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Exploring Flow State Experience in Vocabulary Mastery through Quizizz and Wordwall-Based Gamification

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Abstract

Flow State refers to a psychological experience characterized by focused attention, deep engagement, and a reduced awareness of time during an activity. This study explores students' experiences of Flow during Arabic vocabulary (*mufradat*) learning through Quizizz and Wordwall, with particular attention to how vocabulary characteristics shape students' engagement and meaning-making processes. A descriptive qualitative phenomenological design was employed with fifteen eleventh-grade students at Madrasah Aliyah Darul Ishlah in Lubuklinggau. Data were collected through semi-structured interviews and classroom observations and analyzed thematically through a phenomenological lens. The analysis focused on students' experiences of attention, recognition, recall, and the interpretation of Arabic vocabulary presented in digital learning activities. It also considered the distinction between concrete vocabulary, which can be associated with observable objects or visual representations, and abstract vocabulary, which may require greater reliance on contextual interpretation. The findings were organized into four themes: reduced anxiety as a possible entry point into Flow; gamification features that sustain engagement; altered time perception and absorption; and students' experiences of recognizing and recalling vocabulary. From Husserl's

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phenomenological perspective, the analysis examines Arabic vocabulary as an object of consciousness (*noema*) and students' acts of attending to, recognizing, and recalling words as aspects of conscious activity (*noesis*), within the framework of intentionality. Flow State theory provides an interpretive framework for understanding students' reported concentration and immersion. The study highlights the importance of examining both the psychological experience of learning and the linguistic characteristics of the vocabulary involved. However, claims about long-term retention, vocabulary mastery, or differences between concrete and abstract vocabulary require direct supporting evidence from the field data.

Keywords: Flow State; Arabic Vocabulary; Gamification; Vocabulary Internalization; Arabic Language Learning.

Introduction

Proficiency in Arabic occupies a strategic position in the contemporary educational landscape, both as a means of understanding Islamic sources and as a globally recognised international language.(Alshammari et al., 2024) In the case of Madrasah Aliyah in Indonesia, this competence is based on vocabulary (*mufradat*) as the primary foundation for all language skills; without adequate vocabulary, pupils will struggle to listen, speak, read and write effectively. (Almubarak et al., n.d.) (Nation, 2001) Therefore, vocabulary learning must not merely focus on increasing the number of words students know, but must also build a strong representation of meaning so that new vocabulary can be retained and used productively in the long term. However, this objective faces increasingly complex challenges in the digital age. (Ahmadi, 2014)

Vocabulary learning at Madrasah Aliyah Darul Ishlah remains dominated by rote learning and teacher-centred lectures, despite the importance of vocabulary mastery in Arabic language learning. As a result, much of the vocabulary is retained only until the exam is over, after which it is gradually forgotten. More than just a matter of retention, this approach to learning also fosters anxiety about using the language, reduces engagement with the subject, and causes pupils to become increasingly disengaged from the learning process.(Rahmadi et al., 2026) (Sun, 2026) This situation does not merely reflect pupils' low ability, but rather indicates a mismatch between their learning needs and the learning experiences provided in the classroom.(Haq et al., 2024) Various studies show that when learning fails to provide a sense of security, motivation and sufficient cognitive engagement, the process of forming long-term memories is also hindered.(Sikandar et al., 2025) (Al-khresheh & Almayez,

2026) Therefore, the main challenge in vocabulary learning today lies not only in how to teach more vocabulary, but also in how to create learning experiences that make that vocabulary meaningful, engaging and lasting in students' memories.

The issues surrounding vocabulary learning at Madrasah Aliyah Darul Ishlah are not only related to the predominance of conventional methods, but also to the sub-optimal use of technology in the learning process. Although the school's facilities are reasonably adequate, the use of technology remains limited to one-way media, such as presentations and digital documents, and is therefore unable to create an interactive learning experience.(Ullah & Anwar, 2020) Consequently, pupils often do not receive prompt feedback on the mistakes they make and tend to lose motivation to engage actively.(Liu et al., 2025) (S. Li et al., 2026) In this context, gamification platforms such as Quizizz and Wordwall offer a promising alternative through interactive features, such as instant feedback, leaderboards, challenges and reward systems, which can boost pupil participation during lessons.(Almelhes, 2024a) (Saleh, 2023) These findings are consistent with various previous studies showing that the use of gamification can enhance learning motivation whilst also contributing to improved vocabulary acquisition among pupils.(Sukirman & Kholis, 2025)

