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Thesis Titled:

The Effectiveness of Mobile Game Applications in Enhancing Vocabulary Skills of Iranian EFL Learners

Submitted in the Partial Fulfillment of the Requirements for the Degree of Master of Arts in Teaching English as a Foreign Language (TEFL)

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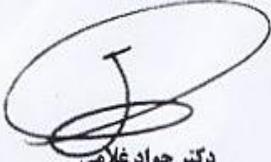
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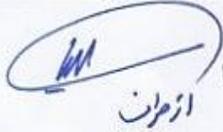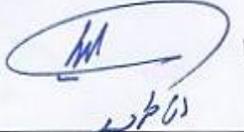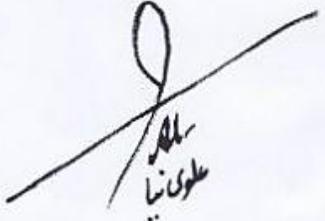
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Dedicated to:

My Beloved Mother

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Abstract

Title: The Effectiveness of Mobile Game Applications in Enhancing Vocabulary Skills of Iranian EFL Learners

This study investigated the effectiveness of Mobile Game-Based Learning (MGBL) in boosting vocabulary acquisition among Iranian EFL students through methodical investigations that address the shortcomings in standard vocabulary teaching practices. Recognizing the importance of vocabulary in language competency, the exploration centered on how gamified mobile applications impacted learners' engagement, retention, and total vocabulary abilities. An explanatory sequential mixed-methods approach was employed, integrating quantitative data from a researcher-made questionnaire completed by 100 Iranian university students (aged 18-40) majoring in English in undergraduate or post-graduate related fields through Google Form. Furthermore, qualitative insights were gained from semi-structured interviews with 20 participants from the same cohort. Based on their prior experience, the participants answered interview questions on gamified apps and non-gamified apps. Findings revealed that gamified applications are useful due to their interactive features, progress tracking, and incentive factors such as rewards and achievements. The participants also noted that these apps are far more engaging, memorable, and valuable as primary learning tools than non-gamified alternatives. These findings were supported by qualitative data, which highlighted the motivating and immersive nature of gamified apps while also identifying areas for improvement, such as the need for more variety and deeper contextualization of vocabulary learning. Non-gamified applications, on the other hand, were praised for their practicality but criticized for a lack of engagement and structured reinforcement. Additionally, adoption barriers such as financial constraints, limited device access, and an overemphasis on entertainment in gamified tools, which sometimes detracted from educational objectives, were examined. Spaced repetition, contextual practice, and hybrid integration with traditional methods were suggested as ways to improve vocabulary learning and acquisition via both types of apps. This research highlighted MGBL's transformative potential in EFL settings, offering evidence-based insights to educators, curriculum developers, and policymakers. This exploration contributes to the growing body of literature on innovative language learning technologies by demonstrating how gamified mobile applications can overcome the limitations of traditional vocabulary teaching. Practical recommendations were also provided for their effective implementation in Iranian EFL settings.

Keywords: MGBL, Iranian EFL Learners, Vocabulary Acquisition, Effectiveness, Gamified

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List of Abbreviations

AI………………………………………………………………….Artificial Intelligence

ARCS……………………………………………Attention, Relevance, Confidence, and Satisfaction

DGBLL…………………………………………………..Digital Game-Based Language Learning

EFL………………………………………………………………English as a Foreign Language

ELT………………………………………………………………English Language Teaching

ICT………………………………………………….Information and Communication Technology

IMDT…………………………………………………...Intelligent Mobile Dictionary and Thesaurus

M-Learning………………………………………………………………….Mobile Learning

MALL…………………………………………………..Mobile-Assisted Language Learning

NVivo……………………………………………………….Qualitative Data Analysis Software

RPG………………………………………………………………….Role-Playing Game

SDT………………………………………………………………….Self-Determination Theory

SG…………………………………………………………………...Serious Games

SPSS…………………………………………………Statistical Package for the Social Sciences

CHAPTER I: INTRODUCTION

1.1. Background

Vocabulary plays a crucial role in learning a language, enabling learners to express their thoughts, construct clear sentences, and communicate effectively. Its importance is evident in its direct impact on the four primary language skills: reading, writing, listening, and speaking. Nazeer et al. (2023) emphasized that a robust vocabulary is essential for understanding and producing texts in academic, professional, and social contexts. Thach (2022) similarly highlights the significance of vocabulary acquisition in second language learning, while Afzal (2019) links English proficiency to the breadth and depth of vocabulary knowledge among both second-language learners and native speakers.

Vocabulary is not merely a collection of words but a complex system of interconnected knowledge. Nation (2001) categorizes vocabulary knowledge into dimensions of form, meaning, and use. Form includes aspects such as spelling, pronunciation, and morphological characteristics. Meaning encompasses both conceptual and associative definitions, while use pertains to grammatical behavior, collocations, and pragmatic rules. This multidimensional view underscores the necessity of a diverse and thorough approach to teaching and learning vocabulary.

Acquiring vocabulary is a multifaceted process that involves memorization, comprehension of concepts, and awareness of usage in various contexts. Learners must establish effective vocabulary learning practices to develop a comprehensive and practical lexicon. Hulstijn and Laufer (2001), Laufer (2005), Nassaji (2003, 2004), Nassaji and Hu (2012), and Schmidt (2001) argued that L2 learners need to pay deliberate attention to target words and deeply process their different aspects to learn them effectively. Traditional methods, such as rote memorization and repetitive drilling, often fail to engage students or ensure long-term retention. Consequently, educators and researchers are exploring alternative approaches, including Mobile Game-Based Learning (MGBL), as a potential solution.

The rise of mobile technology has transformed many aspects of education, including language acquisition. Sung, Chang, and Liu (2016) suggest that mobile technologies hold significant potential for facilitating innovative educational methods. Smartphones and tablets, now ubiquitous, provide unprecedented access to educational content and interactive learning experiences. MGBL leverages the engaging and immersive features of games to support language learning, particularly vocabulary acquisition.

MGBL is rooted in gamification principles, which apply game-design elements in non-game contexts to make learning more enjoyable and participatory. Huizenga et al. (2019) note that students engage in MGBL for both leisure and educational purposes, which can make learning more enjoyable. Mivehchi and Rajabion (2020) also found that MGBL can improve learning outcomes and student motivation. However, it is important to recognize that while MGBL offers potential benefits, it is not without limitations. The effectiveness of MGBL can vary depending on factors such as game design, learner engagement, and the context in which it is used.

Mobile technology has expanded access to learning resources, removing geographical and temporal barriers and promoting educational inclusion. West and Vosloo (2013) define mobile learning as the use of mobile technology, either independently or in combination with other ICT, to facilitate learning anytime and anywhere. This accessibility is particularly beneficial for EFL learners, especially in contexts where traditional educational resources are limited. Mobile games provide a flexible platform for vocabulary development, allowing learners to integrate study sessions into their daily routines.

Educational mobile games are often designed using principles from cognitive psychology and instructional design to ensure they are both engaging and effective. Techniques such as spaced repetition, which promotes long-term retention through periodic review, are commonly incorporated. For example, Gilbert et al. (2023) highlight the use of spaced repetition algorithms in apps like Anki™, which strategically time reviews to improve memory retention. While such evidence-based methods can enhance vocabulary learning, their success depends on consistent and appropriate use by learners.

MGBL offers several potential advantages for vocabulary learning. It creates an interactive environment that can capture students' interest through multimedia features, catering to various learning styles. According to Mayer's (2020) cognitive theory of multimedia learning, participation in tasks requiring active problem-solving and decision-making promotes deeper learning. Games like Duolingo and Memrise use visuals, animations, and sounds to make vocabulary acquisition more engaging. Loewen et al. (2019) found that students using Duolingo appreciated its flexibility and gamified approach, which aligns with findings from Ajisoko (2020), Falk and Götz (2016), Gadanecz (2018), Rachels and Rockinson-Szapkiw (2017), and Vesselinov and Grego (2012). It also meets the principle of personalized learning, where learning level difficulty is adjusted according to the learners' language proficiency (Xie et al., 2017; Xie et al., 2019; Zou et al., 2020).

MGBL teaches students how to utilize language in context and in a realistic manner. Games usually imitate real-life circumstances and situations, helping students to use their vocabulary knowledge in meaningful contexts. Contextualized learning increases vocabulary retention and transfer by helping students remember and apply words they encounter in real-world circumstances. Games such as "SimCity" and "The Sims" demand players to employ vocabulary relating to urban planning, daily activities, and interpersonal relationships, encouraging them to hone their language abilities.

MGBL also provides immediate and personalized feedback, which is crucial for effective learning. Fengyu (2023) emphasizes that personalized feedback addresses immediate learning needs and supports long-term retention and application. Additionally, MGBL allows learners to control the pace and difficulty of their learning, promoting autonomy and self-directed learning. This adaptability makes MGBL suitable for learners of different ages and proficiency levels. However, the extent to which learners benefit from these features depends on their ability to self-regulate and stay motivated.

Research suggests that MGBL has the potential to enhance vocabulary learning by increasing engagement and motivation. However, the effectiveness of this approach may vary depending on

individual learner preferences and contextual factors. A more detailed discussion of the empirical evidence supporting MGBL will be provided in the Literature Review chapter.

Another potential benefit of MGBL is its ability to contextualize vocabulary learning. Games often simulate real-life situations, helping learners apply their vocabulary knowledge in meaningful contexts. This contextualized approach can enhance retention and transfer of vocabulary. However, the quality of the context provided by the game and its relevance to real-world language use are critical factors in determining its effectiveness.

While MGBL has shown promise in enhancing vocabulary learning, it is not a one-size-fits-all solution. Mivehchi and Rajabion (2020) found that Iranian EFL learners who used mobile games for vocabulary learning demonstrated better word retention and recall compared to those using traditional methods. However, the study also highlighted the importance of learner motivation and the quality of the games used. Similarly, Kapp (2012) noted that adaptive games, which adjust difficulty based on learner performance, tend to result in higher engagement and better vocabulary acquisition than static games. Social features, such as multiplayer modes, can also enhance the learning experience by promoting interaction and collaboration.

Qualitative research has provided insights into learners' perspectives on MGBL. Many students appreciate the interactive and enjoyable nature of mobile games, which contrasts with the often monotonous nature of traditional vocabulary learning methods. Immediate feedback and adaptive features are frequently cited as motivators that help learners stay focused on their goals. However, these positive experiences are not universal, and some learners may find certain game mechanics distracting or less effective for their learning style.

The motivational aspects of MGBL are well-documented. For example, Kao, Yuan, and Wang (2023) found that using a mobile game-based learning method could motivate students to learn accounting by providing them with the satisfaction of directly using a designed accounting game. Deterding et al. (2011) argued that gamification elements like points, badges, and leaderboards can increase extrinsic motivation. However, intrinsic motivation, driven by the enjoyment and

engagement of the games themselves, often has a more significant impact on learning outcomes. While these motivational benefits are notable, they depend on the design of the games and the individual preferences of the learners.

In conclusion, while MGBL offers several potential benefits for vocabulary learning, its effectiveness is not guaranteed and depends on various factors, including game design, learner engagement, and context. It is essential to approach MGBL with a critical eye, recognizing both its strengths and limitations. As technology continues to evolve, MGBL may play an increasingly important role in language education, but it should be integrated thoughtfully to maximize its potential benefits.

1.2. Statement of the Problem

The incorporation of mobile game applications into educational frameworks heralded the start of a transformative era in language learning. Despite this progress, the effectiveness of these applications in improving vocabulary skills among Iranian EFL learners is still underexplored and poorly documented. While mobile technology is widely used and vocabulary acquisition is recognized as an important aspect of English mastery, there is a noticeable lack of empirical evidence on the specific impact of Mobile Game-Based Learning (MGBL) on vocabulary development in this group.

Traditional vocabulary learning approaches, such as rote memorization and repetitive drills, have been extensively critiqued for their inability to engage students and their ineffectiveness in building long-term memory. These traditional strategies frequently lack the motivational factors required to maintain learner attention, resulting in surface learning and low vocabulary retention. The study by Lashari et al. (2024) noted that the game-based group exhibited higher motivation compared to the traditional classroom. Consequently, it's crucial to investigate new strategies that are both engaging and effective in boosting long-term vocabulary acquisition.

Mobile game-based learning appears to be an acceptable alternative to traditional vocabulary instruction due to its interactive and immersive nature. MGBL adds game design elements and

principles to make learning more interesting and engaging, potentially increasing learner motivation and engagement. Despite its theoretical advantages, the practical effectiveness of MGBL in vocabulary acquisition among Iranian EFL learners has yet to be proven. This is particularly important given Iran's distinct educational and cultural background, which may limit access to cutting-edge educational resources.

The current body of research on MGBL in language learning is primarily limited to contexts other than Iran, and it tends to focus on general language skills rather than specific vocabulary development. Although studies have shown that MGBL can improve learning outcomes and student motivation, little research has been conducted on Iranian EFL learners and their specific challenges and demands. Cultural, educational, and linguistic differences can all have an impact on the effectiveness of educational interventions, resulting in significant disparities.

Additionally, while certain studies have showcased the advantages of MGBL, they often lack methodological rigor and fail to provide comprehensive analyses of how various game elements contribute to vocabulary learning. Numerous studies do not examine how specific features such as adaptive learning algorithms, immediate feedback, and contextualized language use affect vocabulary acquisition. To bridge this gap, more robust research designs are required that can effectively isolate and investigate the effects of these game features on language learning outcomes, allowing for a better understanding of their individual contributions. Umamah (2023) also emphasized in her review the necessity for future research to identify the types of mobile games used, their roles in various aspects of English proficiency, and factors that may challenge the implementation of MGBL.

Another major issue is the usability and accessibility of mobile game applications for Iranian EFL students. Iran's socioeconomic and technical context provides unique obstacles that may influence the adoption and efficacy of mobile learning technology. In Iranian educational contexts, factors such as unreliable internet access, limited device availability, and varied degrees of digital literacy can all significantly impact the feasibility of employing MGBL. These limitations underscore the

importance of considering local infrastructure and resources when implementing mobile game-based learning in the region.

Furthermore, the attitudes and perceptions of Iranian EFL learners toward mobile game-based learning remain unclear. In their research, Ahmed et al. (2022) found that although game-based learning has shown potential benefits for motivation and anxiety reduction among Iranian EFL learners, there remains a limited understanding of their specific attitudes toward mobile game-based learning. Any educational intervention's success is dependent on learner acceptance and engagement. Understanding these factors can provide valuable insights into how MGBL can be effectively integrated into vocabulary instruction while meeting learners' needs and preferences.

Qualitative research is needed to investigate learners' experiences, preferences, and challenges when using mobile game applications for vocabulary learning. Such research could help us understand how MGBL influences learners' motivation and language acquisition outcomes.

In summary, while mobile game-based learning has significant potential for improving vocabulary skills, there is an urgent need for empirical research into its effectiveness among Iranian EFL students. This study looks at Iran's unique educational and cultural context, the impact of specific game features on vocabulary acquisition, and the accessibility and usability of mobile game applications. By addressing these gaps, this study hopes to contribute to the creation of more effective and engaging vocabulary learning strategies for Iranian EFL students, ultimately improving their language proficiency and overall learning outcomes.

1.3. Significance of Study

This study holds considerable significance within the English Language Teaching (ELT) field, particularly in the context of Iranian EFL learners. Examining the effectiveness of Mobile Game-Based Learning (MGBL) for vocabulary acquisition addresses a critical gap in the existing body of research and offers several key contributions to both theoretical and practical aspects of language education.

Theoretically, this study expands our understanding of how gamification and mobile learning technologies can be effectively integrated into language instruction. While previous research has emphasized the potential benefits of MGBL, there is a distinct lack of empirical investigations that focus especially on vocabulary development among Iranian EFL learners. For instance, Godoy Jr (2020) noted that mobile games possess significant instructional power that can transform teaching methodologies. Many other research findings highlight the effective use of mobile technologies for educational purposes (Naismith et al., 2004; Pachler, 2007) with the implementation of various learning systems, including the MGBL model proposed by Mitchell et al. (2006). By focusing on this demographic, the study provides nuanced insights into the specific educational and cultural factors that influence MGBL's effectiveness in Iran. These findings are critical for enriching the global discourse on language learning technologies by incorporating perspectives from a variety of educational contexts.

Practically, this study has important significance for educators, policymakers, and curriculum developers. For educators, the findings offer evidence-based approaches to incorporating mobile games into vocabulary instruction. The study demonstrates how MGBL can significantly improve learner motivation and retention by demonstrating the advantages of interactive and engaging learning environments. This shift away from traditional, less engaging vocabulary teaching methods and toward more dynamic and effective approaches has the potential to transform the learning experience for students, making it more enjoyable and meaningful. The findings of this study can assist educators in implementing more innovative teaching practices.

Policymakers and curriculum creators can also use the study's findings to inform policy decisions and curriculum design. The research confirming MGBL's efficacy can help guide the integration of technology in education, especially in countries like Iran, where access to new educational resources is limited. Insights into mobile game accessibility and usability can help shape policies that promote fair access to digital learning resources. Curriculum developers can also use the findings to construct curricula that include MGBL, ensuring that vocabulary education is both successful and entertaining.

Furthermore, the study has significant benefits for learners. Demonstrating the effectiveness of MGBL empowers learners with innovative tools for vocabulary acquisition. Engaging with mobile games enhances their language skills and digital literacy, preparing them for future academic and professional challenges. This dual benefit enriches their overall educational experience and promotes lifelong learning.

