



The Effectiveness of Gamified Learning in Second Language Acquisition

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Abstract

This study investigates the influence of gamified learning on second language acquisition, focusing on how game-based elements affect learner motivation, engagement, and language skill development. Gamified learning refers to the integration of game-like features such as points, levels, badges, and leaderboards into educational environments to make learning more interactive and enjoyable. The research specifically examines the impact of these features on core language competencies: reading, writing, listening, and speaking. Data for the study were gathered through an online survey employing the snowball sampling method, involving 24 participants who are currently engaged in learning a second language. The majority of respondents reported using popular language-learning applications such as Duolingo and Memrise, both of which are known for incorporating gamified techniques. The findings reveal that gamified learning tools significantly enhance learners' motivation and reduce performance anxiety. Participants noted that the game-like format helped them remain focused, increased their willingness to practice regularly, and made the overall experience more enjoyable. Additionally, consistent users of gamified platforms expressed greater enthusiasm for language learning and reported noticeable improvements in their language skills. While the study offers promising insights, it is limited by its small sample size and reliance on self-reported perceptions, which may not fully capture objective learning outcomes. Nevertheless, the research underscores the potential of gamified learning as an effective strategy for encouraging sustained, autonomous, and enjoyable language learning. Future studies with larger and more diverse samples are recommended to validate and expand upon these findings.

Keywords:

Gamified learning, second language acquisition, language learning apps, motivation in language learning, Duolingo, Memrise, educational technology, game-based learning.

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Introduction

The last few decades have witnessed a striking global shift in the educational system's approach towards learning. One such approach that is gaining traction is gamified learning, an instructional strategy that applies game mechanics—points, badges, levels, storylines, interactive challenges, etc.—to non-game contexts. This method attempts to transform the learning experience by making it more engaging and enjoyable (Deterding et al. 2011). Through these game-like features, educators aim to foster motivation, enhance participation, and stimulate interest in students towards activities that are otherwise regarded as boring and burdensome. Gamification is not restricted to a specific subject; rather, it is multitopic in nature as it is used in science, mathematics, and especially language education.

In learning a new language, gamification replaces traditional pedagogy with more immersive experiences where learners get to discover new words, grammar rules, and ways to communicate (Werbach & Hunter, 2012). All forms of learning gamification tap into intrinsic and extrinsic motivators. An intrinsic motivator is something like enjoying an activity whereas an extrinsic motivator relates to reward, acknowledgement, or competition (Sailer et al., 2017). When learners are intrinsically motivated, they tend to put more effort into the learning process and are therefore more effective in the longer perspective. Numerous studies have been carried out that offer evidence claiming positive impacts regarding learner motivation, memory recall, and overall academic performance achievement through gamified learning. The implementation of points and progress tracking creates a sense of achievement, but challenges and leaderboards enhance a healthy level of competition that promotes student engagement (Hamari et al., 2014). These elements enable students to revisit the content on multiple occasions, thus cultivating effective study habits.

Moreover, gamified systems tend to give immediate feedback which allows students to assess their progress, identify areas which require additional work, and make real-time adjustments (Buckley & Doyle, 2016). The immediacy of feedback during the learning process is especially useful in learning languages where rewards and feedback play a vital role in mastering complex linguistic concepts. The process of learning a second language that is not a person's native language is referred to as Second Language Acquisition (SLA). This process is multifaceted and has many dimensions. It amalgamates the cognitive, psychological, social, and temporally dynamic dimensions. Theories of SLA include Krashen's 1982 Input Hypothesis where meaningful interactions and input is essential using a non-threatening environment.

Based on Krashen's theory, learners internalize a language best when exposed to language input slightly above their present level, in a context that allows some level of risk. These criteria are intrinsically met by gamified learning contexts, which offer low-stakes, dynamic, and engaging linguistic activities (Gee, 2003). Through gamified software or computer programs, language learners can practice their listening, speaking, reading, and writing skills in simulated real-life situations. For example, language courses such as Duolingo or Babbel utilize gamified mechanics such as streaks, rewarding users and even offering new challenges to spark further competition with themselves. Most of the programs also provide learners with the options of speech recognition and instant correction, so they can practice pronunciation and sentence building without fear of being judged in a classroom setting. The research conducted by Reinders and Wattana (2015) supports the claim of digital game-based learning fostering communicative competence by placing learners in rich linguistic contexts where they are required to use language actively by interacting, choosing, and applying their knowledge.