Improvements in scores are commonly used as the primary indicator for assessing the success of gamification in language learning. However, behind these figures lies a far more fundamental question: how does this improvement actually happened?(Shen et al., 2023) Various studies on Quizizz and Wordwall have demonstrated a positive contribution to pupils' vocabulary acquisition, but most explanations still stop at comparing pre- and post-intervention results.(Yu, 2023) (Luo, 2023) (Ishaq et al., 2021) Consequently, the psychological processes taking place during learning are often overlooked. In fact, the effectiveness of gamification likely lies not solely in the technology or features used, but in its ability to create psychological conditions that foster optimal engagement in learning. It is this perspective that directs attention to the concept of 'Flow State' introduced by Mihaly Csikszentmihalyi's Flow State theory describes an optimal psychological experience in which individuals become deeply immersed in an activity. Flow occurs when the perceived challenges of a task are balanced with an individual's skills. Its key conditions include clear goals, immediate feedback, and focused attention. During this state, individuals may experience reduced self-consciousness, an altered perception of time, and intrinsic enjoyment, known as the *autotelic experience*, in which an activity is pursued for its inherent satisfaction rather than external rewards.

In Arabic vocabulary learning (*mufradat*), digital platforms such as Quizizz and Wordwall may facilitate flow by providing interactive tasks, clear objectives, and immediate feedback. When vocabulary activities are appropriately matched to students' abilities, they may encourage deeper

engagement with Arabic words and their meanings. However, the use of digital games does not automatically indicate the occurrence of flow or successful vocabulary acquisition. Therefore, this study examines students' subjective experiences, verbal and nonverbal responses, and the ways they recognize, recall, and make sense of Arabic vocabulary during digital learning activities. This perspective positions Flow State theory as an analytical framework for understanding students' psychological engagement in vocabulary learning rather than merely evaluating the effectiveness of digital media.(Zuniga, 2023) In the context of vocabulary learning, Flow offers a conceptual framework that enables researchers to understand the psychological processes occurring during learning, rather than merely the learning outcomes apparent once the learning process has ended.(Amini et al., 2016) (Jacobs & Morgan, n.d.) Although the integration of gamification into language learning continues to evolve, the psychological mechanisms underlying how this technology stimulates a state of flow during vocabulary acquisition remain limited, particularly in Arabic language learning (ALL). Studies on English as a Foreign Language learners in China indicate that the alignment between task difficulty and learners' competence, clarity of objectives, and the speed of feedback are key factors (antecedents) that enhance concentration and intrinsic motivation. These findings reinforce an important premise: success in vocabulary acquisition is not determined by the sophistication of the technology itself, but rather by the quality of the pedagogically designed psychological experience.(R. Li et al., 2021) In contrast to these developments, research linking pedagogical practice with flow theory within the current Pedagogical Language Acquisition landscape remains extremely scarce and marginal. The existing literature has so far only touched upon the realm of instrument validation, as in the study *"Trans-Cultural Validation of the 'Academic Flow Scale' (Flow 4D 16) in Arabic Language"*. Nevertheless, the literature's focus on psychometric testing leaves ample scope for discussion regarding its pedagogical implementation.(Chalghaf et al., 2019) Whilst such validation confirms the urgency of the flow construct within the Arabic-language ecosystem, there remains an empirical gap regarding how to deliberately (by design) foster such optimal experiences within Arabic language classrooms.