In conclusion, this study is extremely important in the field of English Language Teaching, particularly for Iranian EFL learners. It fills a critical research gap by providing empirical evidence on the efficacy of MGBL in vocabulary acquisition. The study's theoretical contributions, practical implications, and emphasis on contextual issues make it an important addition to the existing body of knowledge. This study advances our understanding of MGBL and its applications, paving the way for more effective and engaging vocabulary learning strategies that will ultimately improve Iranian EFL learners' language proficiency and learning outcomes.

1.4. Purpose of the study

This study aims to investigate the effectiveness of Mobile Game-Based Learning (MGBL) in improving the vocabulary skills of Iranian EFL students. Specifically, the study wants to know how mobile game applications designed with gamification principles affect vocabulary acquisition, retention, and learner motivation when compared to traditional vocabulary learning methods. By focusing on Iranian EFL learners, this study aims to fill a gap in empirical evidence about the applicability and benefits of MGBL in this unique educational and cultural setting. The study will look at how different game elements, such as immediate feedback and contextualized language use, contribute to vocabulary learning. Furthermore, the study seeks to provide a comprehensive analysis of MGBL's potential to revolutionize vocabulary instruction for Iranian EFL learners using quantitative and qualitative methods, including surveys and interviews. By employing these approaches, the study aims to better understand how MGBL can enhance vocabulary acquisition. Finally, the goal is to offer evidence-based insights and practical recommendations for educators, policymakers, and curriculum developers who are looking to improve vocabulary teaching strategies and boost language proficiency among EFL learners in Iran.

1.5. Research Questions

The following research questions are aimed at exploring the impact and effectiveness of Mobile Game-Based Learning (MGBL) on vocabulary acquisition among Iranian EFL learners. These questions are crucial because they address gaps in current research and offer insights into how MGBL can enhance vocabulary instruction in this unique educational and cultural context. By investigating these questions, the study aims to provide strategies that can improve language learning outcomes and contribute to advancements in English Language Teaching.

1. Do Iranian university students in English-related fields show significant differences in rating the effectiveness of mobile-based gamified and non-gamified applications for vocabulary learning?

2. To what degree do usage metrics such as frequency and duration influence the acceptance and usage of mobile game applications for vocabulary learning among Iranian EFL learners?

3. What attitudes do Iranian university students in English-related fields hold toward the effectiveness of mobile-based gamified applications for vocabulary learning?

4. What attitudes do Iranian university students in English-related fields hold toward the effectiveness of mobile-based non-gamified applications for vocabulary learning?

These questions are important because they investigate how mobile game applications can practically be used to improve Iranian EFL learners' vocabulary skills. By investigating these questions, the study hopes to fill a critical gap in current research by providing insights into how mobile game applications can be used effectively to improve vocabulary learning and retention. Understanding student attitudes and the factors that influence their adoption and use of these applications can help educators, policymakers, and curriculum creators make informed suggestions. The goal is to maximize vocabulary teaching methods and promote language competency among Iranian EFL students.

1.6. Definition of Key Terms

1.6.1. Vocabulary Skills:

Vocabulary skills encompass the ability to recognize, understand, and use words effectively in a variety of contexts. These skills are necessary for mastering the four language domains: listening, speaking, reading, and writing. Understanding word forms, meanings, and usage is all part of vocabulary knowledge. Nation (2001) defines it as aspects like word spelling, pronunciation, morphology, meaning (both conceptual and associative), and use in syntactic structures and collocations. Effective vocabulary skills allow learners to articulate their thoughts clearly, comprehend texts, and engage in meaningful communication, making them an essential component of language proficiency.

1.6.2. Vocabulary Acquisition:

Vocabulary acquisition is the process by which people learn and incorporate new words and their meanings into their lexicons. This process is critical for effective communication and language proficiency, as it includes the ability to understand, recall, and use words correctly in a variety of contexts. Vocabulary acquisition is divided into several stages: initial exposure, contextual understanding, memorization, and practical application. Factors such as exposure frequency, contextual information richness, and learner strategies all have an impact on effective acquisition. Vocabulary acquisition is a key component of learning English as a second language, providing the essential foundation for the four language skills: listening, speaking, reading, and writing (Jia et al., 2012). The importance of vocabulary for L2 acquisition cannot be disputed (Hu, & Nassaji, 2016). Vocabulary acquisition is critical for improving language abilities and facilitating social interaction and interpersonal skills (Jubair Uddin, 2022).

1.6.3. Retention:

Retention in vocabulary learning is the ability of learners to remember and recall newly learned words over time. Retention in general can be defined as having the information stored in long-term memory in such a way that it can be readily retrieved, for example, in response to standard prompts (Bennett & Rebello, 2012). Effective retention is required for vocabulary to be useful and

accessible in everyday conversation. Repetitive exposure, meaningful use, and spaced repetition are three common methods for improving retention, in which students review vocabulary at increasing intervals to reinforce memory. Mobile games can aid retention by offering engaging and repetitive practice opportunities that allow students to review vocabulary in a fun and interactive manner, cementing words in long-term memory. These features work together to make mobile games an effective tool for vocabulary retention.

1.6.4. Mobile Game-Based Learning (MGBL):

The development of mobile educational games is known with the term "Mobile Game-Based Learning" (MGBL), which amalgamates mobile learning (m-learning), i.e. education through applications in mobile phones (Chung, Hwang, & Lai, 2019), and game-based learning. To enhance learning experiences, MGBL employs games' interactive, immersive, and engaging elements. It motivates and engages students in educational settings by utilizing gamification principles such as points, levels, badges, and leaderboards. MGBL excels at creating adaptable, accessible, and contextually rich learning environments that accommodate a wide range of learning styles and preferences. Its use in language learning seeks to make vocabulary acquisition more enjoyable and effective than conventional methods. MGBL refers to the use of educational games or software applications that use gaming for educational purposes on mobile devices (Troussas, Krouska, & Sgouropoulou, 2020).

1.6.5. Gamification:

Gamification is the process of applying game design elements and principles to non-game settings to boost user engagement and motivation. In their study, Alsan and Tengilimoglu (2024) referred to gamification as the use of game elements and mechanics in non-game environments. Gamification in education entails incorporating elements such as challenges, rewards, feedback, and progression systems into instructional activities. The goal is to create a more dynamic and interactive learning environment that engages students in game-like activities. Gamification can help maintain student interest, provide immediate feedback, and promote a sense of accomplishment during vocabulary learning, resulting in better retention and application of new vocabulary.

1.6.6. Mobile-based Gamified Applications:

The term "Mobile-based Gamified Applications" refers to mobile software programs that incorporate gamification elements such as points, levels, challenges, and rewards. These apps use mobile technology to provide interactive and enjoyable experiences across multiple domains. Duolingo, for example, uses game mechanics to help with language learning through interactive lessons and progress tracking, whereas Memrise uses gamification techniques to improve vocabulary acquisition with engaging, bite-sized lessons. Similarly, LanguageQuest is a gamified mobile language learning application that includes interactive activities, challenges, rewards, and progress tracking features to engage learners and motivate them to participate actively in language learning activities (Safatian, 2023). Mobile game applications also have video game elements, using visuals to entice players (Godoy Jr., 2021). In addition, several mobile game applications are used to supplement language and technical vocational subject teaching and learning (Godoy Jr., 2021). These applications effectively combine the convenience of mobile platforms with the motivating aspects of gaming, resulting in accessible and user-friendly environments that encourage learning, productivity, and user involvement.

1.6.7. Mobile-based Non-Gamified Applications:

Mobile-based Non-Gamified Applications refer to software programs for mobile devices that lack game-like elements such as points, levels, challenges, or rewards. These applications make use of mobile technology to provide practical and utilitarian experiences, focusing on delivering specific services or completing particular tasks rather than gamification. They are often distinguished by a straightforward, goal-oriented design that prioritizes functionality and user efficiency. Language learners, for example, can browse and download a variety of specialized mobile dictionaries on their smartphones to aid in their studies, particularly when learning English as a second or foreign language (Al-Jarf, 2022). Similarly, translation apps like Google Translate offer instant translations of typed words or phrases, and provide additional facilities for listening, speaking, and reading skills (Ducar & Schocket, 2018). Tools like the "Intelligent Mobile Dictionary and Thesaurus" (IMDT) also contribute by recognizing words from a captured image using the mobile camera, then finding the word's synonym, nearest, and antonym from an offline dictionary database (Ruhaiyem, Mahalingam, & Syed-Mohamad, 2019). These applications, which help

users complete a wide range of tasks, present relevant information and services in an easy-to-understand format, reflecting their utility-focused nature.

1.7. Organization of the Study

The current thesis is structured into five chapters:

Chapter one lays the groundwork for the study, including background information. It outlines the study's problems, significance, and purpose. It also presents the research questions and defines key terms to prevent misunderstandings.

Chapter two examines existing research and theoretical frameworks that are relevant to the study. It systematically reviews relevant literature to contextualize the research question, identify dominant theories, and evaluate previous findings. Its goal is to define the current state of knowledge, highlighting significant trends and patterns and thereby revealing gaps that the current study seeks to fill.

Chapter three discusses the methodology, including the research design, participants, and study setting. This chapter also discusses the data collection process and coding procedures.

Chapter four presents the findings and discussion, which address the research questions. It also compares the current study's findings to those of previous studies, providing a thorough discussion.

Chapter five summarizes the study and discusses the implications of the findings. It also suggests areas for future research and concludes with a general summary of the study's findings.

CHAPTER II: LITERATURE REVIEW

2.1. Introduction

Vocabulary acquisition is central to language learning, acting as a foundational component for effective communication and linguistic proficiency in a variety of contexts. As Borawski (2019) mentioned, it is integral to language learning, and for effective communication, it cannot be sidelined in education programs. English proficiency is heavily dependent on vocabulary knowledge, not only for native speakers but also for second and foreign language learners (Afzal, 2019). Webb (2019) believes that vocabulary acquisition is important for language learners because it allows them to express a diverse range of ideas and comprehend a variety of speech and text forms. Similarly, Thach (2022) emphasizes that vocabulary acquisition is one of the most important factors in the success of second language acquisition. Nazeer et al. (2023) emphasize the significance of vocabulary as a key component of foreign language learning. Zhang and Huang (2024) confirm that vocabulary acquisition is critical in the context of language acquisition, whether in one's native language or a second language (L2). Teng, Mizumoto, and Takeuchi (2024) emphasize the importance of vocabulary acquisition in achieving second-language proficiency.

In response to the need for effective vocabulary acquisition strategies, educators have continually sought innovative methods to enhance language learning experiences. The emergence of Mobile Game-Based Learning (MGBL) presents a promising avenue in this regard. MGBL, with its interactive and engaging nature, offers a dynamic platform for learners to actively engage with vocabulary acquisition processes. MGBL creates immersive environments for language learning that improve vocabulary retention and application skills by incorporating game-like elements. This novel approach not only piques learners' interest, but it also provides instant feedback and personalized learning experiences, resulting in more effective vocabulary acquisition strategies. Chen et al. (2019) found that mobile apps with game-related functions improve learners' vocabulary acquisition and retention significantly.

The primary goal of this review is to investigate the efficacy of mobile game applications in improving the vocabulary skills of Iranian EFL learners. This review attempts to provide a comprehensive understanding of how Mobile Game-Based Learning (MGBL) can improve vocabulary acquisition by reviewing theoretical frameworks and empirical studies, as well as identifying gaps in current research. Through this investigation, the review will provide insights into MGBL's potential as a language learning tool, as well as recommendations for future research to fill existing gaps in the field.

2.2. Theoretical Background

Theoretical frameworks lay the groundwork for understanding how mobile game-based learning (MGBL) aids in language acquisition. MGBL develops engaging, interactive, and student-centered learning experiences by combining principles from various learning theories. Each theoretical perspective provides distinct insights into the mechanisms that underpin MGBL's effectiveness, such as promoting active knowledge construction, maintaining learner engagement, and ensuring optimal cognitive load. This section looks at key theories like constructivism, flow theory, cognitive load theory, game design principles, social learning theory, and motivation and engagement theories to see how they all contribute to the design and implementation of MGBL in vocabulary acquisition. These frameworks demonstrate MGBL's ability to transform traditional educational practices by leveraging innovative, technology-driven approaches that are tailored to the needs of diverse students. By integrating elements from these diverse theories, MGBL offers a comprehensive and effective methodology for enhancing vocabulary skills, addressing the unique challenges faced by Iranian EFL learners. This holistic approach not only revolutionizes vocabulary acquisition but also provides learners with a dynamic and immersive educational experience, ensuring sustained engagement and measurable progress. Through this synthesis of theoretical insights, MGBL stands out as a potent tool for promoting language acquisition and educational innovation.

2.2.1. Constructivism

Constructivist learning theories emphasize active knowledge production via inquiry, discovery, and problem solving. MGBL conforms to these ideals by immersing students in interactive gaming

settings where they must make decisions, solve issues, and research subjects. Mobile game-based learning has proven to be an effective approach to student-centered learning, supporting constructivism, where individuals construct their own knowledge through experiences and reflection (Chen & Hsu, 2020). Mobile technologies, with their flexibility and accessibility, support the constructivist approach by allowing students to access knowledge sources at any time and from any location (Phumeechanya & Wannapiroon, 2013; Yakar et al., 2020). MGBL promotes a student-centered learning environment by encouraging students to be responsible for their own knowledge construction, resulting in more personalized learning opportunities.

Constructivism also encourages the incorporation of mobile learning into educational practices. Teachers who use a constructivist approach frequently find mobile learning (M-Learning) useful in achieving their instructional objectives (Gilakjani et al., 2013). Research by Baharum et al. (2020) indicates that mobile learning yields better results than conventional learning due to its constructivist approach to education (Yakar et al., 2020). This approach aligns with the goals of MGBL, making it an appropriate framework for investigating the potential benefits of mobile game applications in vocabulary acquisition.

2.2.2. Flow Theory

Flow theory proposes that individuals experience optimal engagement and enjoyment when fully immersed in activities that match their skill level and provide clear goals and immediate feedback. Flow theory consists of six dimensions, namely concentration, clear goal, feedback, challenge, autonomy, and immersion. It is therefore applied in game studies to create concentration for the students in the lectures, according to these elements (Bakan & Bakan, 2018; Wan, King, & Chan, 2021). MGBL frequently incorporates flow elements by presenting learners with challenges that are neither too easy nor too difficult, encouraging focused attention and motivation (Wan, King, & Chan, 2021). Ozhan and Kocadere (2019) used gamification to study the effects of flow and emotional engagement on motivation. The results suggested that when students were more engaged and experienced flow, their motivation increased.

The concept of flow is critical to creating effective MGBL environments. When students are in the flow, they are more engaged, motivated, and committed to learning. Educational games with flow components can give students a sense of challenge and accomplishment, making the learning process more enjoyable and effective. The affordances observed in game-based learning are consistent with flow theory (Csikszentmihalyi, 2014). Flow theory ideas can be used to develop MGBL applications that keep learners engaged and motivated throughout the vocabulary acquisition process. This technique improves the overall learning experience by ensuring adequate levels of difficulty and skill development.

2.2.3. Cognitive Load Theory

Cognitive Load Theory emphasizes the importance of controlling managing load in order to improve learning results. MGBL can be used to present information in a way that is appropriate for learners' cognitive abilities, resulting in efficient processing and deeper understanding. MGBL improves learners' cognitive task performance by breaking complex concepts down into manageable chunks and providing scaffolding and support as needed. As learning materials are designed to fit mobile screens while also allowing for effective knowledge transfer on complex learning topics, instructional design principles and cognitive load theories cannot be overlooked (Curum & Khedo, 2020).

MGBL requires effective cognitive load management. Games that are too complex or overwhelming can stymie learning by overloading learners' cognitive resources. In contrast, well-designed games that effectively manage cognitive load can help students understand and retain vocabulary. When developing MGBL applications, instructional designers must take cognitive load theory into account to ensure that learners can efficiently process and retain information.

2.2.4. Game Design Principles

The principles of game design, such as clear goals, meaningful choices, feedback mechanisms, and progressive challenge, are essential for creating engaging and motivating learning experiences in MGBL. Essentially, when a game exceeds one's problem-solving capacity, the person may lose interest (Coleman & Money, 2020). Game design should be carefully assessed so as not to amplify

students' cognitive load (Zheng et al., 2024). By incorporating elements of game mechanics, narrative, and aesthetics, MGBL captures learners' interest and encourages sustained participation and exploration. Furthermore, educational game design should take developmental characteristics and cognitive load into account to ensure that they are effective and engaging for learners. Games should be designed to match users' developmental characteristics in order to ensure learning engagement while reducing cognitive load (Plass, Homer, & Kinzer, 2015). These principles enhance the overall learning experience and assist students in meeting their academic objectives.

Game design principles play a critical role in the success of MGBL applications. Clear objectives give learners direction and purpose, while meaningful choices boost engagement by enabling decision-making that impacts their learning journey. Feedback mechanisms are key for reinforcing learning and guiding students to the correct answers. Progressive challenges maintain the game's engagement and difficulty, preventing boredom and encouraging continued participation. By integrating these principles, MGBL applications can create a vibrant, immersive learning environment that improves vocabulary acquisition.