This type of immersion allows for language input and output, the two core elements in SLA, as if by magic. Furthermore, the affective filter as described by Krashen—emotional barriers to second language acquisition such as anxiety, feeling inadequate, or low self-esteem

are greatly reduced when learning is gamified. Sailer et al. (2017) notes, a low-stress, gamified setting encourages learners to experiment with language, take risks, and practice multiple times all in the absence of critiquing eyes. Gamification also supports self-paced learning, which is a crucial characteristic of every educational setting. Different learners have different prior knowledge, preferred styles of learning, and pace of understanding. These differences can be catered in gamified settings by offering individualized challenges, optional practice tasks, and tailored feedback (Suh et al., 2018). Such systematic flexibility enables learners to take control of their learning by self-directing how to reinforce concepts at their pace while kept motivated through goals and incentives. In summary, the potential of gamified approaches to the teaching and learning of languages is appealing. It not only brings joy into the learning but also respects the principles underpinning SLA by offering a comprehensive and delightful solution that attends to the, cognitive and affective, needs of the learners.

Objective

- **O1:** To examine the impact of gamified learning tools on learner motivation and engagement in second language acquisition.
- **O2:** To evaluate the effectiveness of gamified platforms (e.g., Duolingo, Memrise) in enhancing specific language skills such as reading, writing, listening, and speaking.
- **O3:** To identify learner attitudes and emotional responses towards gamified environments and how these affect their second language learning experience.

Literature Review

The phenomenon of gamified learning has attracted concern like wildfire in educational SLA for its facilitation of engagement, motivation, and skill development of learners. Platforms attempt to gamify education by adding points, badges, levels, and leaderboards to unlock the charm of games within the classroom (Deterding et al., 2011). Based on Self-Determination Theory, gamification enhances autonomy, competence and relatedness—the three core psychological needs that sustain motivation and catalyze learning (Deci & Ryan, 2000).

There is ample evidence to support that gamified instruction has a great impact on the motivation of learners in a language class setting. For example, Safatian (2024) reported increased motivation and retention in ESL classrooms with the use of gamified applications such as “LanguageQuest”. Zainuddin et al. (2020) reported active participation in digital gamification, particularly when tasks were collaborative. Also, learners who performed collaborative gamified tasks achieved better language performance than those in non-gamified settings, as demonstrated by Sung and Hwang (2018). Concerning language skills, there has been ample research documenting advancements in vocabulary, grammar, reading, and listening comprehension skills. Wu and Liu (2022) found positive outcomes in most areas of language proficiency during a systematic review of gamified tools in SLA. In the same way, Jiang and Luk (2023) noted improvements in reading comprehension as well as learner satisfaction after implementing gamified reading activities. One of the most popular gamified applications, Duolingo, for example, is known to improve grammar and vocabulary skills of users, regardless of their proficiency level (Vesselinov & Grego, 2012). The individual differences of learners and their perceptions towards technology are also equally important. Students who have a positive attitude towards digital games tend to score higher in Language Proficiency and are more interested in working with gamified learning tools. (Alshammari & Almasri, 2023). With regard to personalization, Ortega and Gomez (2021) emphasized the need to tailor non-rewarding game elements in order to meet learners’ expectations and skill levels and suggested that personalization increases efficacy and satisfaction in gamified content.

While evidence supporting positive outcomes from gamification is available, it is not without criticism. An overdependence on external rewards can undermine intrinsic motivation (Hanus & Fox, 2015). Students tend to compete for points rather than grasp content, particularly when competitive elements are exaggerated (Seaborn & Fels, 2015). Moreover,

not all literature documents statistically significant improvements in language performance resulting from gamified approaches, suggesting divergence in success (Huang & Soman, 2023). Appropriate and effective gamification merges fun with learning, which requires well thought out educational plans. Adding adaptive feedback, storytelling, and authentic social participation to the gamified spaces nurture deeper and more enduring learning (Hamari et al., 2016). According to Alsubaie and Albashtawi (2021), balanced and thoughtful gamification increases motivation to learn and positively influences skill acquisition, especially in the teaching of English as a Foreign Language. In addition, Chen et al. (2021) noted that gamification used in mobile learning promoted learner independence, an important asset in second language acquisition (SLA).

Methodology

In this study, an online survey method was employed to investigate the effectiveness of gamified learning in second language acquisition (SLA). The survey was designed with a series of structured quantitative questions aimed at assessing how gamified elements—such as points, badges, leaderboards, and challenges—impact learners' motivation, engagement, and language retention. The questions covered multiple dimensions, including learners' current language proficiency, duration of language study, frequency of using gamified tools, and perceived improvement in different language skills (listening, speaking, reading, and writing). The survey also included items to gauge the emotional and cognitive responses of learners toward gamified learning environments. The target population for this study included individuals actively engaged in learning a second language, specifically those participating in online SLA communities or enrolled in language courses. From this population, a sample of 24 participants was selected through convenience sampling, based on their willingness and availability to respond. The survey was broadcasted online to ensure wide reach and accessibility. A total of 24 valid responses were collected and analyzed, providing insights into learner experiences with gamified language learning tools. To analyze the data, the Statistical Package for the Social Sciences (SPSS) software was used. Descriptive statistics were first computed to summarize participant demographics and usage patterns of gamified tools. To explore the relationships between key variables such as frequency of gamified tool usage, motivation, and perceived language improvement, **correlation analysis** was conducted due to the ordinal nature of some survey items.