However, similar studies are rarely found in the context of Arabic language learning, particularly at the Madrasah Aliyah level. Nevertheless, the majority of research still focuses on improving scores, learning motivation, or the effectiveness of the platform in general, whilst the psychological processes that bridge gamification features, the flow experience, and vocabulary mastery have not been extensively explained. Previous studies have examined Arabic vocabulary acquisition from linguistic, pedagogical, and psychological perspectives. in their study published in Arabia, investigated students' mastery of everyday Arabic vocabulary at TPQ Nurul Iman Pati. Their findings indicated that lexical competence was associated with learners' linguistic potential, age,

first language, learning materials, real-life vocabulary use, and teacher involvement. This study highlights the importance of contextual relevance and learners' everyday experiences in developing Arabic lexical competence. Despite these contributions, further investigation is needed into how learners subjectively experience vocabulary acquisition when interacting with digital learning environments. In particular, the relationship between flow experiences, learners' moment-to-moment awareness, and their engagement with Arabic vocabulary through platforms such as Quizizz and Wordwall remains a relevant area for phenomenological inquiry. Accordingly, this study does not claim that the psychological dimensions of Arabic vocabulary acquisition have never been investigated. Rather, it focuses on understanding how learners experience and make sense of vocabulary learning through the interaction between digital stimuli, focused attention, and the perceived meanings of Arabic words, drawing on Csikszentmihalyi's Flow State theory and Husserl's transcendental phenomenology. It is this gap that highlights the need to examine Flow not merely as a by-product of gamification, but as a mechanism that helps explain how learning engagement and vocabulary acquisition can be fostered more deeply.

If the improvement in scores to date has been viewed as evidence of the success of gamification, this study seeks to explore the processes leading up to those scores. The focus of the research is not on what pupils achieve once the learning has ended, but rather on what they experience whilst the learning process is taking place. When pupils remain focused throughout the learning activities, dare to take risks without fear of making mistakes, become fully immersed in the tasks at hand, and even lose track of time, there is a psychological experience that warrants further understanding. It may well be that what is actually at work is not the application itself, but rather the experience of 'Flow' that arises during the learning process. Therefore, this study explores how the experience of 'Flow' is formed in vocabulary learning using Quizizz and Wordwall among students at Madrasah Aliyah Darul Ishlah, and how this experience contributes to their engagement and mastery of vocabulary. By placing 'Flow' at the centre of the analysis, this study seeks to demonstrate that the success of gamification in Arabic language learning can be understood not only through learning outcomes but also through the quality of the learning experience built up during the learning process.

Methods

This study employed a qualitative descriptive phenomenological design to explore students' lived experiences of learning Arabic vocabulary (mufradat) through Quizizz and Wordwall. A phenomenological approach seeks to understand how individuals experience and make sense of a particular

phenomenon from their own perspectives.[1] In this study, the approach was used to examine students' subjective psychological experiences, including attention, engagement, perceived concentration, and their experiences of recognizing and recalling Arabic vocabulary during digital learning activities. Data were collected through interviews and observations of students' verbal and nonverbal responses. The data were analyzed descriptively to identify recurring patterns of experience while preserving the meanings expressed by the participants. Descriptive phenomenology was selected because the study sought to understand the essence of students' experiences as they engaged in gamified learning activities rather than to measure learning outcomes quantitatively. Grounded in Edmund Husserl's transcendental phenomenology, this study examines students' lived experiences of flow during Arabic vocabulary (mufradat) learning. Husserl's concept of intentionality emphasizes that consciousness is always directed toward something, while the distinction between noesis and noema helps clarify the relationship between the act of consciousness and the object as experienced.[1] In this study, **noesis** refers to students' acts of attending to, recognizing, recalling, and interpreting Arabic vocabulary, whereas noema refers to the vocabulary as it is consciously experienced and understood within the learning activity. Flow theory is used to interpret students' reported experiences of focused attention, immersion, and intrinsic enjoyment. These concepts guide the analysis of interview accounts and observed verbal and nonverbal responses. Rather than assuming that flow represents a complete merging of consciousness and its object, the study examines how students experience and make meaning of Arabic vocabulary during digital learning activities.

The study was conducted at Darul Ishlah Madrasah Aliyah, Lubuklinggau. Participants consisted of fifteen eleventh-grade students who had experienced Arabic vocabulary learning activities using Quizizz and Wordwall for at least one semester. Participants were selected through purposive sampling to ensure that all respondents possessed direct experience with the phenomenon being investigated. In phenomenological research, participant selection is guided not by statistical representativeness but by experiential relevance, making purposive sampling appropriate for identifying individuals capable of providing rich descriptions of the phenomenon.

This study employed classroom observation and semi-structured interviews to explore students' subjective experiences of learning Arabic vocabulary (*mufradat*) through Quizizz and Wordwall. The instruments were designed to document observable expressions of engagement and to explore the meanings students attributed to their learning experiences.