2.2.5. Social Learning Theory

The Social Learning Theory emphasizes the importance of social interaction and collaboration in the learning process. MGBL can facilitate collaborative and social learning experiences by allowing learners to interact, cooperate, and compete. MGBL allows learners to construct knowledge collectively while benefiting from diverse perspectives and expertise by encouraging peer-to-peer interaction, communication, and collaboration. Gamification can increase participation, as measured by contributions within the social network, resulting in increased social interaction and communication, which, in turn, would also result in motivational gains that fuel further participation (de Marcos-Ortega et al., 2020). DGBLL can create an environment where education is mostly learner-centered, provide opportunities for socialization when well-organized, and can awaken the will to win and competitive desire in some social contexts (Butler, 2017; Wichadee & Pattanapichet, 2018). MGBL can also provide an immersive platform for students to learn about and practice safe social media use while effectively integrating technology lessons.

This is consistent with Zheng et al.'s (2024) principle that a game can simulate social media use to help students understand how to use technology safely.

Social learning theory emphasizes the importance of social interactions in the learning process. MGBL applications with social elements, such as multiplayer modes or collaborative tasks, can improve learning by encouraging interaction and communication among learners. Social learning experiences can help students gain a better understanding of vocabulary by exposing them to different points of view and encouraging them to explain and discuss concepts with their peers. This collaborative approach is consistent with the principles of social learning theory and improves the efficacy of MGBL in vocabulary acquisition.

2.2.6. Motivation and Engagement Theories

Motivation and engagement are critical factors in language learning and have a significant impact on the effectiveness of MGBL. Deci and Ryan (2013) proposed the Self-Determination Theory (SDT), which emphasizes the importance of intrinsic motivation, which is driven by the activity's inherent enjoyment. MGBL can boost intrinsic motivation by offering enjoyable and engaging experiences that match learners' interests and preferences. The integration of game elements and learning activities into gamified learning can potentially increase students' intrinsic motivation by making learning activities enjoyable and satisfying (Koivisto & Hamari, 2019; Li, Hew, & Du 2024). Furthermore, Keller's (1987) ARCS model of motivational design, which includes attention, relevance, confidence, and satisfaction, can be used to create MGBL applications that capture learners' attention, ensure learning is pertinent, build confidence, and deliver satisfaction through achievement and feedback (Chen et al., 2020).

Motivation and engagement theories stress the importance of creating enjoyable and meaningful learning experiences. MGBL applications that align with these theories can increase learners' motivation and engagement by providing interactive and immersive experiences. MGBL enhances vocabulary learning by incorporating elements like fun, challenge, and feedback. Understanding these principles can help to guide the design of MGBL applications, ensuring that they have the

greatest impact on vocabulary acquisition. This approach emphasizes MGBL's ability to create engaging learning experiences that promote long-term learner interest and success.

2.3. Empirical Background

The empirical background of mobile game-based learning (MGBL) demonstrates its growing importance in educational research, particularly for vocabulary acquisition in English as a Foreign Language (EFL) settings. Numerous studies have shown the effectiveness of MGBL in enhancing learners' vocabulary knowledge, motivation, and engagement through gamified and interactive learning experiences. These studies provide compelling evidence that MGBL can significantly improve vocabulary retention and recall by offering immersive and enjoyable learning environments. Research conducted in various cultural contexts has highlighted the versatility and adaptability of MGBL, with positive outcomes consistently reported across different countries. Additionally, the role of personalization in MGBL has been widely recognized, with tailored game experiences proving more effective in addressing individual learner needs and preferences. However, there are still gaps in the current body of literature, such as the lack of research on the long-term effects of MGBL on vocabulary acquisition. While short-term benefits are well-documented, more longitudinal studies are needed to understand the sustained impact of MGBL on learners' vocabulary skills. Another area that requires further exploration is the identification of adoption barriers. Understanding the challenges faced by educators and learners in implementing MGBL can inform the development of more effective and accessible game-based learning solutions. Furthermore, there is a need for research on the potential for tailored interventions within MGBL to address specific learning difficulties and optimize educational outcomes. By examining key findings from empirical studies, discussing ongoing challenges, and identifying areas for future research, this section aims to provide a comprehensive overview of the current state of MGBL and its implications for language learning. Through continued exploration and innovation, MGBL holds promise for revolutionizing vocabulary acquisition and enhancing the overall educational experience for learners.

2.3.1. Positive Outcomes of MGBL on Vocabulary Acquisition

Studies on the effectiveness of MGBL for vocabulary acquisition have yielded encouraging results. Chen et al. (2019) found that gamified features had a positive impact on English vocabulary learning among EFL learners in Taiwan. Incorporating game-like elements into mobile applications creates immersive environments that improve vocabulary retention and application skills (Huizenga et al., 2019). According to Mivehchi and Rajabion (2020), the use of MGBL improves both learning outcomes and student motivation. These findings highlight the potential of MGBL to improve learners' vocabulary acquisition performance and satisfaction levels.

2.3.2. Studies on MGBL in Different Cultural Contexts

While the majority of MGBL research has been conducted in East Asian countries, there is a growing body of literature exploring its effectiveness in other regions. For instance, Alhebshi and Gamlo (2022) investigated the impact of mobile games using the "Quizizz" application on the vocabulary acquisition of Saudi EFL students, reporting positive outcomes. This study demonstrates the usefulness of MGBL in a variety of linguistic and cultural contexts. However, more research is needed to understand how the effectiveness of MGBL interventions varies across educational settings and learner populations, particularly in the Middle East and other underrepresented regions.

2.3.3. Personalization in MGBL

Existing research in the field of MGBL has primarily relied on pre-existing mobile applications, frequently overlooking the potential benefits of personalized and context-specific interventions tailored to learners' unique needs and characteristics. Personalized learning has been shown to increase knowledge acquisition and learner satisfaction (Krouska, Troussas, & Sgouropoulou, 2020; Lin et al., 2020). Xie et al. (2019) mention that incorporating personalization into educational software helps learners achieve their learning goals and offers a more effective learning experience. Troussas et al. (2020) also state that personalized learning provides tailored instruction to each student's needs and preferences, promoting a student-centered approach. Krouska, Troussas, and Sgouropoulou (2022) affirmed that incorporating personalization into MGBL positively impacts students' acceptance of the technology and improves their performance.

2.3.4. Case Studies and Practical Applications

Case Study 1: Taiwanese EFL Learners

Chen et al. (2019) conducted a study on Taiwanese EFL learners using the mobile application "PHONE," which incorporated a range of gamified features. The application included game mechanics such as points, levels, rewards, leaderboards, and badges to encourage active participation in vocabulary exercises. The study demonstrated significant improvements in vocabulary acquisition and retention among learners who used the gamified version of the app. It highlighted the value of interactive elements, immediate feedback, and personalized learning experiences in enhancing vocabulary acquisition. Additionally, learners who used the gamified app reported higher levels of engagement and happiness, as evidenced by their better performance in vocabulary tests.

Case Study 2: Saudi EFL Students

Alhebshi and Gamlo (2022) explored the impact of the "Quizizz" mobile game application on the vocabulary acquisition of Saudi EFL foundation year students. The study found that students using the application showed significant improvements in their vocabulary knowledge compared to those using traditional learning methods. The application's gamified nature, combined with interactive features and immediate feedback, contributed to the study's positive results. This case study demonstrates the potential of MGBL in a variety of cultural contexts and emphasizes the need for additional research in similar settings.

Case Study 3: Iranian EFL Learners

A recent study conducted by Esmaeili and Shahrokhi (2020) investigated the impact of the "Memrise" mobile game application on the collocation learning and retention of Iranian EFL learners. The study utilized a quasi-experimental design with 75 intermediate learners from a private language institute in Farahan, Iran. Memrise, a mobile-assisted language learning (MALL) tool, was implemented to enhance learners' acquisition and retention of collocations, and its effectiveness was compared to traditional teaching methods. The results demonstrated statistically significant improvements in both immediate and delayed post-test scores among learners who used Memrise, highlighting its superiority over conventional approaches. The study ascribed these

findings to the application's dynamic and engaging nature, which aided both short-term learning and long-term retention of collocations. This study highlights the potential of incorporating technologically advanced and learner-centered MALL tools such as Memrise into EFL classrooms, providing a reproducible paradigm for future studies in similar environments.

2.4. Gaps in the Current Research

Despite the promising findings, there are still considerable gaps in MGBL research. First, the majority of studies have focused on learners from East Asian nations, with little studies into the effectiveness of MGBL in other linguistic and cultural contexts. This limitation limits our understanding of how MGBL interventions' effectiveness varies across different educational settings and learner populations.

Second, previous research has primarily focused on commercial or generic applications, often overlooking the potential benefits of personalized and context-specific interventions (e.g. Iran) tailored to learners' specific needs and characteristics. This has resulted in a gap in understanding the impact of personalized MGBL applications, which consider pedagogical principles and learner feedback, on educational outcomes.

Third, more in-depth and longitudinal studies on the long-term impact of MGBL on vocabulary acquisition are lacking. Many studies have focused on short-term outcomes, creating a gap in understanding MGBL's long-term effects on vocabulary retention and language proficiency.

Fourth, while MGBL has been shown to benefit education, it is not yet widely used. According to Papadakis, Kalogiannakis, and Zaranis (2018), and Van Roy and Zaman (2018) MGBL has great potential, but its adoption in educational settings remains limited. There is still a significant lack of comprehensive insights into the specific barriers hindering the widespread adoption of MGBL, leading to an incomplete understanding of the reasons behind its limited use in educational practice.

2.4.1. Addressing the Gaps

To address the existing gaps in the research on Mobile Game-Based Learning (MGBL) for vocabulary acquisition among Iranian EFL learners, the following areas should be considered:

1. Diverse Contexts and Learner Populations: This research expands the understanding of MGBL effectiveness by focusing on Iranian EFL learners, thereby adding insights into how MGBL interventions work in different linguistic and cultural contexts beyond the predominant East Asian studies. It addresses the limitation of understanding MGBL's effectiveness across varied educational settings and learner populations.

2. Personalized MGBL Application Development: The study emphasizes the development and assessment of personalized MGBL applications tailored to the specific needs and characteristics of Iranian EFL learners. By incorporating pedagogical principles and learner feedback, this research addresses the gap in understanding the impact of context-specific and personalized MGBL applications on educational outcomes.

3. Long-term Effects of MGBL: This research includes a comprehensive analysis of the long-term effects of MGBL on vocabulary acquisition and retention. By examining both short-term and long-term outcomes, the research addresses the gap in understanding how MGBL influences long-term language proficiency and academic performance.

4. Barriers to Adoption: The study identifies and analyzes the specific barriers hindering the widespread adoption of MGBL in educational settings. By investigating the factors that influence the acceptance and implementation of MGBL, this research provides comprehensive insights into the reasons behind its limited use in educational practice and suggests ways to overcome these barriers.

5. Exploring Different Game Genres: Although not a primary focus, this research touches upon the potential impact of different game genres on vocabulary acquisition. By recognizing the

importance of diverse game genres, it opens avenues for future research to explore comparative effectiveness in vocabulary learning.

6. Integration with Traditional Learning Methods: This study highlights the potential for integrating MGBL with traditional language learning methods to create a blended learning approach. By combining the strengths of both MGBL and traditional teaching methods, it offers EFL students a more comprehensive and effective learning experience.

By addressing these gaps, this study enhances the understanding of MGBL's potential to improve vocabulary acquisition and informs the development of more effective and engaging educational interventions tailored to learners' needs.

2.5. Chapter Summary

To summarize, vocabulary acquisition is an important part of language learning because it allows for effective communication and linguistic proficiency. Mobile Game-Based Learning (MGBL) is a promising approach to improving vocabulary acquisition because it provides interactive, engaging, and personalized learning experiences. Constructivism, flow theory, cognitive load theory, game design principles, social learning theory, and motivation and engagement theories all contribute to MGBL's effectiveness in promoting learning outcomes and participation.

Empirical studies have shown that MGBL has a positive impact on vocabulary acquisition, emphasizing its potential to improve learner performance and motivation. However, there are substantial study gaps, notably in terms of MGBL's usefulness in various linguistic and cultural settings, the creation of individualized MGBL applications, and the long-term effects of MGBL on vocabulary retention. Addressing these limitations in future research can give important insights into MGBL's ability to improve vocabulary acquisition and influence the creation of more effective and engaging educational interventions.

Educators and researchers can maximize MGBL's potential to improve vocabulary acquisition for EFL learners by expanding research efforts into its effectiveness in a variety of educational settings, developing personalized applications, conducting longitudinal studies, investigating

adoption barriers, and exploring different game genres. The case studies in this research demonstrate the practical applications of MGBL and provide evidence of its usefulness in a variety of circumstances, emphasizing the significance of ongoing research and development in this area.

In conclusion, while MGBL shows great potential as a vocabulary learning tool, further study is needed to understand its impact in many contexts and develop effective, context-specific interventions. This literature review aims to contribute to the broader discourse on innovative language learning methodologies by examining the effectiveness of MGBL in enhancing the vocabulary skills of Iranian EFL learners and providing recommendations for future research and practice.

CHAPTER III: METHOD

3.1. Introduction

This chapter presented the detailed methodology used to investigate the effectiveness of Mobile Game-Based Learning (MGBL) for vocabulary acquisition among Iranian EFL learners.

The chapter began by outlining the design of the study, explaining the rationale for using an explanatory sequential mixed-methods approach to comprehensively address the research questions. It highlighted the integration of quantitative data from an online questionnaire and qualitative data from semi-structured interviews, aiming to capture the breadth and depth of learners' experiences with mobile game applications for vocabulary acquisition.

Next, the chapter provided an overview of the participants involved in the study, detailing their demographic characteristics and the criteria for their selection. This ensured that the study included a diverse and representative sample of Iranian university students majoring in English. The subsequent sections described the instruments used for data collection, including the online questionnaire and semi-structured interview guide. The procedures for data collection and analysis were outlined to ensure the reliability and validity of the study's findings. By integrating quantitative and qualitative data, the chapter aimed to deliver a thorough evaluation of MGBL's impact on vocabulary learning.

Overall, this chapter set the groundwork for the study by detailing the methods used to explore the effectiveness of mobile game-based learning for vocabulary acquisition among Iranian EFL learners. The combination of quantitative and qualitative techniques allowed for a robust analysis of the research questions, offering valuable insights that can inform educational practices and contribute to the development of effective gamified learning tools.

3.2. Restatement of the Research Questions

The investigation into Mobile Game-Based Learning (MGBL) in this study was focused on four key research topics, with the goal of shedding light on the efficacy and influence of mobile gaming

apps on vocabulary acquisition among Iranian EFL students. These questions aimed to fill gaps in the existing literature and offer practical insights into improving vocabulary training in the Iranian educational context. The study sought to answer the following questions:

1. Do Iranian university students in English-related fields show significant differences in rating the effectiveness of mobile-based gamified and non-gamified applications for vocabulary learning?

2. To what degree do usage metrics such as frequency and duration influence the acceptance and usage of mobile game applications for vocabulary learning among Iranian EFL learners?

3. What attitudes do Iranian university students in English-related fields hold toward the effectiveness of mobile-based gamified applications for vocabulary learning?

4. What attitudes do Iranian university students in English-related fields hold toward the effectiveness of mobile-based non-gamified applications for vocabulary learning?

By addressing these questions, the study intended to offer a comprehensive analysis of mobile game applications' role in enhancing vocabulary learning and retention. The results were expected to offer evidence-based recommendations for educators and curriculum developers, aimed at improving vocabulary teaching strategies and learner outcomes in the context of English language education in Iran.

3.3. Design of the Study

This study utilized an explanatory sequential mixed-methods design, which involved two distinct phases: a quantitative phase followed by a qualitative phase, to investigate the effectiveness of Mobile Game-Based Learning (MGBL) on vocabulary acquisition among Iranian EFL learners. The integration of both quantitative and qualitative data phases facilitated a more comprehensive understanding of the research problem and questions. This approach allowed for a deeper exploration of the topic, with the qualitative data explaining and contextualizing the quantitative findings, thereby providing greater context and depth to the overall analysis.

During the quantitative phase, 100 Iranian university students majoring in English were given an online questionnaire through Google Forms. The questionnaire was created to elicit participants'

opinions and experiences with mobile game-based vocabulary learning apps. It was divided into eight sections: demographics, general perceptions on vocabulary learning, experience with technology in learning, awareness and use of mobile game-based learning (MGBL), its effectiveness, perceptions on MGBL, comparison with traditional learning methods, and overall satisfaction and future intentions. The questions consisted of Likert scale ratings (Joshi et al., 2015; Likert, 1932), and close-ended prompts.

The online questionnaire was designed as the primary method for gathering quantitative data, ensuring its statistical validity through descriptive statistics and inferential analysis. (Cohen et al., 2018; Creswell, 2014). To further confirm its reliability, Cronbach's alpha was calculated for the Likert-scale items across the eight sections, yielding an overall reliability score of 0.997. This excellent internal consistency ensures that the questionnaire items reliably capture the constructs under investigation.

The questionnaire was created to closely align with existing methodologies in mobile game-based learning and technology-assisted language education. Vnucko and Klimova's (2023) study on digital game-based vocabulary learning and Okumuş Dağdeler's (2022) study on gamification in mobile-assisted vocabulary learning had an impact on the design process. These studies provided frameworks for structuring the questions so that they were relevant and consistent with previous research. Using these established methods, the questionnaire was tailored to meet the study's objectives while maintaining reliability and validity.

For transparency and cross-referencing, the full questionnaire is provided in Appendix A.

Following the quantitative phase, a subset of twenty students was identified for semi-structured interviews. The design featured two distinct sets of interview questions for participants to discuss their experiences with either gamified or non-gamified mobile applications. These interviews were planned to be conducted both online and in person, centering on users' subjective experiences with mobile vocabulary learning apps.