Data Analysis

The software SPSS was used to analyze the collected data.

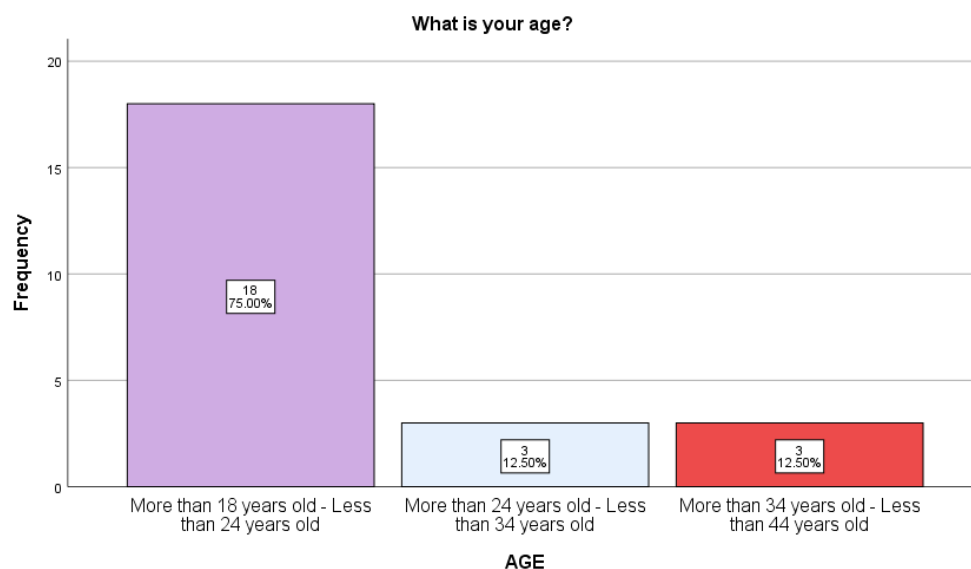


Figure 1: The findings represent that the more than 18 years but less than 24 years old are more as compared to others.

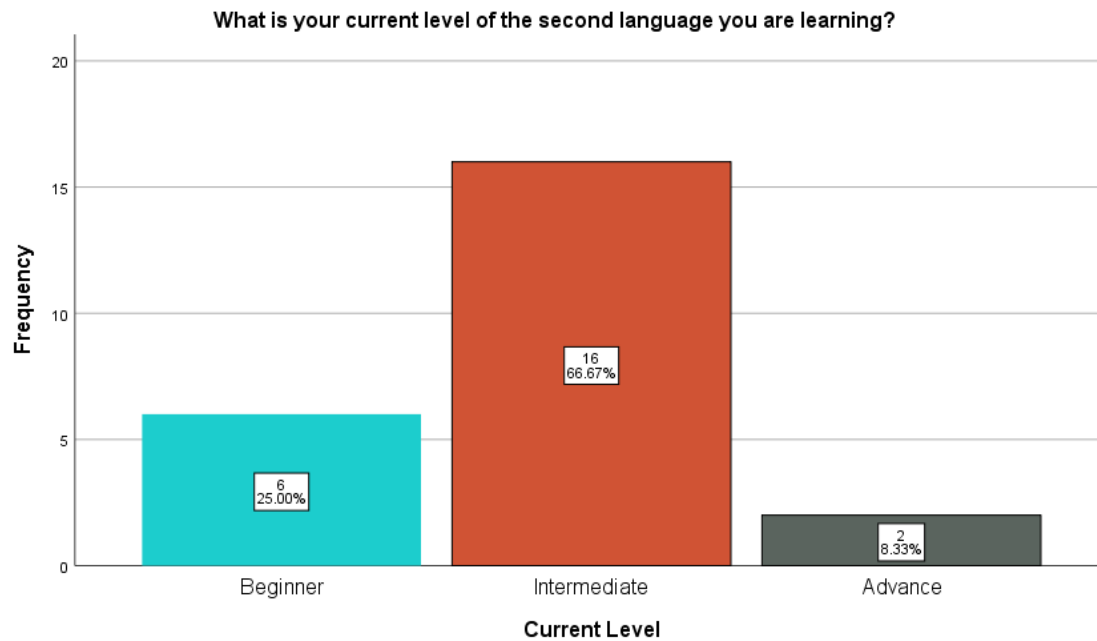


Figure 2: The majority (66.67%) are at the intermediate level, followed by beginners (25%) and a small proportion at the advanced level (8.33%).