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[1]John W. Creswell dan Cheryl N. Poth, Qualitative Inquiry and Research Design: Choosing Among Five Approaches, ed. ke-4 (Thousand Oaks, CA: SAGE Publications, 2018),

Classroom observations focused on three categories of indicators. Visual indicators included students' gaze direction, visual attention to vocabulary items, images, and task instructions, as well as changes in attention during activities. These indicators provided contextual information about students' engagement but were not treated as definitive evidence of flow. Spontaneous verbal indicators included unprompted utterances, such as reading Arabic words aloud, repeating vocabulary, expressing recognition, asking questions, or spontaneously connecting words with their meanings. These responses helped document how students interacted with vocabulary during learning. Nonverbal indicators included facial expressions, gestures, body movements, and observable reactions to correct or incorrect responses. These indicators were interpreted cautiously and in relation to the learning context rather than assumed to reveal students' internal psychological states directly.

Semi-structured interviews were conducted to explore the subjective meanings underlying the observed experiences. The questions addressed students' attention, perceived concentration, emotional responses, experiences of remembering vocabulary, and perceptions of time and enjoyment during the activities. In line with Husserlian phenomenology, the interviews encouraged participants to describe their experiences in their own words. The observation and interview data were then compared to identify patterns in students' reported and observed experiences of flow during Arabic vocabulary learning.

The learning activities were designed to explore how a structured digital environment could facilitate students' experiences of flow during Arabic vocabulary (*mufradat*) learning. Wordwall activities presented visual matching tasks with clear objectives and immediate feedback, allowing students to connect Arabic words with their corresponding images or meanings. These conditions were examined as potential facilitators of focused attention and engagement rather than as automatic evidence of flow. The vocabulary was deliberately selected from concrete, functional, and high-frequency words closely related to students' daily environments, including school facilities and classroom activities. Examples included فَصْلٌ(classroom), مَكْتَبَةٌ(library), سَبُّورَةٌ (board), and يَقْرَأُ(to read). This selection was intended to provide familiar visual and contextual cues during the initial matching activities before students encountered vocabulary requiring more complex interpretation.

During the activities, the researcher observed students' visual attention, spontaneous verbal responses, nonverbal expressions, and engagement with the vocabulary tasks. Semi-structured interviews subsequently explored how students experienced concentration, recognized and recalled words, responded to challenges, and interpreted their learning experiences. The data were analyzed phenomenologically to understand the subjective meanings of these experiences,

while Flow State theory informed the interpretation of immersion, focused attention, and intrinsic enjoyment.

The data were analyzed using thematic phenomenological analysis. The first step involved multiple readings of the interview transcripts and observation notes to gain a comprehensive understanding of the participants' experiences. Key aspects of the Flow experience were then identified and coded. Related codes were clustered into broader themes representing repeated patterns in the participants' statements. Through a process of repeated comparison and refinement, these themes were synthesized to reveal the essential characteristics of Flow experienced during vocabulary learning using Quizizz and Wordwall. The final themes were interpreted in reference to Flow Theory (Csikszentmihalyi, 1990) and current literature on gamified language learning.

To confirm the reliability of the research findings, this study used participant verification and triangulation. Participant verification was obtained by asking several participants to review transcripts of the interview findings to confirm the accuracy of the interpretations. Data from interviews and observations were integrated to achieve triangulation. Throughout the research process, the researcher also kept reflective notes to minimize personal bias and maintain fidelity to the participants' accounts.

Findings and Discussion

Interview data analysis from fifteen students (S1–S15), which was confirmed by classroom observations, identified four interrelated themes that describe the experiences of students during the Quizizz- and Wordwall-based vocabulary learning process. The themes illustrate a learning progression that starts with a reduction in learning anxiety, follows through with engagement reinforced by gamification features, continues with deep absorption during learning activities, and concludes with a more meaningful mastery of vocabulary. A summary of these findings is presented in Table 1.