A thorough review of the literature on vocabulary acquisition, mobile-assisted language learning (MALL), and user engagement with digital educational tools was conducted in order to develop the interview questions methodically. This process ensured that the questions were theoretically sound and addressed key themes pertinent to the study's objectives. Concepts like motivation, engagement, and effectiveness were informed by prior studies, such as Bryman (2016), and Creswell and Creswell (2018).

To ensure consistency and rigor, a structured interview protocol was followed during data collection. Participants were informed about the study's purpose and assured of confidentiality before the interviews began. These interviews, lasting about 15–20 minutes, adhered to a guided structure designed to elicit rich and reflective responses while adhering to ethical research standards. This approach is consistent with Creswell and Creswell's (2018) recommendations for systematic qualitative data collection.

For the complete interview protocol with participants who used non-gamified mobile applications, refer to Appendix B. For sample answers from these interviews, see Appendices C, D, and E. Similarly, for the detailed interview protocol with participants using gamified mobile applications, refer to Appendix F. Sample responses illustrating participants' attitudes towards gamified tools are provided in Appendices G, H, and I.

By combining quantitative and qualitative perspectives, the study provided a comprehensive understanding of the effectiveness of Mobile Game-Based Learning (MGBL) in vocabulary acquisition. Quantitative data provided broad statistical insights, whereas qualitative data contextualized these findings. This integration not only broadened the analysis of the factors that influence vocabulary learning through mobile games, but it also highlighted practical implications, offering useful recommendations to educators, policymakers, and curriculum developers.

3.4. Participants
The participants in this study were carefully chosen to ensure comprehensive and representative data collection across both quantitative and qualitative phases.

In the quantitative phase, 100 Iranian university students aged 18 to 40 who majored in English were selected using simple random sampling techniques from social media platforms like Telegram and WhatsApp. This diverse participant pool, consisting primarily of intermediate learners, was critical for gathering a wide range of MGBL-related experiences and perspectives. Participants detailed their years of English study, which ranged from less than two years to over five years, and provided information about their academic qualifications, identifying as undergraduate (Bachelor's) or postgraduate (Master's or Ph.D.) students. The online questionnaire collected data on their experiences with mobile game applications and their impact on vocabulary acquisition and retention.

Table 3.1 summarized key participant demographics. Most participants (67%) were aged between 18 and 30, reflecting the young demographic commonly associated with mobile applications.

Table 3.1

Demographic characteristics of the participants

Demographic Variable	Category	Frequency (N)	Percentage (%)
Age	18–25	38	38%
	26–30	29	29%
	31–35	20	20%
	36–40	13	13%
Gender	Male	46	46%
	Female	54	54%
Educational Background	Bachelor's Degree	45	45%
	Master's Degree	37	37%
	PhD	18	18%
Years of English Study	1–3 years	15	15%
	3–5 years	30	30%
	5+ years	55	55%

All participants had an educational degree, with 45% holding a bachelor's degree, 37% a master's degree, and 18% a PhD. This was consistent with the study's profile, which prioritized intermediate learners while including some advanced participants. Furthermore, over 55% of respondents had studied English for more than five years, implying that the dataset included experienced learners who were familiar with language acquisition tools. This demographic corresponded to the study's focus on proficient English learners.

In the qualitative phase, a subset of 20 students was chosen from the original quantitative sample. This selection was divided into two groups: one group was asked questions about their experiences with mobile applications that include gamified elements, and another group was asked about their experiences with non-gamified mobile apps. As in the quantitative phase, these participants represented a range of English study durations (from less than two years to more than five years) and academic levels (Bachelor's, Master's, or Ph.D.). Semi-structured interviews with these participants took place, either online or in person, to gather detailed information about their perceptions, evaluations, and the factors that influence their use of mobile applications for vocabulary learning.

The goal of this study was to gain a comprehensive understanding of the effectiveness of MGBL in vocabulary acquisition and its practical implications for English Language Teaching by involving a diverse group of participants and employing both quantitative and qualitative methods.

3.5. Instruments

Investigating the effects of Mobile Game-Based Learning (MGBL) on vocabulary acquisition, the study employed a range of instruments to gather both quantitative and qualitative data. These instruments aimed to collect thorough data while effectively addressing the research questions.

3.5.1. Online Questionnaire

An online questionnaire, distributed via Google Forms, served as the primary instrument for quantitative data collection. This tool was designed to gather detailed information about participants' experiences with vocabulary-learning mobile game applications. Likert scale items

and close-ended questions were employed to collect comprehensive data on participants' demographics, usage patterns, perceived effectiveness, and overall satisfaction with the applications (Bhandari, 2023). See Appendix A for the complete questionnaire, including all sections and specific question formats.

3.5.2. Semi-Structured Interview Guide

A semi-structured interview guide was developed for in-depth interviews with chosen participants (Kvale & Brinkmann, 2015; Patton, 2015). This guide had open-ended questions intended to gather users' experiences, thoughts, and feedback on mobile vocabulary learning apps. The interviews focused on the participants' initial expectations, detailed experiences with the programs, reported effects on vocabulary acquisition, and suggestions for enhancement.

For interviews with participants who used non-gamified mobile applications, see Appendix B for the complete interview protocol. To learn more about the participants' responses and experiences, see Appendices C, D, and E, which contain sample answers from these interviews.

Similarly, for interviews with participants using gamified mobile applications, see Appendix F for a detailed interview protocol. Additionally, Appendices G, H, and I include a selection of sample responses that demonstrate participants' attitudes toward the use of gamified tools for vocabulary learning. These appendices provide a thorough understanding of the interview structure, as well as insights into participant experiences and feedback.

3.5.3. Data Recording and Analysis Tools

Additional tools supported accurate data collection and analysis:

- Digital Recording Devices: For capturing detailed responses for transcription and analysis from interviews.
- Transcription Software: For converting audio recordings into text for thematic analysis.
- Statistical Analysis Software (e.g., SPSS): For analyzing quantitative data from the questionnaire, enabling descriptive and inferential statistics.

- Qualitative Analysis Software (e.g., NVivo): For organizing, coding, and analyzing qualitative data from interview transcripts, enabling the identification of common themes and patterns.

The goal of the study in using these instruments was to thoroughly answer the research questions, providing valuable insights into the effectiveness and acceptability of mobile game-based learning applications for vocabulary acquisition among Iranian EFL students.

3.6. Procedure

The study followed a structured procedure, including the phases of participant recruitment, data collection, and data analysis.

Participants were selected through simple random sampling from Iranian EFL students aged 18 to 40. Telegram and WhatsApp served as the primary means of reaching a large participant base. Comprehensive instructions and study specifics were provided for participant awareness.

The study employed two primary data collection methods: an online questionnaire and semi-structured interviews. Data was gathered in two stages:

First, 100 participants completed an online questionnaire meant to gather information about their experiences and perceptions on vocabulary learning using mobile games. The questionnaire analyzed the efficiency of mobile applications in terms of vocabulary retention and overall user satisfaction. This method was used as the primary source of quantitative data, with descriptive statistics and inferential analysis confirming validity.

Following that, a subset of 20 participants was chosen for semi-structured interviews based on the questionnaire responses. These interviews provided qualitative data for thematic analysis of factors affecting vocabulary acquisition and retention. The participants were divided into two groups: one discussed their experiences with gamified mobile applications, and the other described their use of non-gamified applications. The interviews, which were conducted both online and in person, were recorded and transcribed for further analysis.

3.7. Data Analysis

Questionnaire responses were statistically analyzed to compare the effectiveness of gamified and non-gamified applications. Descriptive statistics were used to summarize the data.

Interview transcripts underwent thematic analysis to identify key themes (Braun & Clarke, 2006; Nowell et al., 2017) related to participants' experiences and perceptions of mobile game-based learning. This analysis identified recurring patterns and insights into the impact of gamified features on vocabulary acquisition.

Both quantitative and qualitative data were analyzed and interpreted in an integrated manner to evaluate the impact of MGBL. The qualitative data were used to explain and provide context to the quantitative results. For example, while the quantitative data indicated the effectiveness of gamified applications, the qualitative insights explained the specific features that contributed to this effectiveness.

Descriptive statistics summarized the questionnaire responses, and thematic analysis of interview data revealed patterns in participants' perceptions and experiences, offering a comprehensive assessment of MGBL's effectiveness.

Reliability analysis was conducted to confirm the internal consistency of the survey items. Cronbach's alpha for the key constructs ranged from 0.997, demonstrating excellent reliability.

3.8. Chapter Summary

This chapter described the methodological framework for studying the impact of Mobile Game-Based Learning (MGBL) on vocabulary acquisition among Iranian EFL students. The study took an explanatory sequential mixed-methods approach, combining quantitative and qualitative research techniques to gain a more nuanced understanding of the research questions.

Initially, an online questionnaire was distributed to 100 Iranian university students majoring in English to learn about their experiences and perceptions of mobile game apps. This phase was

dedicated to evaluating the applications' efficacy as well as overall user satisfaction.

The qualitative phase then began with semi-structured interviews with a subset of 20 participants from the initial sample. This phase provided more detailed information about participants' subjective experiences with both gamified and non-gamified mobile applications. The goal was to elicit detailed feedback on how gamified elements affect vocabulary acquisition and retention.

The instruments for data collection included a well-designed questionnaire, and a semi-structured interview guide. Data collection was carried out in two stages: quantitative data through online questionnaires and qualitative data through interviews. The analysis involved statistical methods for quantitative data and thematic analysis for qualitative data.

Integrating these methods ensured a comprehensive evaluation of MGBL's impact, capturing both broad statistical trends and rich, and detailed personal insights. This chapter set the groundwork for the study, leading to the presentation and discussion of findings in subsequent chapters, thereby contributing valuable knowledge to the field of English language teaching.

CHAPTER IV: RESULTS AND DISCUSSION

4.1. Introduction

This chapter presents the findings derived from both quantitative and qualitative data collected for this study. The results aimed to evaluate the effectiveness of Mobile Game-Based Learning (MGBL) and non-gamified applications in enhancing vocabulary acquisition among Iranian EFL learners. By addressing the study's research questions, the chapter explored learners' preferences, perceptions, and usage patterns of these applications while comparing them to traditional methods of vocabulary learning.

The chapter is split into two sections. The quantitative findings included statistical analyses of questionnaire responses from 100 participants, which highlighted key trends and patterns. Qualitative Results delved into the insights gained from semi-structured interviews with 20 students, offering a thorough examination of their experiences. Tables and figures were used in each section to improve clarity. Finally, the chapter included a summary of the findings, which can be discussed and interpreted.

4.2. Results
4.2.1. Quantitative Results

This section presents the statistical analysis of questionnaire responses, with an emphasis on participant demographics, attitudes toward vocabulary learning, and preferences for gamified and non-gamified applications.

4.2.1.1. Perceptions on Vocabulary Learning

Table 4.1 briefly summarizes the findings on perceptions of vocabulary learning and motivation. The data showed a strong recognition of the importance of vocabulary learning, with 95% of participants strongly agreeing or agreeing that it is critical.

Table 4.1

Participants' Perceptions on Vocabulary Learning

Statement	Mean	SD	Agreement Level
Vocabulary learning is essential for language acquisition.	4.85	0.42	Very High
I am motivated to learn new vocabulary.	4.65	0.50	High
Expanding my vocabulary is a top priority.	4.75	0.47	Very High

Furthermore, motivation levels were extremely high, as evidenced by a mean score of 4.65. This highlighted learners' strong enthusiasm and commitment to vocabulary acquisition, emphasizing its centrality in language learning. These results collectively underscored the importance of vocabulary-focused strategies to align with learners' positive attitudes and high motivation for this aspect of their development.

4.2.1.2. Gamified vs Non-Gamified Applications

Table 4.2, which was supported by user feedback on key metrics, highlighted a strong preference for gamified vocabulary learning applications. Participants rated their experiences and preferences, revealing that gamified tools were widely preferred due to their interactivity, enjoyment, and effectiveness, with 88% reporting increased engagement versus 45% for non-gamified apps.

Table 4.2

User Preference: Gamified vs Non-Gamified Apps

Metric	Gamified Apps (%)	Non-Gamified Apps (%)
Engagement	88	45
Retention of Learned Vocabulary	78	52
Usefulness as a Primary Learning Tool	72	35
Perceived Fun and Enjoyment	90	40

In addition, they outperformed non-gamified tools in terms of vocabulary retention (78% vs. 52%) and perceived usefulness as a primary learning tool (72% vs. 35%). Furthermore, 90% of users enjoyed gamified apps, which is significantly higher than the 40% rate for non-gamified tools.

Non-gamified tools, on the other hand, were useful for quick references but lacked the engaging features required for long-term motivation and usage. This data showed that gamification is effective at increasing engagement and vocabulary acquisition.

Figure 4.1

Preferences for Gamified vs. Non-Gamified Apps
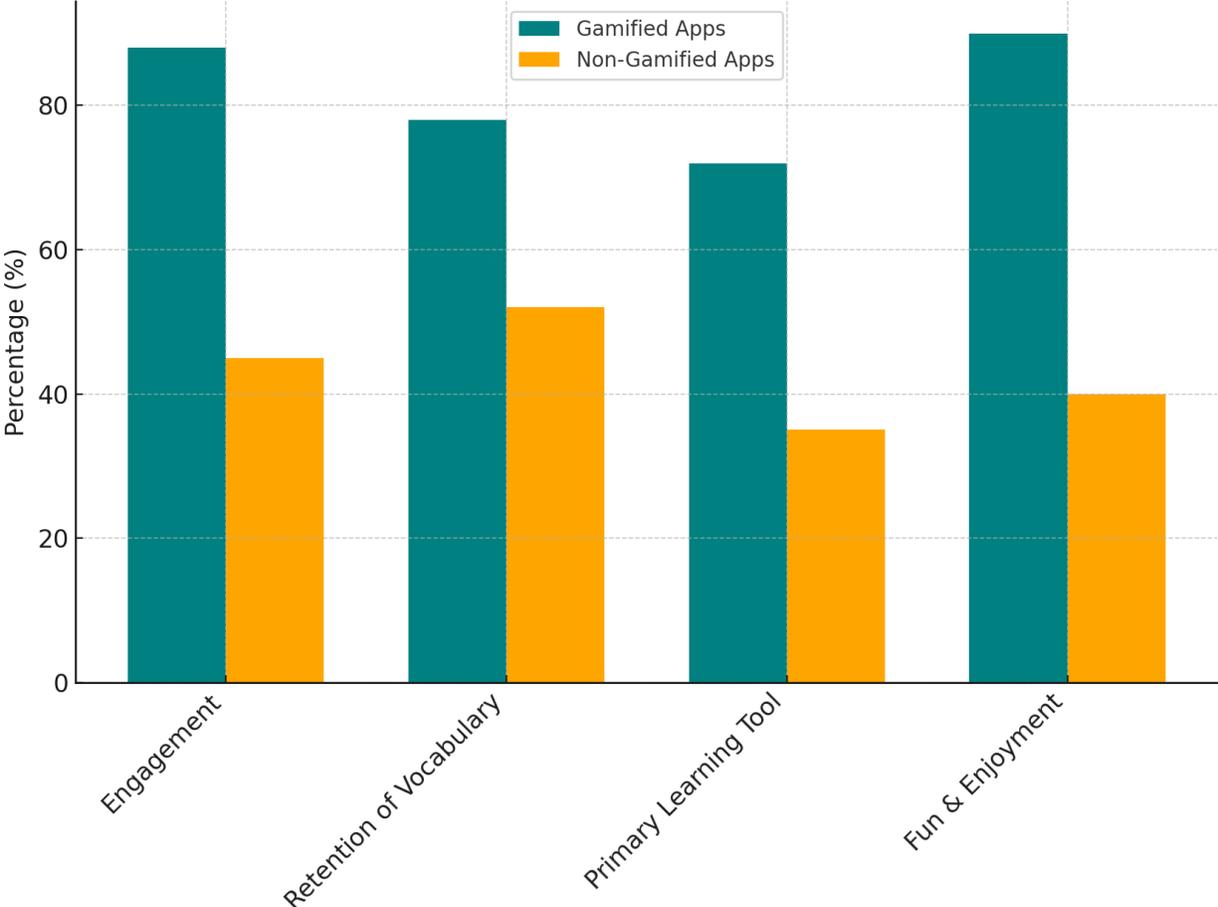
Figure 4.1, which depicts a grouped bar chart, further emphasized the contrast between participant preferences for gamified and non-gamified apps. The graph showed that gamified apps outperformed non-gamified ones across all metrics, particularly engagement (88% vs. 45%) and enjoyment (90% vs. 40%). This provided additional evidence of the popularity of gamification in vocabulary learning.

4.2.1.3. Features Influencing MGBL Adoption

Table 4.3 summarized the key findings derived from participant feedback and ratings of features critical to gamified mobile application adoption. Participants consistently identified interactivity and reward systems as the most appealing features, emphasizing their importance in increasing engagement.

Table 4.3

Features Influencing MGBL Adoption

Feature	Mean	SD	Importance Level
Progress tracking	4.75	0.48	Very High
Regular vocabulary updates	4.85	0.41	Very High
Interactive game design	4.80	0.45	Very High
Rewards and achievements (e.g., badges)	4.70	0.49	High

Furthermore, regular content updates were highly valued, indicating that students value the dynamic nature of learning environment. This preference for evolving content reflected a desire for continuous improvement and adaptation in the learning environment, emphasizing the importance of regular updates to keep learners engaged and motivated. These findings emphasized the importance of interactivity, rewards, and content evolution in providing an effective and engaging learning experience.