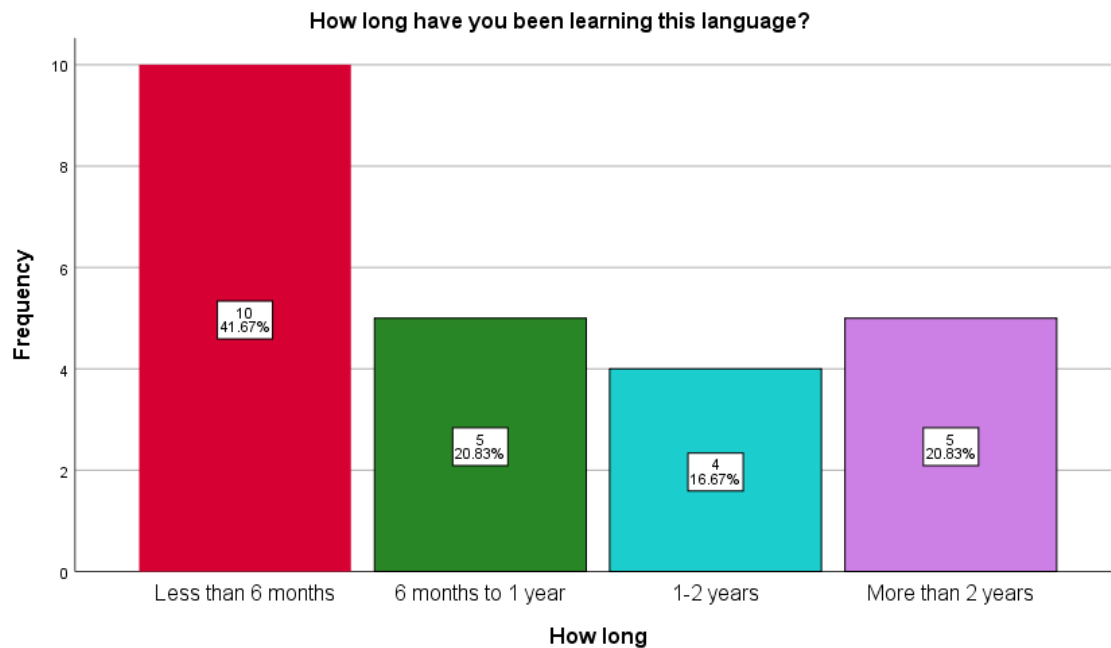


Figure 3: The majority of participants (41.67%) have been learning the second language for less than 6 months, while 20.83% have studied it for 6 months to 1 year, another 20.83% for more than 2 years, and 16.67% for 1–2 years.

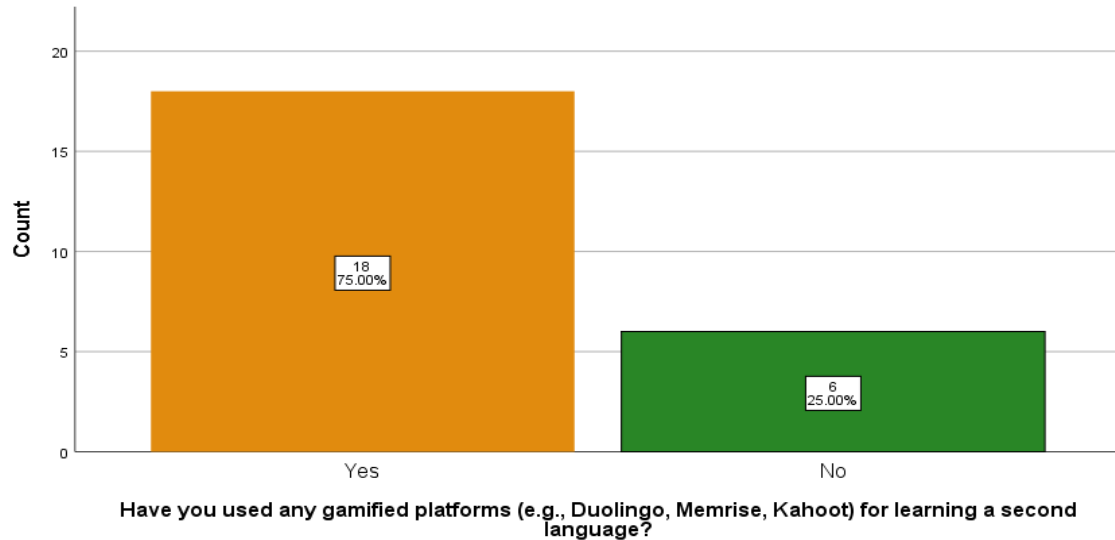


Figure 4: A significant majority (75%) of participants have used gamified platforms like Duolingo, Memrise, and Kahoot.