Table 1. Themes of Students' Flow Experiences in Gamified Arabic Vocabulary Learning

Theme	Representative Quotes	Observational Evidence
Anxiety Reduction as the Entry Point to Flow	*"Dulu takut salah kalau ditunjuk langsung, tapi di aplikasi lebih aman." (S1,S2,S3,S13)*	The students responded to the questions enthusiastically, without any hesitation or shyness.
Gamification Features Sustaining Engagement	*"Senang karena langsung tahu jawaban benar atau salah." (S4, S5, S9)*	Students continuously monitored scores and attempted to improve performance on subsequent

		items.
Time Distortion and Deep Absorption	*"Waktu berjalan sangat cepat, saya tidak sadar sudah menjawab banyak soal." (S7, S8,14)*	No students were observed checking the clock during the session.
Natural Vocabulary Internalization	"I could still remember some Arabic vocabulary after the game had ended." (S6, S10, S15)	Students spontaneously repeated Arabic words while reading answer options.

Anxiety Reduction as the Gateway to Flow

The learning experience through Quizizz and Wordwall began not with an increase in vocabulary mastery, but with a reduction in students' anxiety about participating. The majority of participants admitted to feeling more comfortable answering questions via these two platforms than in a conventional classroom setting. Making mistakes is not seen as a shameful thing anymore, but as a natural part of the educational process.. As S1 put it, *"I used to be afraid of making mistakes when called on directly, but using the application feels safer. When I make a mistake, I do not feel embarrassed; instead, I want to try again."* This account suggests that the digital learning environment was perceived as less socially threatening than being called on directly in class. The participant's response indicates that making mistakes during vocabulary activities did not necessarily lead to feelings of embarrassment. In the context of Arabic mufradat learning, this perception may have shaped how students experienced answering vocabulary questions through the platform. However, whether students actually attempted the questions again after incorrect answers requires confirmation through classroom observation. These interview findings are supported by classroom observations, in which pupils were seen to participate actively throughout the learning sessions, including when encountering unfamiliar vocabulary, without displaying any avoidance behaviour. The consistency between what the pupils reported feeling and what was observed in the classroom suggests that this sense of psychological safety is not merely a subjective perception, but is genuinely reflected in their patterns of participation.(Tahir & Wang, 2024) (Jaafar & Yusoff, 2022)

A learning environment that allows mistakes to occurred without significant social consequences appears to be an essential prerequisite before deeper engagement can develop.(Almelhes, 2024b) This explanation is aligned with the Affective This is the Filter Hypothesis (Krashen, 1982), which identifies affective factors like anxiety and self-confidence as determinants of successful language acquisition.(Sa'Diyah & Fahmi, 2026) (Bao et al., 2026)

When these emotional barriers are removed, as illustrated by the experiences of S1 and S13, students become more responsive to language input and more actively engaged in the learning process.Thus, the increase in participation during gamified activities can be understood as a result of changes in the students' affective state, rather than solely due to the use of the digital platform itself.

The Roles of Instant Feedback and Leaderboards

As a sense of security in participating develops, pupils' attention is sustained by a series of mechanisms embedded in the gamification design.(L. Li et al., 2024) One of the most prominent mechanisms is instant feedback. Rather than waiting for the teacher's correction at the end of the lesson, pupils receive information about their performance immediately after submitting an answer.(Almelhes, 2024b) This is clearly illustrated by statement S4: "*I feel happy because I immediately know whether my answer is correct or incorrect."* The participant's response highlights the value of immediate feedback in digital vocabulary activities. Knowing whether an answer is correct or incorrect allows students to receive direct information about their responses when matching Arabic words with their meanings or pictures. However, this response alone does not establish whether students subsequently corrected their vocabulary errors or changed their answering strategies. Such processes would require further evidence from classroom observations or interview accounts. From a Flow perspective, the presence of rapid feedback helps maintain continuity in the interaction between the individual and the task at hand.(Krath et al., 2021) Thus, feedback serves not only as an evaluation tool, but also as a mechanism that sustains focus, engagement and a sense of progress throughout the learning process.