Figure 4.2

Importance of Gamified Features
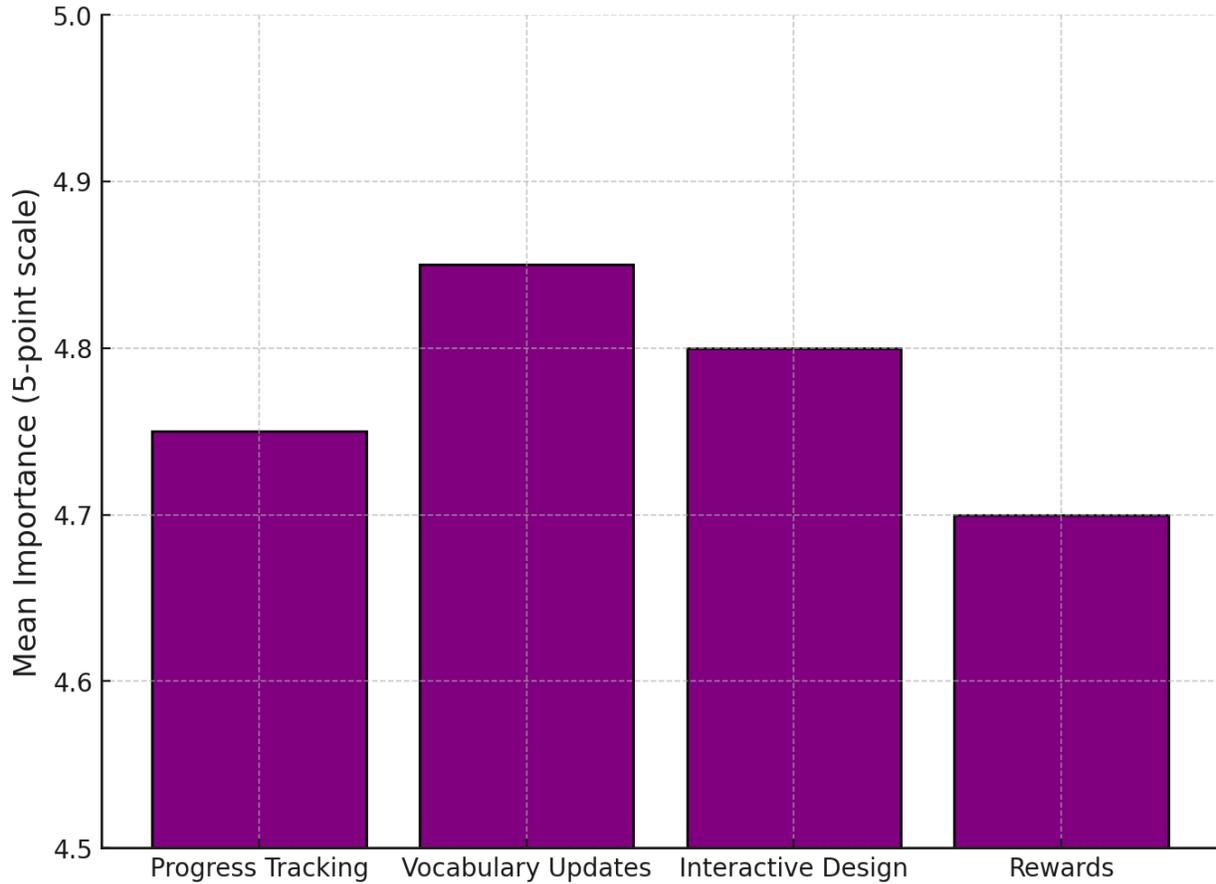
Participants' ratings for gamified features were further validated by Figure 4.2 through a bar chart, with regular vocabulary updates (mean: 4.85) and interactive design (mean: 4.80) achieving the highest ratings. These findings emphasized the need for dynamic and engaging elements in gamified learning tools.

4.2.1.4. Comparison with Traditional Methods

To investigate how mobile applications compare to traditional vocabulary learning methods, participants were asked to rate their effectiveness in various areas. Table 4.4 briefly summarized the study's main findings. Gamified applications were found to be extremely effective in terms of retention and motivation, with 78% of participants describing them as effective for long-term retention.

Table 4.4

Comparison of Gamified Apps and Traditional Methods

Aspect	Gamified Apps (%)	Traditional Methods (%)
Facilitates long-term retention	78	60
Encourages active participation	85	50
Provides contextual learning depth	45	85
Accessibility and ease of use	92	65
Overall preference	70	30

Furthermore, 92% of participants found gamified apps accessible and simple to use. Traditional methods, on the other hand, were deemed more beneficial for providing contextual depth and structured learning, with 85% emphasizing their importance in comprehending vocabulary in real-world contexts. While gamified tools were preferred overall, with 70% of participants favoring them, the results suggested that combining gamified and traditional approaches could provide the best outcomes for vocabulary learning.

4.2.1.5. Barriers to Adoption

Participants were also asked about the challenges they faced in using mobile applications for vocabulary learning. Table 4.5 presented an analysis of the challenges that participants faced. Financial and time constraints were the most frequently reported obstacles.

Table 4.5

Barriers to Adoption of Mobile Apps for Vocabulary Learning

Challenge	Percentage Reporting (%)
Limited access to suitable devices	15
Cost of premium application features	20
Lack of time for consistent usage	25
Preference for traditional methods	18
Overuse of gamification features	22

Furthermore, 22% of participants expressed concerns about the overuse of gamified features, specifically an overemphasis on rewards. This highlighted the need for a more balanced design that prioritizes learning outcomes over entertainment. The findings suggested that, while gamification can increase engagement, it must be carefully designed to avoid undermining educational goals. This analysis emphasized the importance of carefully integrating gamified elements into educational settings.

Figure 4.3

Barriers to the Adoption of Mobile Games
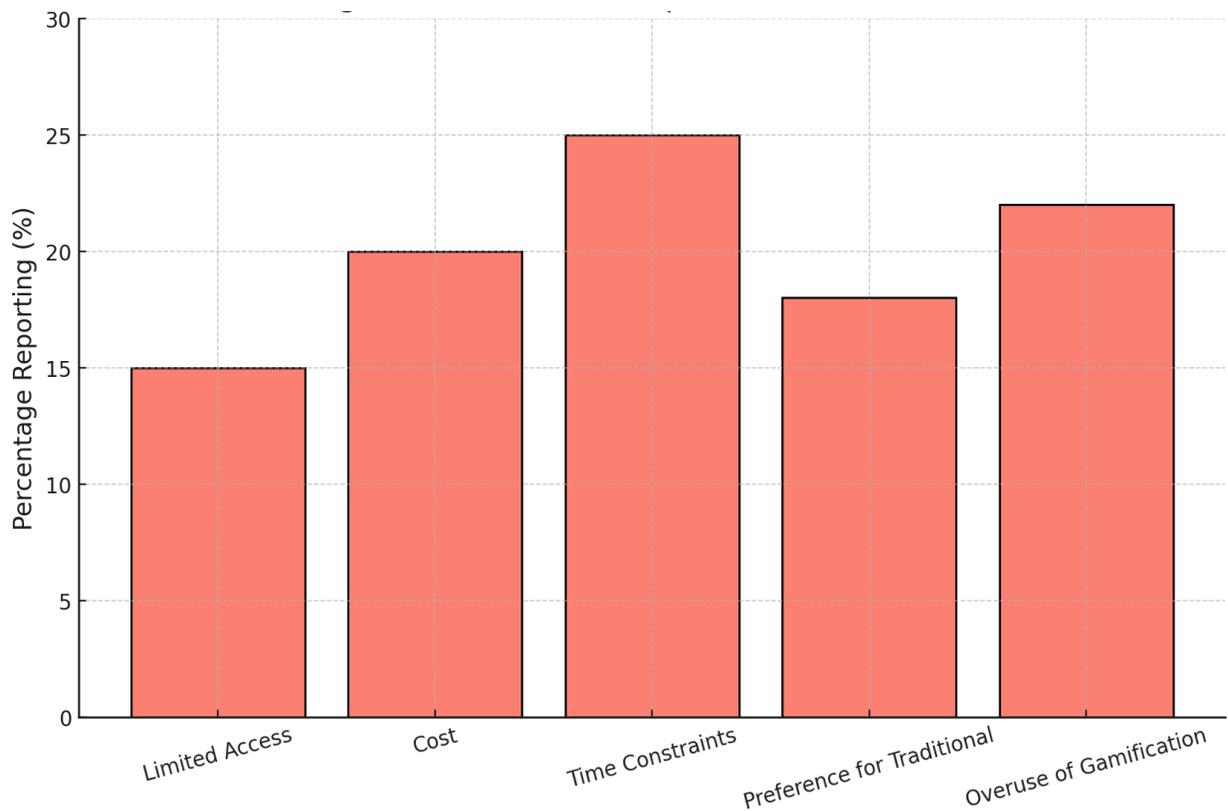
Figure 4.3 further confirmed participant-reported barriers to mobile game adoption with a bar chart, with time constraints (25%) and cost (20%) being the most frequently mentioned. This data demonstrated the importance of developing cost-effective, time-efficient solutions to improve accessibility.

Quantitative data from the online questionnaire showed that gamified applications were preferred by 88% of participants due to their engaging features. However, these findings were further illuminated by qualitative insights.

4.2.2. Qualitative Results

The study's qualitative phase delved deeply into the nuanced and multifaceted experiences of Iranian EFL learners with mobile vocabulary learning apps. It highlighted valuable insights gleaned from interviews with two distinct groups: those using non-gamified apps and those using gamified ones. The data were meticulously analyzed thematically, using actual participant responses as concrete evidence to back up the findings and add depth to the analysis. The data revealed several key themes, including motivation, engagement, effectiveness, learner challenges, and actionable suggestions for improvement. The findings seek to improve understanding of the learning dynamics associated with these applications.

4.2.2.1. Motivation: Non-Gamified vs. Gamified Mobile Applications

Participants had mixed views on why they would use non-gamified mobile apps for vocabulary learning. While the apps were praised for their practical value in assisting users in achieving specific learning objectives, the design elements were deemed insufficient in terms of motivation. Many users complained that the lack of interactive features made it difficult to establish consistent study habits or rely on the apps for self-directed learning. As a result, these applications were regarded as occasional tools rather than necessary platforms for daily use.

For instance, Participant 6 said, *"I do find it challenging to remember to use these apps regularly because there's nothing really drawing me back to them."*

Similarly, Participant 8 stated, *"They're practical, but they don't encourage me to study independently."*

Participant 1 added, *"These apps not really encourage me to study by myself. They are useful, but I don't feel like a push to continue."*

These responses highlighted a recurring problem: non-gamified apps have trouble maintaining user motivation. While their practical utility was recognized, the absence of motivational elements made consistent engagement difficult, preventing users from incorporating them into their daily routines. By addressing this gap, the effectiveness of these apps could be increased, ensuring that users are not only aware of their value but also motivated to return to them on a consistent basis.

Participants in the gamified group consistently reported higher levels of motivation, which they attributed to the apps' rewarding features. Unlike non-gamified options, these apps made vocabulary learning feel less boring and more fun. Participants discussed how rewards, levels, and points made studying less of a chore and more enjoyable, promoting long-term motivation and consistency.

Participant 1 explained, *"Yes, I feel more motivated with gamified apps. Before, I study only when I have a test. But now, I study more often. I even want to study every day because it is not boring."* Participant 5 said, *"Gamified apps make it easier to stay motivated on my own. Before, I depended more on class schedules or teachers to encourage me. Now, I keep going because I enjoy it."* Participant 3 also mentioned, *"These apps have improved my consistency. I used to struggle with finding time to study vocabulary. But now, even with a busy day, I can do a quick lesson. It's easy to stay motivated when there are rewards to reach."*

The responses clearly showed that gamified features, such as rewards and levels, were important in motivating the participants. By providing tangible accomplishments and a clear sense of progress, these elements encouraged users to stay committed to their studies. The sense of accomplishment that came with completing levels and earning points encouraged participants to develop regular study habits, making the learning process more enjoyable and self-motivating. Gamified apps effectively instilled a sense of personal accomplishment and continued involvement in vocabulary study.

4.2.2.2. Engagement: Non-Gamified vs. Gamified Mobile Applications

Users of non-gamified apps consistently reported low levels of engagement, citing the absence of

interactive features. Many people found the experience repetitive and difficult to stick with because the apps lacked elements that piqued their interest or encouraged active participation. These apps were commonly perceived as practical tools rather than immersive learning experiences, causing users to regard them as tasks rather than engaging activities.

Participant 4 remarked, *"It's hard for me to stay engaged with these apps. The lack of interaction makes it feel more like a task than a learning experience."*
Participant 9 echoed this sentiment, stating, *"They don't keep my attention for long. They feel more like reference tools, and I don't feel very engaged when using them."*
Participant 10 added, *"I find hard to stay interested in these apps because they don't feel engaging. I think it will be hard to stay engaged without some way to see progress or things to do that make the learning more interesting."*

According to comments, the lack of interactive elements and progress monitoring in non-gamified apps lead to a disengaged user experience. The learning process felt monotonous and disconnected from users' interests in the absence of dynamic elements to keep them engaged. As a result, these apps struggled to maintain sustained engagement, which limited their potential in promoting long-term learning. Non-gamified apps, by failing to provide an engaging environment, prevented users from fully immersing themselves in the learning process.

Participants who used gamified applications reported high levels of engagement, which they attributed to the apps' dynamic and interactive elements. Challenges, rewards, and progress tracking helped to convert the learning process from a mundane task to an exciting and pleasurable activity. These game-like features successfully drew users' attention by providing constant stimulation that kept them engaged and focused on their learning.

Participant 1 noted, *"They are fun and easy to use. I feel interested because they have rewards and games. It's not hard to stay focused because you want to win points. Sometimes I spend more time than I think because it is like playing a game."*

Participant 6 added, *"The game-like challenges make it interesting, so I do not lose focus easy like I do with old study methods."*

Participant 4 shared, *"For me, they are very interesting. The points, daily goals, and reminders help me to study regularly. I feel, not like traditional study, I don't need to force myself so much to stay focused because it's fun."*

Participants' reported engagement was directly related to the gamified features that made the learning experience more interactive. Challenges, rewards, and real-time progress tracking not only kept users interested, but also instilled a sense of accomplishment, encouraging them to return frequently. Streaks, reminders, and points all helped to improve consistency and study habits, resulting in an environment where learning was both enjoyable and rewarding. These features effectively combined education and entertainment, keeping users engaged throughout their learning experience.

4.2.2.3. Effectiveness: Non-Gamified vs. Gamified Mobile Applications

Generally, non-gamified applications were considered useful for quick word searches, but participants expressed doubts about their effectiveness for long-term vocabulary retention. Although the apps were handy for reviewing individual words and checking definitions, they lacked the features necessary for deeper learning. The lack of structured activities such as quizzes or spaced repetition made it difficult for users to remember new vocabulary beyond brief use.

Participant 5 explained, *"I not really see much improvement in my vocabulary from using them. They okay for check words, but not good for deeply learn new words. I think they can work better if they have things like tests or spaced review for help memorization."*

Participant 3 observed, *"In my experience, they are somewhat effective, but only as quick references. They help me find meanings or translations quickly, but they don't reinforce vocabulary in a way that ensures retention. To be more effective, they should include structured reviews and exercises for repeated practice."*

Participant 2 also noted, *"They've been useful for reviewing and remembering some words, but I wouldn't say they are very effective. They are missing things that would help the learning stay, like*

spaced repetition or quizzes. If they had better review features, they could be more helpful for long-term vocabulary improvement."

According to the feedback, non-gamified apps served a specific purpose but struggled to support long-term vocabulary retention. Their reliance on quick reference rather than active practice limited their ability to provide the repetition required for long-term learning. Features such as spaced repetition, interactive exercises, and progress tracking could help them perform better. Without these elements, these apps were useful for immediate needs but failed to help users fully internalize new vocabulary over time.

Participants in the gamified group emphasized the apps' efficacy in increasing vocabulary development. The combination of structure and interactive elements allowed for consistent, meaningful practice, which improved new vocabulary retention and recall. The variety of exercises and repetition helped to prevent boredom, while the flexibility of self-paced learning allowed participants to review terms as needed, reinforcing retention at their own pace.

Participant 3 stated, *"In my experience, they are quite effective. Since I'm constantly practicing vocabulary in various contexts on the app, it becomes easier to recall these words in real situations."*

Participant 1 elaborated, *"They are good for improving my vocabulary. The app repeats and shows the words many times, so I don't forget them. Also, when it makes me practice old words, I can remember them better. It helps me a lot."*

Participant 7 added, *"I find them effective because they allow me to learn at my own pace, and I get regular practice without it feeling like a burden. The structure helps me keep track of what I've learned."*

The feedback emphasized the importance of repetition, a variety of activities, and progress tracking for vocabulary retention. Gamified apps allowed participants to practice and internalize vocabulary in a variety of contexts by providing regular reviews through spaced repetition and varied tasks. This combination of structured and flexible learning methods created an effective environment for

long-term vocabulary retention, increasing participants' confidence in their ability to apply new terms in real-world situations.

4.2.2.4. Challenges: Negative Aspects for Both Non-Gamified and Gamified Mobile Applications

Participants frequently cited a lack of engaging features and achievement tracking in non-gamified apps as a major disadvantage. Many people found these apps dull and uninspiring due to the lack of interactive elements or feedback. Without milestones or ways to track progress, users struggled to find direction and stay engaged, reducing the overall value of the learning experience.