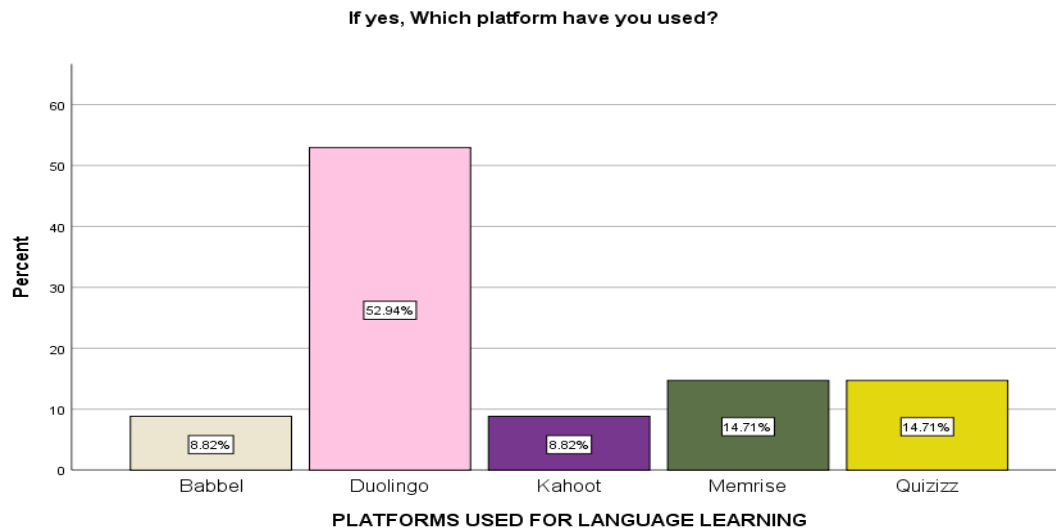


Figure 5: Most participants have used Duolingo 52.94% than other apps [Memrise14.71%, Quizizz 14.71%, Babbel 8.82%, Kahoot 8.82%].

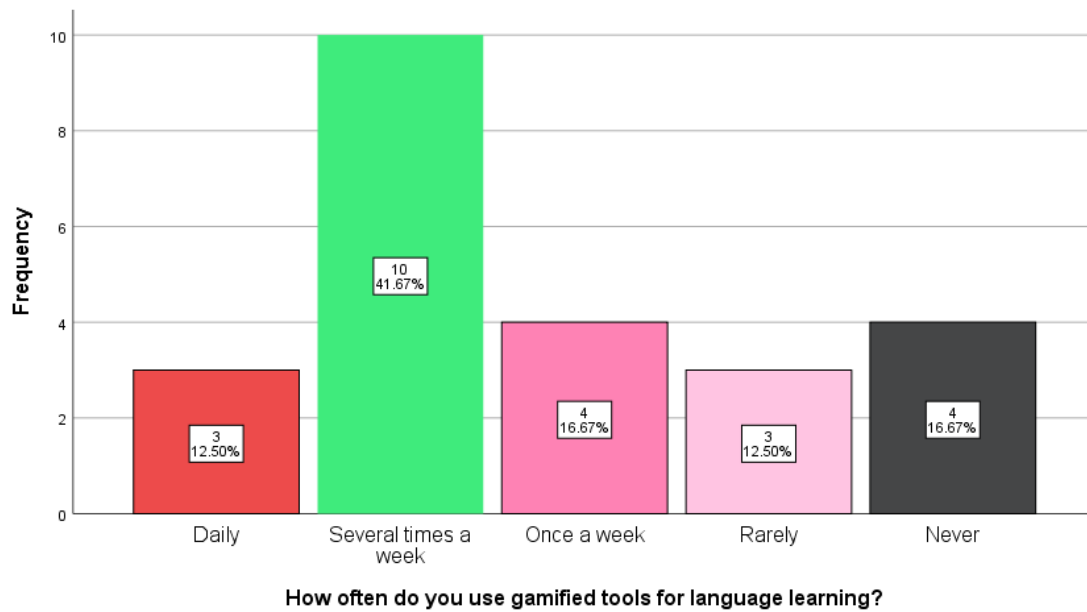


Figure 6: The majority of participants 41.67% reported using gamifies tools several times a week.