The interesting thing is that features often regarded as supplementary elements of the game actually appear to play a key role in maintaining a state of flow.(Oliveira et al., 2021) Leaderboards, for example, do not create the kind of social pressure commonly found in conventional classroom assessments.(C. Li et al., 2024) Instead, pupils use them as a benchmark for progress that helps them monitor their achievements in real time, as S5 put it: *"The leaderboard motivates us to aim for higher scores*." The leaderboard appeared to provide an external motivational cue that encouraged students to monitor their progress during Arabic vocabulary (**mufradat**) activities. Observational data indicated that students regularly checked their scores and rankings. When they encountered incorrect answers, some students directed their attention toward subsequent questions rather than immediately disengaging. This behavior may indicate cognitive resilience, understood here as students' observable persistence in responding to learning challenges. From a Husserlian phenomenological perspective, the Arabic vocabulary presented through the digital platform constitutes the **noema**—the object as experienced in consciousness—while students' acts of attending to, recognizing, and recalling the words can be

examined as aspects of **noesis**. The leaderboard may therefore shape the learning context in which students engage with vocabulary, while their responses provide insight into how they experience and process the words. However, repeated exposure or continued participation alone does not establish that vocabulary has been intuitively internalized or retained; such interpretations require supporting evidence from interviews and observations of students' vocabulary recognition and recall.

Time Distortion and Deep Immersion as Indicators of Flow

The loss of awareness of time is one of the most convincing indicators that pupils have moved from mere engagement to a pure state of flow.(Lavoie et al., 2022) During the lesson, the pupils' attention seemed so absorbed in the activity that there was no behaviour suggesting any awareness of the passing of time. This state was vividly described by S7: *"Time passed so quickly. I did not realize that I had answered so many questions because I was so focused on playing the game."* A similar experience was reported by S14, who expressed surprise when the learning session ended because it felt shorter than expected. Observation notes also recorded sustained visual attention to the screens throughout the approximately twenty-five-minute activity, minimal visible distraction, and spontaneous requests from several students to continue playing after the session ended. In the context of Arabic vocabulary (*mufradat*) learning, these observations suggest that the digital activity sustained students' engagement with the learning tasks. From the perspective of Flow State theory, the perceived passage of time and continued engagement may indicate features of a flow experience. Through Husserl's phenomenological lens, the Arabic words presented on the screens can be examined as objects of students' consciousness (**noema**), while their acts of attending to, recognizing, and interpreting those words relate to the activity of consciousness (*noesis*). Nevertheless, sustained attention and altered time perception alone cannot establish that students were deeply processing word meanings or achieving vocabulary mastery. Such interpretations require supporting evidence from students' interview accounts and observations of their actual responses to the Arabic vocabulary tasks. This phenomenon is consistent with the concept of 'temporal distortion' described by Nakamura and Csikszentmihalyi, namely the alteration in the perception of time that occurs when an individual is intensely absorbed in an activity.(Peifer et al., 2022) Therefore, the experiences identified in this study are best understood as manifestations of deep cognitive engagement rather than merely enthusiasm for the use of engaging learning materials.

If enthusiasm alone were used as an indicator of the success of gamification, then almost all game-based activities could be considered effective. However, the data from this study point towards a more in-depth interpretation. More than simply making pupils enjoy learning, gamification in this study appears to have succeeded in transforming the way pupils experience the

learning process itself.(Chan et al., 2021) Time seemed to pass unnoticed, anxiety about making mistakes faded, and pupils' attention remained firmly fixed on the activity at hand, to the extent that spontaneous requests to continue the game served as an undeniable sign that their engagement had gone beyond mere momentary enjoyment. These observations suggest that students' experiences extended beyond increased participation toward a more sustained engagement with Arabic vocabulary (**mufradat**). During the activities, students were not merely interacting with the digital game; they were directing their attention toward Arabic words and attempting to associate them with corresponding images or meanings. For example, concrete vocabulary related to familiar surroundings, such as فَصْلٌ(classroom) and مَكْتَبَةٌ(library), provided visual and contextual cues that could support word recognition. By contrast, abstract vocabulary, whose meanings are less readily represented through images, may require students to rely more heavily on contextual interpretation and prior linguistic knowledge. From Husserl's phenomenological perspective, the Arabic words as experienced by students can be understood in terms of the **noema**, while their acts of attending to, recognizing, and recalling those words relate to the **noesis**. This relationship illustrates intentionality, whereby consciousness is directed toward an object of experience. Meanwhile, Csikszentmihalyi's Flow State theory provides a framework for interpreting students' sustained attention and absorption in the vocabulary tasks, particularly when the activities offer clear goals and immediate feedback. In this context, vocabulary learning may become an engaging experience rather than solely a deliberate memorization exercise. However, sustained engagement does not by itself demonstrate durable vocabulary acquisition; claims about long-term retention require supporting evidence from students' recall or subsequent vocabulary performance.