Participant 7 stated, *"Without interactivity or rewards, they are not engaging enough. It also can be hard to know if I'm making progress."*

Participant 6 added, *"The lack of immediate feedback or progress tracking can make the experience feel a bit flat and uninspiring."*

Participant 4 also remarked, *"These apps can feel boring, especially because they don't give any rewards or goals to motivate me. Without these, I quickly lose interest and stop using them."*

Participants' feedback highlighted the difficulty of maintaining consistent use of non-gamified apps, owing to the lack of dynamic features or progress tracking. Without rewards or clear milestones, the learning process felt tedious and uninteresting, which caused many users to lose interest quickly. Incorporating more engaging elements and feedback-driven features could help address these issues and increase user retention and involvement in the learning process.

Although gamified applications were praised for their engaging and interactive features, some participants reported difficulties during the learning process. While competitive elements motivated users, they occasionally resulted in a focus on points rather than actual language acquisition. The repetitive nature of specific tasks, combined with a lack of variety, limited vocabulary exposure, raising concerns about how to strike an effective balance between entertainment and education.

Participant 1 mentioned, *"Sometimes I focus too much on the game, like winning points or leveling up. I don't pay attention to words really, so I don't learn them well. It's a bit distracting sometimes."*

Participant 6 noted, *"Some of the games feel repeated and same after some time. They are fun in start, but I wish there is more different activities. Otherwise, I start to feel a bit bored."*

Participant 3 added, *"For me, the challenge is that some words don't appear often enough in the exercises, so it's hard to remember them later. Also, I think the focus on winning can sometimes make me rush through the exercises without fully understanding the words."*

Feedback indicated that, while entertaining, gamified apps could occasionally impede deeper learning due to repetitive tasks and limited vocabulary exposure. The emphasis on competition may also lead users to rush through exercises, reducing the quality of their learning. A more diverse set of activities, with a stronger emphasis on educational content, would better balance entertainment and language retention objectives.

4.2.2.5. Suggestions for Improvement: Enhancements for Both App Types

Participants' suggestions for improving non-gamified apps were primarily about improving long-term language retention and encouraging consistent use. To support regular practice, key recommendations included the use of progress tracking, reminders, and review systems. Many people suggested adding interactive features like customizable word lists, quizzes, and spaced repetition to better meet the needs of individual learners. Some participants suggested combining non-gamified apps with traditional methods to add depth and context to the learning experience, arguing that a hybrid approach could make these apps more effective for long-term language learning.

Participant 5 proposed, *"I think they need to add a way to review words I already learn, so I can keep them in my memory. It also could be helpful if they give small rewards or points for finish lessons, this would help me stay motivated."*

Participant 9 suggested, *"These apps would be better with reminders to help me practice every day and progress tracking to make the learning feel more goal-oriented."*

Participant 2 recommended, *"It would help to add more interactive things, like quizzes or review exercises after learning new words. Also, having a spaced repetition feature would help remember the words better."*

Participant 6 noted, *"These apps are convenient and useful, but I believe traditional methods offer more depth. Books and classroom learning provide more context and examples, which these apps often lack. I think the best approach would be a mix of both, where apps complement traditional methods."*

The suggestions revealed a clear need for non-gamified apps to include more interactive and personalized features. Progress tracking, review systems, and spaced repetition all have the potential to promote ongoing engagement and vocabulary retention. Incorporating traditional learning methods alongside these apps would also help to fill in the depth and context gaps. By incorporating these enhancements, non-gamified apps can provide a more dynamic and comprehensive learning environment, assisting users in developing better long-term language skills.

Participants suggested numerous improvements to gamified applications, with a focus on increasing vocabulary and diversifying activities to improve the learning experience. Many users expressed a desire for more participatory and competitive features, such as challenges and leaderboards, which may increase engagement. Others proposed providing more advanced vocabulary and contextual learning, such as practicing words within sentences or incorporating writing tasks. Other participants proposed combining gamified apps with traditional methods to provide an academic layer, balancing pleasure and instructional value for a broader range of students.

Participant 3 suggested, *"I'd like to see more social or competitive features, like being able to challenge friends."*

Participant 2 added, *"I think adding a feature where we can review vocabulary in sentences would be helpful. Sometimes I learn words alone, but using them in sentences makes it easier to remember. Maybe writing exercises or prompts could help too."*

Participant 9 remarked, *"I'd suggest focusing on collocations or phrases instead of just single words. It would also be helpful if the app could provide more advanced vocabulary for learners at a higher level."*

Participant 7 noted, *"While gamified apps are motivating and keep you engaged, traditional methods still offer a more academic feel, which is important. Apps may be better for quick vocabulary practice, but textbooks provide more in-depth understanding, especially for more complex words."*

The suggestions revolved around the need for gamified apps to provide more interactive and context-driven learning experiences. Adding social features such as challenges, practicing vocabulary in context through sentence exercises, and incorporating traditional learning methods may increase the educational value of the apps while also keeping them engaging. Increasing the vocabulary to include more advanced phrases and collocations would help cater to learners at various levels. If these changes are made, gamified apps may offer a more comprehensive, balanced, and effective language-learning experience.

The findings revealed significant differences in motivation, engagement, and effectiveness between non-gamified and gamified mobile applications. Non-gamified apps, while useful for quick reference, frequently fell short in engaging users and promoting long-term learning due to the absence of interactive features and progress tracking. In contrast, gamified apps effectively used interactive, reward-based elements to increase motivation and engagement, resulting in improved vocabulary retention. Despite their qualities, both types of apps had room for growth. Participants emphasized the importance of increased engagement, enhanced progress tracking, and personalized learning tools to enhance the educational experience. These qualitative insights provide context to the quantitative data, illustrating the specific elements that contribute to the effectiveness of gamified applications.

4.3. Discussion

The findings of this study shed light on the efficacy of Mobile Game-Based Learning (MGBL) in improving vocabulary acquisition among Iranian EFL students. By integrating quantitative and

qualitative data, the study provides a comprehensive understanding of how gamified and non-gamified apps influence learners' engagement, motivation, retention, experiences, and outcomes. The quantitative data revealed that gamified apps were more engaging and effective than non-gamified apps. The qualitative data provided deeper insights into why this was the case, with participants highlighting the role of rewards, progress tracking, and interactive features in maintaining motivation and interest. Triangulating these data sources not only validated the study's findings but also placed them within the larger context of language education. Recent studies further supported the effectiveness of MGBL in improving vocabulary acquisition for EFL students. According to research, MGBL significantly improved vocabulary acquisition and retention compared to non-gamified methods (Alhebshi & Gamlo, 2022; Chen et al., 2019).

One of the most notable findings of this study was the enormous benefit of gamified applications in engaging learners and increasing motivation. Quantitative data showed that gamified applications outperformed non-gamified apps in terms of engagement, retention, and enjoyment. These findings were in line with gamification theory, which emphasized the importance of interactive and reward-based features in creating an engaging learning environment. Participants repeatedly stated that elements like points, progress monitoring, and instant feedback kept them motivated and promoted continued use. This demonstrated how gamified applications may turn vocabulary acquisition from a tedious process to an exciting and self-directed activity. Such findings underscored the value of gamification in making vocabulary acquisition more engaging, particularly for EFL learners who may otherwise struggle with maintaining motivation. Recent research corroborated this viewpoint, consistently indicating that gamified approaches enhanced learning outcomes, elevated motivation, and heightened satisfaction in comparison to traditional methods (Avila & Fonseca, 2021; Genç Ersoy et al., 2021; Yu, 2023). Furthermore, learners themselves perceived gamified instruction positively, considering it an efficient way to learn and practice vocabulary (Sadeghi et al., 2022).

However, the advantages of gamified applications went beyond just engagement. According to the study, these tools helped people remember their vocabulary more effectively. Participants reported that the repetitive and structured nature of gamified applications, combined with varied tasks and

spaced repetition, improved long-term memory retention. This finding was consistent with cognitive learning theories, which suggested that frequent retrieval and practice in a variety of contexts improve memory consolidation. Gamified applications encouraged learners to revisit and reinforce their knowledge by incorporating vocabulary into interactive exercises and providing regular reviews, resulting in deeper retention. This was especially important for EFL students, as vocabulary retention was frequently a major issue in language acquisition. As a result, the structured but dynamic nature of gamified applications offered a promising solution to this problem. Supporting this, Lafleur (2024) emphasized the improvement of learning efficiency through gamification elements inspired by and promoting spaced repetition principles, noting that a higher ratio of items remembered per time invested may hold the most promise. Similarly, Jaramillo-Mediavilla et al. (2024) emphasized that gamification improves knowledge retention by encouraging active learning, in which students actively participate in tasks and challenges related to course content, consolidating their learning.

While gamified applications showed clear advantages, the findings also revealed some limitations and areas for improvement. Several participants expressed concern about the repetitive nature of some applications' tasks, which occasionally resulted in boredom or disengagement. Others observed that the emphasis on earning rewards, such as points or badges, sometimes overshadowed the actual learning process, causing students to concentrate on meeting game-related milestones rather than understanding the vocabulary itself. These observations suggested that while gamification was effective in capturing learners' attention, an over-reliance on extrinsic motivators might detract from intrinsic learning goals. To address this, developers should consider incorporating a wider variety of activities and integrating more contextualized learning opportunities, such as sentence-building exercises or real-world applications of vocabulary. Gamified applications can better align their design with the ultimate goal of language mastery by balancing entertainment and educational rigor. Supporting this, Sousa et al. (2022) argued that using games in planning is difficult due to limitations in the available frameworks and methods. Despite this, they emphasized the potential of serious games (SG) to promote participation, collaboration, and innovation, implying the need for careful integration and design. Serious games have yielded significant outcomes for different subject areas such as social studies (Cruz et al.,

2017). Similarly, Bader et al. (2024) observed that, while gaming mechanisms in e-learning applications such as Duolingo have a neutral to relatively positive impact, excessive use of gamification may harm the learning experience. They discovered that gamification effectively captures attention but can quickly lose it if exercises prioritize gaming elements over theoretical depth or fail to meet diverse user expectations. These findings highlighted the importance of balancing engagement with meaningful educational content in order to maximize gamification's benefits in language learning.

Non-gamified applications, on the other hand, were perceived to be less engaging and effective for long-term vocabulary learning. Participants frequently described these tools as functional but uninspiring, relegating them to only occasional use rather than regular practice. While they were thought to be useful for quick reference or targeted review, their lack of interactive and motivational features limited their ability to support long-term learning. This study exposed a key problem in the design of non-gamified applications: a lack of aspects that stimulated frequent use and active involvement. Adding features like as progress tracking, reminders, and personalized review regimens could significantly boost their utility and appeal. Furthermore, incorporating gamification elements, even in moderation, may help bridge the gap between functionality and engagement, making these tools more adaptable and efficient. In support of these findings, Jagušt et al. (2017) compared non-gamified digital lessons to gamified ones and discovered that the latter improved students' motivation and focus. Students in gamified environments completed more tasks and remained engaged for longer periods of time, whereas non-gamified students were more likely to become bored and unproductive. Similarly, Hussain et al. (2018) investigated how gamification affects motivation and retention among university students. Their findings revealed that participants in gamified environments were more motivated, engaged, and retained than non-gamified counterparts. These findings supported the idea that, while non-gamified applications have a functional purpose, incorporating even minor gamification features can significantly improve user motivation and engagement.

Another key finding from the study was the importance of personalization and adaptability in mobile learning applications. Participants consistently emphasized the value of features that

allowed them to control the pace and difficulty of their learning. Gamified applications were particularly effective in this regard, as they often provided adaptive challenges tailored to the user's skill level. In the study conducted by Lavoué et al. (2018), the personalized gamification positively affected the students' experience (i.e., students' using the adapted version of the gamified system spend significantly more time in the system). Most recently, Hallifax et al. (2020) simulated different adaptation techniques in a gamified educational system. They identified that students who used personalized versions were more engaged and motivated. They also perceived personalization can increase intrinsic motivation and decrease amotivation when compared to a solely learner-driven adaptation. This adaptability not only met individual learning needs, but it also promoted a sense of autonomy and self-direction, both of which are essential for long-term motivation. However, the absence of such features in non-gamified applications frequently resulted in a one-size-fits-all approach, limiting their effectiveness for a wide range of learners. These findings emphasized the importance of personalization in vocabulary learning tools, implying that both gamified and non-gamified applications should prioritize adaptability to meet the diverse needs of EFL students.

The qualitative findings also revealed valuable insights into learners' preferences and challenges. While gamified applications were praised for their engaging features, some participants expressed a desire for more complex and contextualized vocabulary practice. For example, many participants suggested incorporating sentence-based activities or exercises that focus on collocations and phrases rather than isolated words. Such elements may help students better comprehend how terminology is utilized in real-world circumstances, hence boosting their ability to apply their knowledge in practical scenarios. Participants also advised incorporating social or collaborative components, such as peer challenges or group activities, to boost engagement and promote a feeling of community among students. These recommendations were consistent with social learning theories, which emphasized the value of interaction and collaboration in language acquisition. Mobile applications that include these elements may offer a more comprehensive and immersive learning experience. Nicholson (2015) agreed with these viewpoints, arguing that the long-term goal of gamification systems should be to guide learners toward deeper engagement with real-world contexts, eventually transitioning them away from gamification. As learners

become more immersed in the system, they should gradually spend more time applying their knowledge in real-world situations. Thurairasu (2022) also discussed how gamification reinforces important educational skills like problem solving, collaboration, and communication. Advanced gamified systems frequently allow students with similar language proficiency levels to pair up and provide mutual support. Professional gamification platforms also promote online classroom cultures that emphasize collaboration, patience, and progress over perfection. These insights further underscored the potential of gamified applications to create a more comprehensive and socially enriched learning environment.

Despite their benefits, both gamified and non-gamified applications faced adoption barriers, as the study demonstrated. Common obstacles included limited access to appropriate devices, financial constraints associated with premium features, and a lack of time for consistent usage. In their research, Ampatzidou et al. (2018) mentioned that despite the generally positive attitude towards games and gamified applications, barriers and challenges seem to impede their regular use. They added that one of the main barriers was identified as a resource scarcity that limited the development of and engagement with such tools. Additionally, some participants raised concerns about the overuse of gamification features, which they felt could detract from the educational value of the applications. The overuse of gamification in the classroom demotivated students. Through this response, it could be said that different students have different ways of getting motivated (Alomari et al., 2019; Soundrarajan et al., 2022). These findings emphasized the importance of taking a balanced approach to develop and implementing mobile learning technologies. Developers should strive to make their applications both accessible and affordable, while maintaining a focus on educational quality. Furthermore, educators and policymakers should think about incorporating these technologies into formal language training to address accessibility issues and ensure that students receive the support they need to reap the most benefits.

For educators, developers, and policymakers, the findings of this study have significant implications. For educators, the findings demonstrated the potential of gamified applications to improve vocabulary instruction by making it more engaging and effective. Incorporating these tools into classroom activities or assigning them as supplementary resources may help students

improve their vocabulary in a more dynamic and enjoyable manner. Developers, on the other hand, should focus on overcoming the limitations of current applications by incorporating more diverse, contextualized, and adaptive features. This includes striking a balance between gamification and educational content in order to maintain the primary focus on learning. For policymakers, the study emphasized the importance of promoting equitable access to mobile learning technologies, particularly in contexts where socioeconomic and infrastructure hurdles may prevent their adoption. Funding educational technology efforts and ensuring that schools have access to digital resources could help to overcome these problems.

Finally, this study showed that mobile game-based learning has a high potential for improving vocabulary acquisition among Iranian EFL learners. Gamified applications, with their engaging and interactive features, proved to be especially effective at increasing motivation, engagement, and retention. However, both gamified and non-gamified applications could be enhanced, notably in terms of customization, contextualization, and accessibility. By addressing these challenges, mobile learning technologies may improve their effectiveness and contribute to the development of new, learner-centered vocabulary education approaches. These findings not only helped us understand the role of mobile applications in language acquisition, but they also gave us valuable insights into how to design and implement more effective educational technology.

4.4. Chapter Summary

This chapter presented a thorough study of the quantitative and qualitative data collected to determine the efficacy of Mobile Game-Based Learning (MGBL) and non-gamified applications in increasing vocabulary learning among Iranian EFL students. The findings highlighted benefits and limitations of both learning systems, offering insights into their suitability in current educational environments.

The quantitative analysis demonstrated the significant benefits of gamified applications for increasing engagement, motivation, and vocabulary retention. When using gamified tools, participants consistently reported higher levels of enjoyment and sustained focus than when not using them. Statistical comparisons revealed that gamified apps outperformed other apps in several

metrics, including engagement (88% vs. 45%) and vocabulary retention (78% vs. 52%). This implied that gamified features like rewards, interactive exercises, and progress tracking were essential for making vocabulary learning more dynamic and enjoyable. At the same time, non-gamified tools were praised for their functional utility, particularly for quick reference or targeted reviews, but they fell short of maintaining user interest and encouraging consistent use.

Qualitative data presented a more complete picture of learner experiences, emphasizing the motivational contrasts between the two application types. Gamified technologies have been shown to effectively engage learners by including components like challenges, leaderboards, and reward systems, making the learning experience more fun. Participants reported that these features not only encouraged frequent use, but also provided a sense of accomplishment, reinforcing their motivation to continue learning on their own. Some users, however, expressed concern about the overemphasis on rewards and repetitive tasks, claiming that these elements occasionally interfered with deeper vocabulary acquisition. Non-gamified applications, on the other hand, were criticized for their lack of engaging features and interactive elements, which frequently resulted in disinterest and inconsistent use. While they served as practical tools for immediate needs, their limited design failed to support the long-term retention and comprehensive understanding necessary for language mastery.