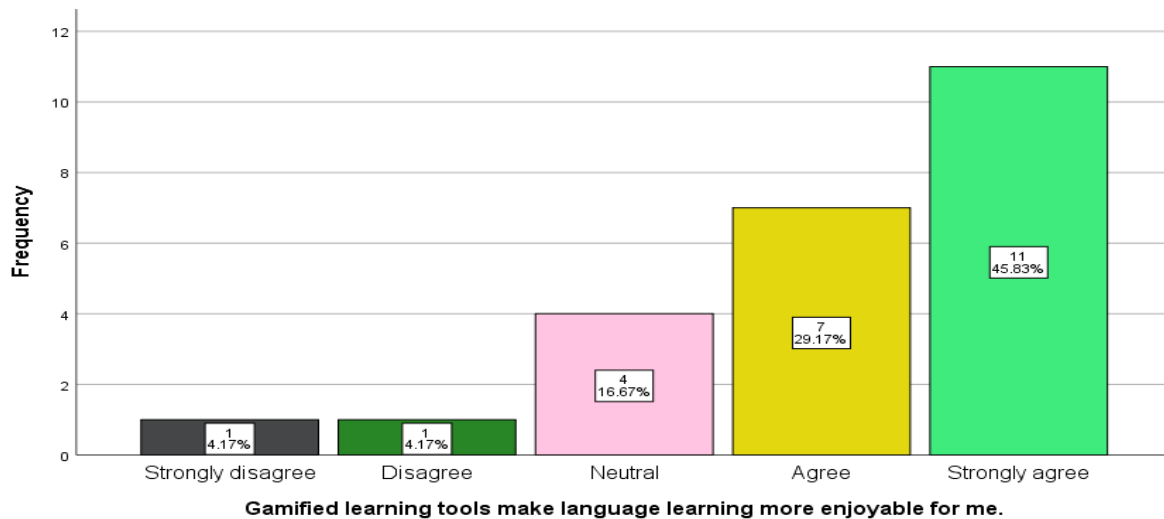


Figure 7: As shown above in the graph, 45.83% respondents strongly agree that gamified learning tools make language learning more enjoyable.

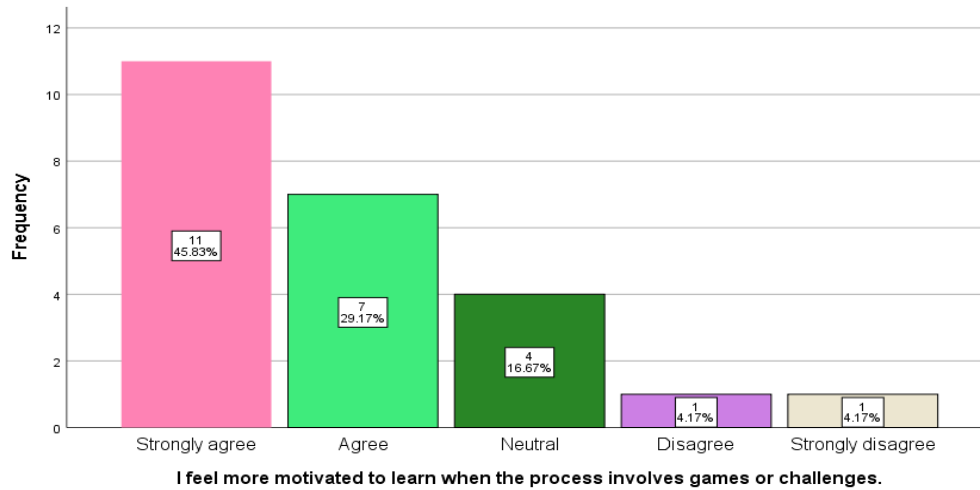


Figure 8: 45.83% respondents feel more motivated to learn when the process involves games.

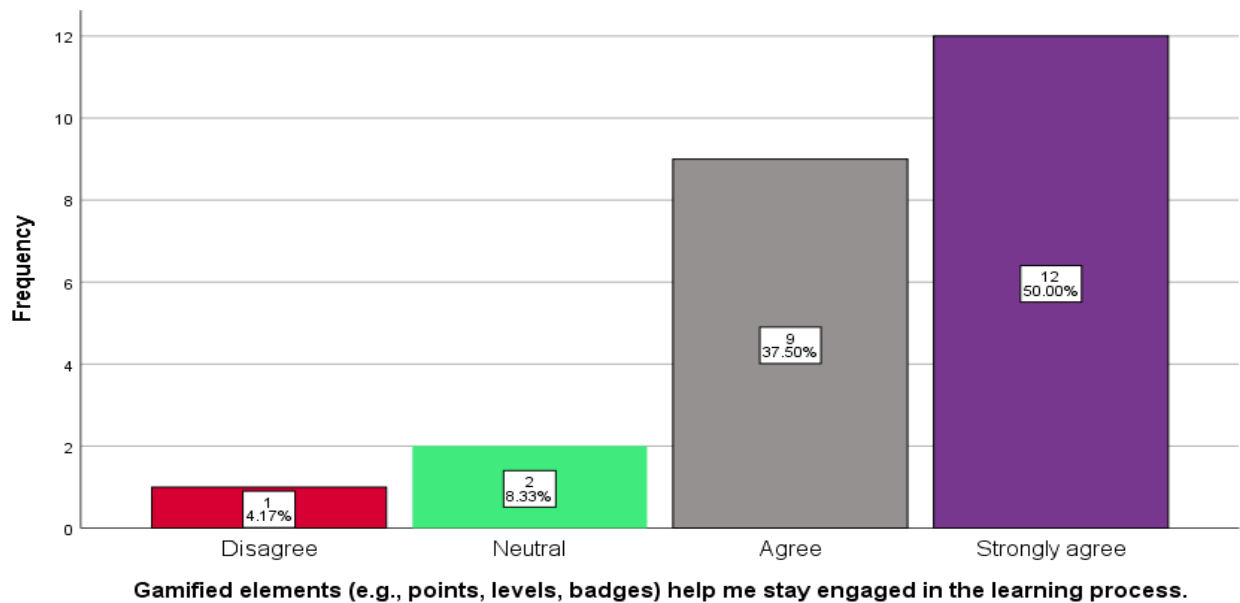


Figure 9: 50.00% participants strongly agree that gamified elements help then stay engaged in the learning process.