Sequential Flow Pathway in Gamified Vocabulary Learning

Consequently, vocabulary mastery is not understood as a direct effect of using Quizizz and Wordwall, but rather as the end result of a psychological transformation that develops gradually throughout the learning process. This perspective helps to explain why improvements in learning outcomes occur, rather than merely proving that such improvements do indeed take place. Moreover, the discussion in this study reveals that the focus of gamification does not stop at Rather than examining improvements in vocabulary proficiency, this study explores students' psychological experiences of learning, memorizing, recognizing, and recalling Arabic vocabulary (*mufradat*) during digital gamified activities, but extends to the realm of the learning experience. The findings indicate that success in mastering vocabulary is not primarily determined by the platform used, but rather by the learning environment's ability to foster conditions conducive to the emergence of Flow. As long as pupils feel safe to participate, receive prompt feedback, understand the

objectives to be achieved, and face challenges commensurate with their abilities, the likelihood of deep engagement increases. From this perspective, Quizizz and Wordwall should not be understood as the direct cause of vocabulary improvement, but rather as tools that facilitate the creation of a 'Flow' experience, which provides insight into how students experience focused engagement while recognizing, recalling, and making sense of Arabic vocabulary (*mufradat*) during digital learning activities.

Conclusion

This study explored students' psychological experiences of learning Arabic vocabulary (mufradat**)** through digital gamified activities using Husserl's transcendental phenomenology and Csikszentmihalyi's Flow State theory. From a Husserlian perspective, the findings can be interpreted through the relationship between noema**,** noesis, and intentionality. The Arabic vocabulary presented through digital media constituted the objects as experienced by students (**noema**), while their acts of attending to, recognizing, and recalling the words represented aspects of conscious activity (noesis). Intentionality provides the basis for examining how students' attention was directed toward these vocabulary items during the learning activities. Meanwhile, Flow State theory helps interpret students' reported concentration, immersion, and altered perception of time during the tasks.

Regarding the linguistic characteristics of the learning materials, the study focused on Arabic vocabulary presented through digital matching activities. Where supported by the field data, students' responses may be described in terms of their recognition of word forms and their association of those forms with corresponding meanings. If the activities primarily involved concrete and functional vocabulary related to students' everyday surroundings, the findings should be interpreted within that lexical scope rather than generalized to abstract vocabulary or morphological patterns such as **taṣrīf**. Students' reported incidental recall offers insight into their experiences of remembering vocabulary; however, it should not be equated with comprehensive lexical mastery or long-term retention unless supported by evidence demonstrating both recognition of word forms and understanding of their meanings.

Overall, the study highlights how students experience Arabic vocabulary learning as a process of directed attention, recognition, and meaning-making within a digital learning environment. By bringing Husserl's phenomenological concepts into dialogue with Flow State theory, the study interprets not only students' engagement with the activities but also how Arabic vocabulary becomes an object of their conscious experience. The conclusions are therefore limited to the experiences and lexical responses documented in the field data,

rather than claims that digital gamification necessarily produces vocabulary improvement or durable internalization.

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Author Contributions Statement

AA: developed the research concept and design, collected data, analyzed data, and wrote and edited the manuscript. GR, TS, RB, RK, RY: helped with data collection, validated the findings, reviewed the analysis results, and edited the manuscript. All authors have read and approved the final version of the manuscript.

AI Writing Statement

During the preparation of this manuscript, the authors used artificial intelligence (AI) tools, including ChatGPT and DeepL, to assist with language editing, grammar checking, translation, and improving the clarity and readability of the manuscript. The authors carefully reviewed, verified, and edited all content generated with the assistance of these AI tools and take full responsibility for the accuracy, integrity, interpretation, and final content of the manuscript.

Ethical Considerations

Participation was voluntary, and informed consent was obtained from all participants prior to data collection. Participants were assured of the confidentiality of their responses, and pseudonyms were used in reporting the findings to protect their identities.

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