Both approaches identified distinct barriers to adoption. Cost, limited access to appropriate devices, and time constraints were frequently cited as obstacles, particularly for gamified applications. Furthermore, excessive use of gamified elements, such as an overemphasis on point accumulation, had the potential to diminish the educational value of these tools. Non-gamified applications, on the other hand, struggled to maintain user interest due to their static and one-dimensional design, which lacked features like progress tracking and personalized learning pathways. These findings implied that, while both types of applications had benefits, addressing these limitations through thoughtful design and integration could significantly boost their overall impact.

Participants made several actionable suggestions for improvement, emphasizing the value of personalization, variety, and contextual learning. Learners suggested that gamified applications include more diverse activities, such as sentence-building exercises, collocation practice, and real-world vocabulary applications. Social and collaborative features, such as peer challenges and group competitions, were also proposed to promote a sense of community and shared learning. Non-gamified applications saw significant improvements, including the addition of interactive features such as quizzes, progress tracking, and reminders, which could encourage more consistent usage and reinforce long-term retention. Furthermore, incorporating gamification elements into these tools was proposed as a means of closing the engagement and functionality gap.

These findings have important implications for educators, developers, and policymakers. For educators, the study emphasized gamified applications' ability to make vocabulary instruction more engaging and learner-centered. Incorporating these tools into classroom activities or suggesting them as additional resources may improve student performance. Developers are encouraged to address the limitations of both types of applications, especially by striking a balance between entertainment and educational rigor. This entails developing tools that are not only enjoyable but also highly effective in promoting meaningful language learning. Policymakers, on the other hand, must consider broader issues of accessibility and affordability, ensuring that mobile learning technologies are accessible to a wide range of populations, regardless of socioeconomic status.

Finally, this chapter showed how mobile learning apps can improve language acquisition. Gamified tools, with their interactive and motivating features, have been shown to be particularly effective in increasing learner engagement, retention, and satisfaction. Non-gamified tools were functional, but they required significant improvement to meet the evolving needs of language learners. Both application types could make a meaningful contribution to the development of innovative, inclusive, and effective vocabulary learning strategies by addressing identified limitations and incorporating learner-centered features. These findings laid the groundwork for future research and practical advancements in mobile-assisted language learning, paving the way for more dynamic and impactful educational tools.

CHAPTER V: CONCLUSION AND IMPLICATIONS

5.1. Introduction

This chapter serves as the study's comprehensive conclusion, summarizing its findings, implications, limitations, and potential future research directions. The study's primary goal was to assess the efficacy of Mobile Game-Based Learning (MGBL) in improving vocabulary acquisition among Iranian EFL students. The integration of gamified and non-gamified mobile applications into language learning was thoroughly investigated using quantitative and qualitative analyses, which revealed valuable insights into learner behavior, preferences, and outcomes. These findings provide a solid foundation for investigating mobile technology's innovative potential in education.

The study is consistent with growing global trends emphasizing the use of digital tools in language education, particularly in regions where traditional resources may be limited. This study not only explains how gamified applications can transform vocabulary acquisition, but it also emphasizes the importance of tailoring these tools to specific cultural and educational contexts. By connecting theoretical frameworks and empirical evidence, the study establishes a precedent for using gamified learning technologies to fill existing gaps in language instruction.

5.2. Summary of the Main Findings

This study employed an explanatory sequential mixed-methods approach to investigate the effectiveness of mobile game-based learning (MGBL) for vocabulary acquisition among Iranian EFL learners. By combining quantitative and qualitative data, the study provided both broad statistical insights and deeper contextual understanding of learners' experiences and preferences.

The study's quantitative data highlighted several important trends in vocabulary acquisition using mobile applications. These findings emphasized the measurable advantages of gamified tools over their non-gamified counterparts:

A remarkable 88% of participants using gamified applications reported high levels of engagement compared to 45% for non-gamified applications. The interactive features, combined with

motivational rewards, greatly increased learner participation. Engagement was critical for maintaining motivation and promoting a positive learning environment.

Gamified tools demonstrated superior performance in facilitating vocabulary retention, with 78% of users reporting effective long-term recall versus 52% for non-gamified tools. This disparity emphasized the significance of organized repetition and contextual learning, both of which are features of gamified platforms.

Among participants, 72% identified gamified apps as their preferred primary learning resource, compared to 35% for non-gamified apps. This preference indicated a broader acceptance of gamification as a viable replacement or complement to traditional methods of instruction.

The qualitative interviews provided a more nuanced understanding of user experiences. These in-depth perspectives revealed critical insights into learner behavior and app effectiveness:

Gamified applications continually inspired learners via reward mechanisms, progress tracking, and challenges. Users felt that these components made language acquisition an entertaining pastime rather than a work. This intrinsic motivation was a significant factor in their sustained use.

Participants reported that non-gamified tools lacked engaging features, progress tracking, and interactive components, making them less appealing and effective for long-term use. These apps were frequently viewed as static tools, only useful for short-term reference or occasional use.

Gamified apps' diverse activities, such as spaced repetition and contextualized vocabulary practice, have been praised for promoting deeper retention when compared to non-gamified tools, which are more static. Repeated exposure to vocabulary in different contexts resulted in better integration into long-term memory.

Furthermore, the interviews emphasized the contextual relevance of gamification. Participants emphasized the role of interactive design in instilling a sense of accomplishment and progression,

both of which are necessary for developing a habit of consistent learning. Gamification's motivational benefits extend beyond the classroom, indicating that it has a broader application in lifelong learning.

5.3. Implications of the Study

The study's findings have significant implications for language education, educational technology, and general teaching practices. These implications highlight the potential benefits of gamified mobile applications for vocabulary learning and provide educators, developers, and policymakers with practical advice. These implications are broken down into sub-sections to help you understand their impact.

The findings have several important pedagogical implications for educators that can improve teaching practices and student outcomes:

The study highlights the potential of gamified tools to encourage active engagement among students. Learning environments can be made more engaging and fun by educators by implementing interactive challenges and rewards. This change in approach tackles prevalent problems of disengaged learners and encourages a more comprehensive approach to education.

Mobile applications' flexibility allows for customized learning experiences that meet the requirements and preferences of each individual learner. With the help of these resources, educators can provide a more inclusive learning environment by accommodating students' varying skill levels and rates of learning.

Gamified applications and traditional classroom instruction can be combined to improve language learning results. Blended learning ensures that students receive both structured instruction and independent exploration.

For developers and educational technologists, the findings suggest the following: Progress tracking, regular vocabulary updates, and context-based learning exercises are all important

features that improve the user experience and effectiveness of mobile applications. These features can help to fill gaps in traditional educational models, especially in remote or underserved areas. While gamified elements are effective, overemphasis on rewards can detract from educational objectives. A balance between entertainment and learning is crucial to ensure long-term effectiveness and academic rigor.

Ensuring that mobile apps are accessible across a wide range of technological and economic situations, particularly in nations such as Iran, is critical to expanding their educational reach. Developers must prioritize the design of low-cost, user-friendly interfaces that accommodate varying levels of digital literacy.

Designing apps that reflect the linguistic and cultural context of the learners can increase their effectiveness. Incorporating culturally appropriate content and examples enhances relatability and learner engagement.

Beyond individual classrooms and technological advancements, these findings offer insights into systemic changes and broader educational strategies. They underscore the following:

The findings are in line with global trends that promote technology integration in education. Institutions that adopt gamified learning can lead to educational innovation.

Teacher training programs should have modules on effectively using gamified tools. Educators who understand their features and pedagogical applications can maximize their potential.

Gamified learning solutions should be included in national curricula by policymakers to tackle language education challenges. Governments can promote equitable access to quality education by investing in scalable digital solutions.

5.4. Limitations of the Study

Despite its contributions, this study has several limitations that need to be acknowledged:

The study's focus on Iranian EFL learners may limit its relevance to other contexts. Future studies could look at a variety of populations to improve generalizability.

While the study had a large number of participants, a more diverse sample may have yielded more valuable insights. Expanding participant demographic diversity would improve the findings' robustness.

The analysis focused on current apps. The creation and testing of customized applications specifically designed for Iranian students may yield additional results, providing deeper insights into culturally relevant educational strategies.

The study's short duration may not fully capture long-term retention and learning trends. A longitudinal approach could address this limitation by providing a more complete picture of the impact of gamified learning over time.

The study focused mostly on intermediate learners, and the perspectives of advanced learners were not completely explored. Future studies might look into how gamified tools accommodate advanced users.

5.5. Suggestions for Further Research

To build on the insights provided by this study, future research could explore examining how gamified applications affect vocabulary retention and linguistic competency over time. Such investigations would provide important information about the long-term benefits of MGBL. It looks promising to extend the research to include learners from various cultural and educational backgrounds to assess the universal applicability of gamified learning tools. Comparative studies could highlight regional variations in efficacy.

Additional studies are warranted to study the outcomes of blended learning models that combine gamified apps with conventional classroom teaching. This approach could identify the optimal balance between traditional and digital methods.

Further research could look into the impact of artificial intelligence (AI) on personalized gamified learning experiences. AI-powered systems can provide personalized feedback and adapt to student progress.

Exploration of how gamified applications affect EFL learners' self-directed learning abilities would be valuable. Understanding this relationship may help to inform strategies for developing lifelong learning habits.

Developing mobile learning solutions for underprivileged and technologically disadvantaged populations is an important area to address. Ensuring inclusivity in education is critical for equitable learning opportunities.

Future studies could also explore the impact of multiplayer or team-based gamified applications, assessing how social dynamics influence motivation and learning outcomes.

Finally, evaluating the cognitive load of gamified applications would help ensure that they are designed to optimize learning without overwhelming users.

5.6. Conclusion

This study found that Mobile Game-Based Learning (MGBL) had a transformative effect on vocabulary acquisition among Iranian EFL students. The use of gamification components such as challenges, incentives, and progress tracking has been demonstrated to greatly boost student engagement, motivation, and retention. The findings, however, emphasize the importance of a balanced approach that aligns gamified features with pedagogical priorities in order to achieve optimal educational outcomes.

The findings of this study provide a solid foundation for advancing language education practices. Educators, policymakers, and developers are encouraged to address the limitations of gamified tools and expand their applications in order to create more inclusive and effective learning environments. By doing so, stakeholders can realize the full potential of MGBL to meet the changing needs of language learners.

Ultimately, this study adds to the growing body of knowledge regarding the role of educational technology in language acquisition. The findings point to a bright future in which gamified learning technologies are refined and integrated, paving the way for novel approaches that will reshape English language education on a global scale. This study not only demonstrates the immediate benefits of MGBL but also lays the groundwork for future research and advancement in this field.

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APPENDICES

Appendix A: Questionnaire on Mobile Game-Based Learning for Vocabulary Skills among Iranian EFL Learners

In the name of god

Age:

○ 18-25
○ 26-30
○ 31-35
○ 36-40

Gender:

○ Male
○ Female

Academic Degree:

○ BA
○ MA
○ PhD

Years of English study:

○ 1-3 years
○ 3-5 years
○ 5+ year

Instructions:

● Please indicate your level of agreement with each statement by selecting one of the following options: Strongly Disagree, Disagree, Neutral, Agree, or Strongly Agree.
● If you have not used mobile games for vocabulary learning, you may skip the relevant questions in Section 4 and proceed to Section 5.

Section 1: General Perceptions on Vocabulary Learning

1. I believe vocabulary learning is crucial for improving my language skills.

2. I am generally motivated to learn new vocabulary in English.

3. Expanding my vocabulary is one of my top priorities in learning English.

Section 2: Experience with Technology in Learning

4. I find using technology beneficial for learning new vocabulary.

5. I am comfortable using mobile applications for educational purposes.

6. I often use mobile applications to assist with my language learning.

Section 3: Awareness and Usage of Mobile Game-Based Learning (MGBL)

7. I am aware that mobile games can be used for vocabulary learning.

8. I believe mobile games can be an effective tool for vocabulary learning.

9. I am open to exploring new methods, like mobile games, for vocabulary acquisition.

10. I have used mobile games specifically designed for vocabulary learning.

■ **Note: If you answered "Disagree" or "Strongly Disagree," please skip to Section 5.**

Section 4: Effectiveness of Mobile Game-Based Learning (For Users)

11. The mobile games I used made learning new vocabulary more enjoyable.

12. Using mobile games helped me retain vocabulary better than traditional methods.

13. I noticed an improvement in my vocabulary after using mobile games for learning.

14. The gamified elements (points, badges, etc.) in the apps motivated me to keep learning.

15. I would recommend mobile game-based learning to others for improving their vocabulary.

Section 5: Perceptions on Mobile Game-Based Learning (For Non-Users)

16. Even though I haven't used them, I believe mobile games could make vocabulary learning more engaging.

17. I would consider using mobile games in the future for vocabulary acquisition.

18. I think gamified learning could improve my retention of new vocabulary.

Section 6: Comparison with Traditional Learning Methods

19. I believe mobile games are more effective than traditional vocabulary learning methods (e.g., flashcards, textbooks).

20. Traditional methods of learning vocabulary are still necessary alongside mobile games.

Section 7: Factors Affecting the Use of Mobile Game-Based Learning

21. The availability of engaging mobile games influences my willingness to use them for vocabulary learning.

22. I am more likely to use mobile games for vocabulary learning if they are designed specifically for language learners.

23. I would be more inclined to use mobile games for vocabulary learning if they included regular updates with new.

24. The ability to track my progress in a mobile game motivates me to continue using it for vocabulary learning.

Section 8: Overall Satisfaction and Future Intentions

25. Overall, I am satisfied with the idea of using mobile games for vocabulary learning.

26. I plan to continue or start using mobile games for learning vocabulary in the future.

Appendix B: Interview Protocol on Iranian EFL Learners' vocabulary learning through non-Gamified Mobile Apps

Age:

Gender:

Academic degree:

Years of English study:

Thank you for participating in this interview. We are exploring the use of mobile applications, particularly non-gamified ones, in enhancing vocabulary learning among Iranian EFL learners. Your insights will be valuable in understanding how these tools affect your vocabulary learning. This interview will take approximately 15-20 minutes. All responses will be confidential and used only for research purposes.

Interview Questions:

1. Could you briefly describe your background as an English learner, including how long you have been learning English and the methods you have used to improve your vocabulary?

2. How familiar are you with mobile applications designed for vocabulary learning that do not include gamified elements? Have you used any of these applications, or do you have any thoughts on them?

3. Have you used non-gamified mobile applications to help you learn vocabulary? If not, how do you think you could use them in your language learning routine?

4. How do you find using non-gamified mobile applications for learning vocabulary? Do you feel engaged, or do you think it would be difficult for you to stay motivated with these applications?

5. From your experience, how effective have non-gamified mobile applications been in helping you improve your vocabulary? If you haven't used them, what factors do you think would make them effective?

6. Have you faced any challenges when using non-gamified applications for vocabulary learning? Or, if you haven't used them, what challenges do you think you might face?

7. How would you compare using non-gamified mobile applications with traditional methods (like books or classroom learning) for vocabulary learning? What do you think are the main advantages or disadvantages?

8. Have you noticed any changes in your motivation or independence when using non-gamified applications for vocabulary learning? If not, what impact do you think these applications could have on your learning?

9. What improvements would you suggest for non-gamified mobile applications to make them more useful for vocabulary learning?

10. How do you see the future role of non-gamified mobile applications in language learning? Do you think they will become more popular or be replaced by other learning methods?

Thank you for sharing your insights. Your feedback is crucial in understanding the potential and limitations of non-gamified mobile applications in vocabulary learning. Please feel free to share any additional thoughts or questions.

Appendix C: Sample Response 1 on Interview Protocol from Iranian EFL Learners on Vocabulary Learning through non-Gamified Mobile Apps

Participant 5 of the 1ˢᵗ group interview

Participant 5

Age: 19

Gender: Female

Academic degree: BA

Years of English study: 5

Q1: I start learning English five years ago in high school. For vocabulary, I mostly memorize word lists from teachers. Sometimes I use flashcards for review words quickly, and recently I start using dictionary app on my phone to check meaning and examples sentences.

Q2: I try some apps for learning vocabulary that don't have games, but I not use them for long time. They feel repetitive, and I don't feel motivated to continue. I prefer something more interactive for keep my interest.

Q3: No, I not use them much. But if I try, I think I can use them to help me remember new words after reading English texts or watching videos. Maybe I could spend some minutes each day for review words I just learn.

Q4: They not keep me engaged. I start using them, but I lose interest fast because they feel too plain. I think I need something more interactive, or with goals, to stay motivated.

Q5: I not really see much improvement in my vocabulary from using them. They okay for check words, but not good for deeply learn new words. I think they can work better if they have things like tests or spaced review for help memorization.

Q6: I not use them much, but I think staying focused is hard. They don't feel fun, and they can feel like task more than learning tool. Maybe I also will have problem to track my progress because there no rewards or achievements.

Q7: Apps are quick and easy for learning new words, but books give more context. In classroom, I feel more involved, especially with group activities and talking with others, which helps me remember words better.

Q8: I not notice any change in my motivation or independence. These apps are okay for practice, but they don't make me want to continue using them. If they had progress tracking, I think I would feel more motivated.