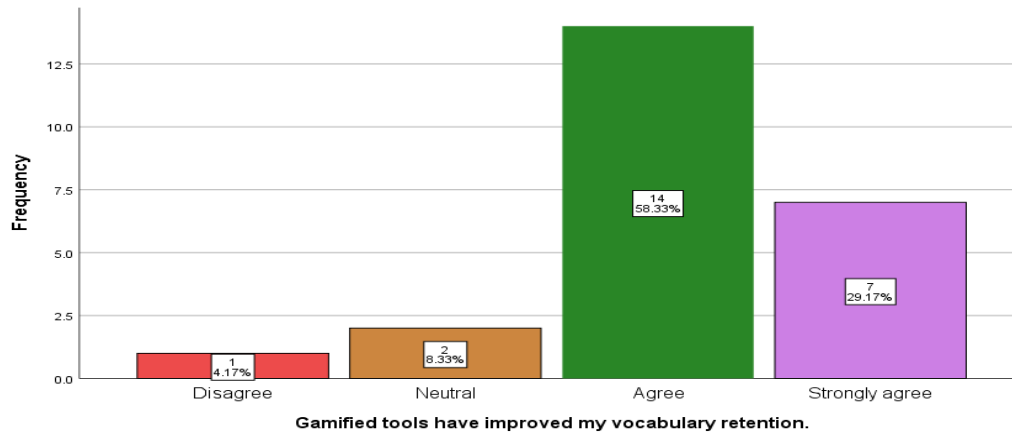


Figure 10: The majority (54.17%) agreed that gamified tools improved their vocabulary, while 29.17% strongly agreed.

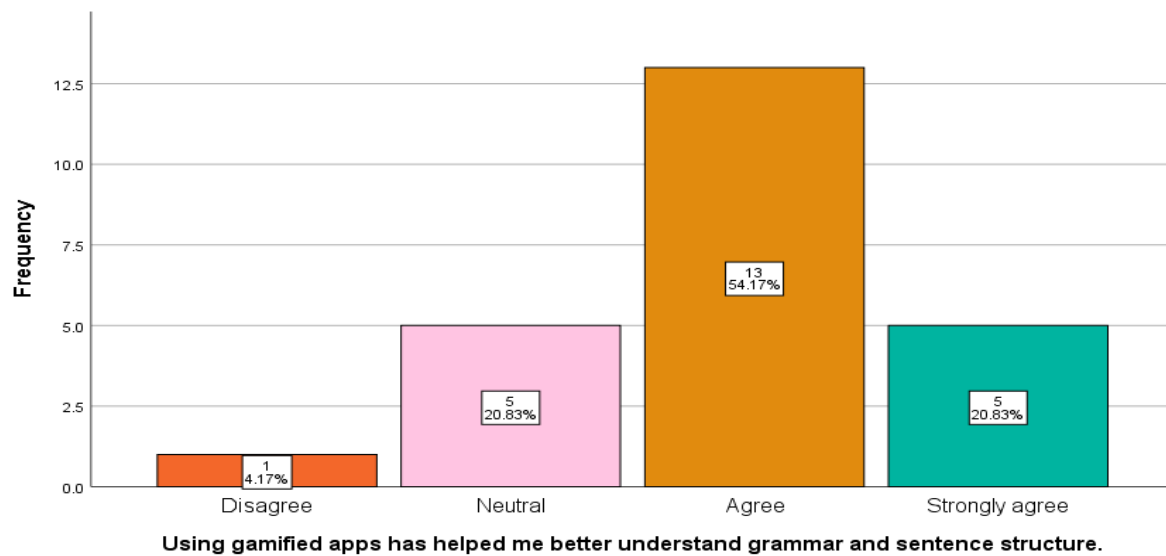


Figure 11: A majority (54.17%) agreed, while 20.83% strongly agreed that these tools enhanced their grammatical understanding.