Q9: I think they need to add a way to review words I already learn, so I can keep them in my memory. It also could be helpful if they give small rewards or points for finish lessons, this would help me stay motivated.

Q10: I think non-gamified apps will still be there for choice in learning, but they maybe not be as popular. Interactive or gamified apps look more fun, and they may attract more people who want fun way to learn.

Appendix D: Sample Response 2 on Interview Protocol from Iranian EFL Learners on Vocabulary Learning through Non-gamified Mobile Apps

Participant 6 of the 1ˢᵗ group interview

Participant 6

Age: 40

Gender: Male

Academic degree: MA

Years of English study: 15

Q1: I've been learning English for about fifteen years. I started learning it by going to different language institutes. After going to the university, I learned it even more, and I'm still learning to this day. When it comes to methods of learning vocabulary, well I used to study vocabulary books only. Now, I mostly focus on reading English articles and books. My way of improving vocabulary is to read a lot, and whenever I encounter unfamiliar words, I use a dictionary to look them up. Sometimes I also try to use these words in sentences to help me remember them.

Q2: I'm quite familiar with non-gamified apps, especially dictionary and flashcard-based ones. They're very straightforward and serve their purpose well when I need to quickly look up a word. However, they don't really capture my interest when it comes to long-term vocabulary study.

Q3: Yes, I use these apps mainly for looking up words and sometimes reviewing vocabulary lists. But I don't rely on them as my main study tool. I think they could be helpful if I included them in my daily routine, maybe for reviewing new vocabulary or looking up words while reading English texts.

Q4: I find them practical, but not very engaging. They're useful as a quick reference, but the lack of interactivity makes it hard to stay motivated in the long run. I think adding features like feedback or progress tracking could make them more interesting and motivating.

Q5: Non-gamified apps are somewhat effective as additional support. They're useful for occasional reference, but they don't offer enough reinforcement for long-term learning. To be more effective, I think they should include structured review options and ways to practice vocabulary beyond just definitions.

Q6: I do find it challenging to remember to use these apps regularly because there's nothing really drawing me back to them. Also, the lack of immediate feedback or progress tracking can make the experience feel a bit flat and uninspiring.

Q7: These apps are convenient and useful, but I believe traditional methods offer more depth. Books and classroom learning provide more context and examples, which these apps often lack. I think the best approach would be a mix of both, where apps complement traditional methods.

Q8: I haven't noticed much of an impact on my motivation or independence when using these apps. They're convenient, but not very inspiring. If they were designed with features like progress tracking or had more structure, I think they could help increase my motivation and independence.

Q9: I think they could improve by adding progress tracking systems and incorporating spaced repetition for better review. It would also be useful to have brief explanations on how to use each word in different contexts, maybe with example sentences.

Q10: I think these apps will continue to exist, but more as a supporting tool. Newer, more engaging methods may take over as the primary tools for learning, but I do believe there will always be people who prefer simpler, traditional learning methods without game-like elements.

Appendix E: Sample Response 3 on Interview Protocol from Iranian EFL Learners on Vocabulary Learning through Non-gamified Mobile Apps

Participant 3 of the 1ˢᵗ group interview

Participant 3

Age: 35

Gender: Female

Academic degree: PhD

Years of English study: 12

Q1: My journey as an English learner began during my university years, and I've been studying English for about twelve years now. For vocabulary, I focus a lot on academic materials, especially those related to my field. I often take notes in a notebook, writing down new words with their definitions and examples. This helps me remember them better.

Q2: I'm familiar with non-gamified apps, especially dictionary and flashcards. I've used them occasionally, but not extensively, as they lack features that keep me engaged. However, they are quite useful when I need to quickly check the meaning or usage of a word.

Q3: I've used these apps mostly for looking up words, but not as a regular part of my study routine. If I were to use them more, I think they would be most helpful for reviewing specialized vocabulary, especially terms that I encounter in academic research.

Q4: They are functional, but I don't find them engaging. They are excellent for quick look ups, but without interactive features, it's hard to maintain motivation. I think they're more suited for occasional use rather than consistent, long-term learning.

Q5: In my experience, they are somewhat effective, but only as quick references. They help me find meanings or translations quickly, but they don't reinforce vocabulary in a way that ensures retention. To be more effective, they should include structured reviews and exercises for repeated practice.

Q6: The biggest challenge with non-gamified apps is staying consistent. Without features like feedback or progress tracking, it's easy to lose focus. Additionally, they often feel unstructured, which can make it unclear what to study next.

Q7: These apps are very convenient and time-efficient, but they can't replace the depth of traditional methods. Books and classroom settings provide more context, detailed explanations, and interaction, all of which are essential for deeper learning. Ideally, these tools should complement each other.

Q8: I haven't seen significant changes in my motivation or independence with these apps. They're helpful tools, but they don't inspire me to be more proactive. I think if they offered challenges or milestones, they could encourage more consistent use and a greater sense of accomplishment.

Q9: Non-gamified apps could improve by incorporating reminders and daily goals to encourage regular practice. Personalized word lists, especially for academic or professional fields, would also make them more practical. Additionally, including example sentences for different contexts would enhance their usefulness.

Q10: I believe they will remain as useful supplementary tools, particularly for learners who prefer straightforward methods. However, with the rise of more interactive and personalized technologies, they might become less popular for regular use. That said, there will always be a niche for those who value simplicity and focus in their learning tools.

Appendix F: Interview Protocol on Iranian EFL Learners' vocabulary learning through Gamified Mobile Apps

Age:
Gender:
Academic degree:
Years of English study:

Thank you for participating in this interview. We are examining the use of gamified mobile applications in enhancing vocabulary learning among Iranian EFL learners. Your insights will help us understand how these tools affect your learning experience. This interview will take approximately 15-20 minutes. All responses will be confidential and used only for research purposes.

Interview Questions:

1. Could you briefly describe your background as an English learner, including how long you have been learning English and what methods you have used to improve your vocabulary?

2. Are you familiar with mobile apps that include gamified elements for vocabulary learning? If yes, which ones?

3. Have you used gamified mobile applications to help you learn vocabulary? If not, how do you think you might use them in your studies?

4. How do you feel about using gamified applications for vocabulary learning? Do you find them engaging, or do you think it would be hard for you to stay focused on them?

5. Based on your experience, how effective have gamified mobile applications been in improving your vocabulary skills? If you haven't used them, what factors do you think would make them effective?

6. Have you faced any challenges when using gamified applications for vocabulary learning? Or, if you haven't used them yet, what challenges do you think you might encounter?

7. How would you compare using gamified mobile applications with traditional vocabulary learning methods (like textbooks or classroom lessons)? What do you think are the key advantages or disadvantages?

8. Have you noticed any changes in your motivation or learning habits when using gamified applications? If not, how do you think these applications could impact your learning?

9. What improvements would you suggest to make gamified mobile applications more effective for vocabulary learning?

10. How do you see the future role of gamified mobile applications in language learning? Do you think they will become more popular or eventually be replaced by other methods?

Thank you for sharing your insights. Your feedback is crucial in understanding the potential and limitations of gamified mobile applications in vocabulary learning. Please feel free to share any additional thoughts or questions.

Appendix G: Sample Response 1 on Interview Protocol from Iranian EFL Learners on Vocabulary Learning through Gamified Mobile Apps

Participant 1 of the 2ⁿᵈ group interview

Participant 1

Age: 20

Gender: Male

Academic degree: BA

Years of English study: 5

Q1: I study English for five years now. At first, I learned from books and in class mostly. We focus more on grammar and writing before. But now I use apps to learn new words. It is good because I can use it when I have time. I see words in sentences sometimes, so it helps me to understand better.

Q2: I know some apps with games for learning. Apps like Duolingo and Memrise has levels and rewards when you learn new words. It's fun and make me want to use them more. I don't use them every day, but when I do, I feel happy to learn more words.

Q3: Yes, I use them before. Memrise is one of them. They are very helpful because they use points and flashcards. It's easy to learn words, and I review them many times. It doesn't feel hard work, like studying with books.

Q4: They are fun and easy to use. I feel interested because they have rewards and games. It's not hard to stay focused because you want to win points. Sometimes I spend more time than I think because it is like playing a game.

Q5: They are good for improving my vocabulary. The app repeats and shows the words many times, so I don't forget them. Also, when it makes me practice old words, I can remember them better. It helps me a lot.

Q6: Sometimes I focus too much on the game, like winning points or leveling up. I don't pay attention to words really, so I don't learn them well. It's a bit distracting sometimes.

Q7: I think gamified apps are more fun than books. With books, I get bored fast. But apps with games keep me interested. But books are better when you want to learn difficult words because they explain better.

Q8: Yes, I feel more motivated with gamified apps. Before, I study only when I have a test. But now, I study more often. I even want to study every day because it is not boring.

Q9: Maybe they can add harder words because sometimes the words are too easy for me and not hard enough to level up me. Also, it is better if they show examples from real life. This way, I can better understand how to use the words.

Q10: I think they going to become more popular because people like learning with games. Maybe they will not replace classes or books, but they are very good for extra practice.

Appendix H: Sample Response 2 on Interview Protocol from Iranian EFL Learners on Vocabulary Learning through Gamified Mobile Apps

Participant 2 of the 2ⁿᵈ group interview

Participant 2

Age: 27

Gender: Female

Academic degree: MA

Years of English study: 9

Q1: I've been studying English for about nine years. At first, it was all about books and lessons from school or institutes. After a few years, I started using online tools and apps. Although I've been using them a lot these days, but I still prefer reading books.

Q2: I know Duolingo, and I think it's great for vocabulary learning. The lessons with levels and points make it motivating. It is fun, and it's easier to learn new words than with textbooks.

Q3: Yes, I've been using Duolingo myself. I really enjoy how it makes vocabulary practice a daily habit. By tracking my progress and giving me points, it makes me come back every day. I could use it more if I wanted extra practice with vocabulary.

Q4: I think they are very engaging. With the levels and rewards, it doesn't feel like studying. It keeps me motivated. I also like that I can come back anytime, so it's easy to pick up from where I left off.

Q5: They are very effective for me. I tend to forget words if I don't use them, but the apps bring words back in different activities, so I remember them better. The games keep it interesting, and I don't feel like I'm just memorizing words.

Q6: My biggest problem is that sometimes I lose track of time while using the apps. The games are fun, but I can end up spending more time than planned, which takes away from other studying. It's engaging but sometimes too addictive.

Q7: In a classroom, we can discuss words and ask questions, which apps can't do as well. But apps like Duolingo help me practice every day, even if just for a few minutes. Both have advantages, but gamified apps feel more accessible.

Q8: Gamified apps have definitely helped my motivation. I like to see my progress, and the reminders stop me from forgetting to study. Without that structure, I don't think I would study as often. It's easy to keep up when it feels like a game.

Q9: I think adding a feature where we can review vocabulary in sentences would be helpful. Sometimes I learn words alone, but using them in sentences makes it easier to remember. Maybe writing exercises or prompts could help too.

Q10: I think gamified apps will keep being important. They make learning fun, which is something many people want. I can see them becoming more advanced, with AI or VR features, making learning even more interactive.

Appendix I: Sample Response 3 on Interview Protocol from Iranian EFL Learners on Vocabulary Learning through Gamified Mobile Apps

Participant 9 of the 2ⁿᵈ group interview

Participant 9

Age: 35

Gender: Male

Academic degree: PhD

Years of English study: 14

Q1: I have been studying English for 14 years, mostly in a formal setting with textbooks, lectures, and academic readings. I've also been using apps to help with vocabulary for years now. Initially, when I started using them, I didn't see much value in them, but now I understand their benefits, especially for quick reviews or refreshing my memory. They're not a substitute for textbooks, but they're a useful complement to what I already know.

Q2: I am familiar with Duolingo, WordUp, and some other apps. I believe they're excellent tools for vocabulary practice. Duolingo makes learning fun with its gamified features, while WordUp focuses on teaching words in context using real-life examples.

Q3: Yes, I've used Duolingo and WordUp, both of which I find helpful. I'd likely use them more regularly if I wanted to build up a large vocabulary quickly. They make learning easy to fit into my schedule and provide a refreshing break from more formal study methods.

Q4: I do find them engaging. The sense of progress and the interactive features keep me focused. I like that they break learning into smaller steps, which makes it easier to stay committed without feeling overwhelmed.

Q5: I'd say they're quite effective. The repetition and gamified challenges help reinforce vocabulary, which is crucial. I feel that it's easier to remember words now, as they appear in different contexts, which is great for long-term retention.

Q6: One issue I've encountered is that the app sometimes doesn't feel academic enough. While the games are helpful, I wish there were more challenging sections that reflect real-world usage or focus on higher-level vocabulary.

Q7: Gamified apps are motivating and keep you engaged, but traditional methods still offer a more academic feel, which is important. Apps may be more suitable for quick vocabulary practice, but textbooks provide a deeper understanding, especially for more complex words.

Q8: Gamified apps have made me approach vocabulary in a more relaxed, engaging way. It doesn't feel like hard work, which I believe has improved my focus and motivation. I used to avoid vocabulary practice, but now it's something I actually look forward to.

Q9: I'd suggest focusing on collocations or phrases instead of just single words. It would also be helpful if the app could provide more advanced vocabulary for learners at a higher level. Furthermore, having the option to customize game settings based on individual goals could make it even more useful.

Q10: I believe gamified apps will remain a valuable tool. They offer a unique approach that's less intimidating than traditional methods of study. I can see them evolving to integrate various learning styles, making them a permanent feature in language education.

ABSTRACT IN FARSI

عنوان: اثربخشی برنامه های بازی موبایل در ارتقای مهارت های واژگانی دانش آموزان ایرانی زبان انگلیسی به عنوان زبان خارجی

چکیده: این پژوهش به بررسی اثربخشی یادگیری مبتنی بر بازی های موبایلی در بهبود فراگیری واژگان میان دانشجویان ایرانی زبان انگلیسی به عنوان زبان خارجی پرداخته و از طریق بررسی های روشمند، کاستی های روش های سنتی آموزش واژگان را مورد توجه قرار داده است. با درک اهمیت واژگان در صلاحیت زبانی، تمرکز اصلی این مطالعه بر تأثیر برنامه های موبایلی بازی محور در مشارکت، حفظ دانش، و توانایی های کلی واژگان زبان آموزان بود. در این پژوهش از یک رویکرد ترکیبی متوالی تبیینی استفاده شد که شامل داده های کمی از پرسشنامه ساخته شده به دست محقق (که توسط ۱۰۰ دانشجوی ایرانی رشته های مرتبط با زبان انگلیسی در مقطع کارشناسی یا تحصیلات تکمیلی، سنین ۱۸ تا ۴۰ سال و از طریق گوگل فرم تکمیل شده) و داده های کیفی حاصل از مصاحبه های نیمه ساختار یافته (با ۲۰ شرکت کننده از همان گروه) بود. شرکت کنندگان بر اساس تجربه پیشین خود به پرسش های مرتبط با برنامه های بازی محور و غیر بازی محور پاسخ دادند. یافته ها نشان داد برنامه های بازی محور به دلیل ویژگی های تعاملی، پیگیری پیشرفت، و عوامل تشویقی مانند پاداش ها و دستاوردها، ابزارهایی مفید هستند. همچنین این برنامه ها در مقایسه با گزینه های غیر بازی محور، به عنوان ابزارهای اصلی یادگیری، جذاب تر، به یاد ماندنی تر، و ارزشمند تر ارزیابی شدند. داده های کیفی نیز ماهیت انگیزشی و جذاب این برنامه ها را تأیید کردند، اما نیاز به بهبود در عرصه هایی مانند تنوع بیشتر و بافتمند سازی عمیق تر آموزش واژگان را نشان دادند. در مقابل، برنامه های غیر بازی محور اگر چه کاربردی توصیف شدند، اما به دلیل عدم جذابیت و نبود تقویت کنندگی ساختار یافته مورد انتقاد قرار گرفتند. علاوه بر این، موانع

پذیرش مانند محدودیت های مالی، دسترسی ناکافی به دستگاه های مناسب، و تأکید افراطی بر جنبه های سرگرمی در ابزارهای بازی محور (که گاهی اهداف آموزشی را کم رنگ می کنند) بررسی شدند. راهکارهایی مانند تکرار کردن با فاصله، داشتن تمرین بافتمند، و تلفیق ترکیبی با روش های سنتی برای بهبود یادگیری واژگان از طریق هر دو نوع برنامه پیشنهاد گردید. این پژوهش، پتانسیل تحول آفرین یادگیری مبتنی بر بازی های موبایلی را در محیط های آموزش زبان انگلیسی به عنوان زبان خارجی برجسته کرده و بینش های مبتنی بر شواهدی را در اختیار مربیان، توسعه دهندگان برنامه های درسی، و سیاست گذاران قرار میدهد. همچنین با نشان دادن چگونگی غلبه برنامه های موبایلی بازی محور بر محدودیت های روش های سنتی، به ادبیات فزاینده فناوری های نوین یادگیری زبان کمک می کند. توصیه های کاربردی برای اجرای مؤثر این برنامه ها در محیط های آموزشی ایران نیز ارائه شده است.

کلمات کلیدی: یادگیری مبتنی بر بازی‌های موبایلی، دانش آموزان ایرانی انگلیسی به عنوان زبان خارجی، یادگیری واژگان، اثربخشی، بازی محور

دانشکده‌ی ادبیات و علوم انسانی ارومیه

گروه زبان و ادبیات انگلیسی

پایان نامه جهت اخذ مدرک کارشناسی ارشد در رشته آموزش زبان انگلیسی

عنوان:

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