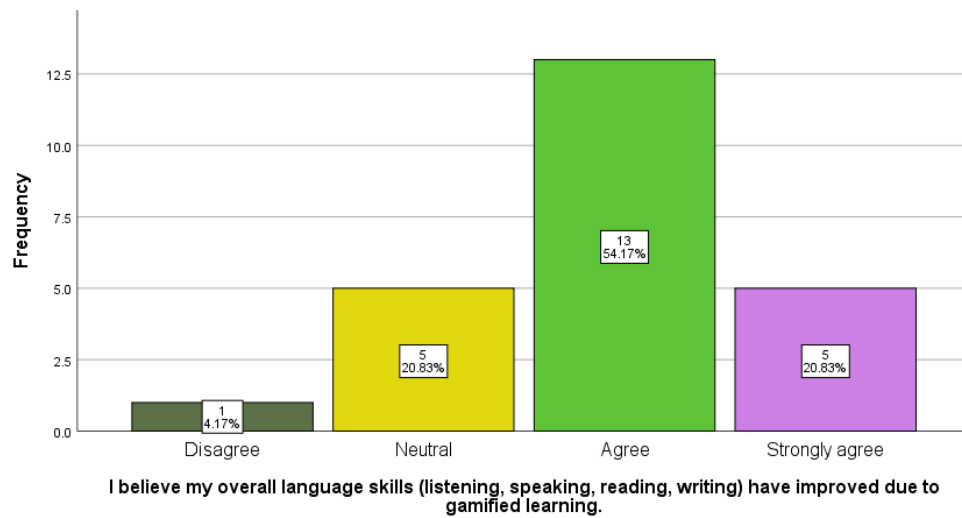


Figure 12: As shown above, 54.17% agree with that overall language skills have improved due to gamified learning.

Correlation

Correlations

		How often do you use gamified tools for language learning?	I feel more motivated to learn when the process involves games or challenges.
How often do you use gamified tools for language learning?	Pearson Correlation	1	.437
	Sig. (2-tailed)		.033
	N	24	24
I feel more motivated to learn when the process involves games or challenges.	Pearson Correlation	.437	1
	Sig. (2-tailed)	.033	
	N	24	24

The correlation analysis shows a moderate positive relationship ($r = 0.437$, $p = 0.033$) between how often learners use gamified tools and their motivation to learn through games. This means that as the frequency of using gamified tools increases, so does learners' motivation. The result is statistically significant at the 0.05 level, indicating a meaningful link between gamification and motivation in language learning.

Discussion

These results exemplify the value that gamified learning offers in a second language acquisition (SLA) concerning motivation level, retention, and skill enhancement perception. Most participants, especially in the age range of 18 to 24 years with intermediate proficiency, claimed that platforms like Duolingo enhanced their learning experiences. A substantial

number of respondents reported using these tools multiple times a week, and a great deal of them strongly agreed that adding game-like features into the process heightened motivation and enjoyment.

The perception of the learners makes sense in relation to literature such as Deterding et al., (2011) and Sailer et al., (2017) which points out how gamification in the form of points, badges, or immediate feedback enhances the educational experience. Moreover, these gamified tools cater to Krashen's (1982) Input Hypothesis in that they offer rich, understandable input without burdening the learner. In particular, a large proportion of learners that reported lowered anxiety levels due to the use of gamified tools demonstrates crucial components of SLA. The correlation analysis showed a significant positive association between the degree of using gamified tools and learning motivation which validates the hypothesis that greater usage of gamified learning increases the chances of participating in the activity. This aligns with the findings of Safatian (2024) and Zainuddin et al. (2020), who reported higher motivation levels with ESL students using gamified platforms. While these findings are productive, it is critical to address the limitations of the study. The sampling technique and the small sample size (n=24) limits the scope of the findings.

Also, the sole use of self-reported data could lead to bias regarding the actual benefits of learning improvements as opposed to perceived advantages. The findings also represent a static situation and may overlook the possibility of prolonged learning results and sustained motivation over time. In any case, these results serve as the groundwork for deeper research into gamification's impact on language learning and highlight the need to build more sophisticated gamified systems. They stress the need to create gamified instruments that preserve intrinsic motivation by balancing content and extrinsic incentives. Reliance on competitive elements for motivation, as noted by previous studies (Hanus & Fox, 2015; Seaborn & Fels, 2015), can detract from the learning focus, which was only minimally evident in this study. The findings of this study suggest that the integration of gamified learning tools in SLA has significant pedagogical advantages due to increased motivation, alleviation of affective obstacles, and support for self-paced, independent learning. These findings add to the growing literature endorsing the deliberate incorporation of gamification into educational frameworks.

Conclusion

This study explored the effectiveness of gamified learning in second language acquisition (SLA), with a focus on learner motivation, engagement, and perceived improvement in language skills. Through an online survey of 24 participants, the research gathered insights into how commonly used gamified platforms—such as Duolingo, Memrise, and Kahoot—impact the language learning experience. The findings indicated that the majority of learners regularly used gamified tools and found them enjoyable and motivating. Many participants reported that these platforms made language learning more engaging, increased their willingness to practice, and contributed to better focus and retention. The use of points, levels, rewards, and interactive tasks appeared to encourage consistent learning habits.

Statistical analysis further supported these observations. A positive correlation was found between the frequency of gamified tool usage and learner motivation. These results suggest that regular use of gamified learning tools can enhance learner engagement and potentially improve language learning outcomes. Despite the small sample size and the self-reported nature of the data, the study provides meaningful insight into learner experiences with

gamified SLA tools. It highlights the potential of gamification to create a more enjoyable and effective learning environment.

In conclusion, gamified learning offers clear benefits for language learners by increasing motivation and supporting consistent practice.

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