

Exploration of the Quizizz Application in Learning Fi'il Mu'tal Based on Bloom's Taxonomy

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ABSTRACT

This study aims to identify the effectiveness of using the Quizizz application in helping students understand the concept of fi'l mu'tal based on the application of Bloom's Taxonomy in question construction. The objectives of the study are to evaluate students' perceptions of using Quizizz in assisting them to recall, comprehend, apply, analyze, and evaluate the concept of fi'l mu'tal systematically. This research employs a quantitative approach using a survey design. A questionnaire was used as the research instrument and distributed to 60 second-semester students taking the Programme in Professional Arabic Communication at Universiti Teknologi MARA (UiTM) Shah Alam. Data were analyzed using descriptive statistical methods involving mean and standard deviation. The findings show that the overall mean score is high in terms of students' understanding and clarity in differentiating the types of fi'l mu'tal. The results indicate that the use of Quizizz as a formative assessment tool can enhance students' comprehension and engagement while promoting higher-order thinking skills (HOTS)-based learning.

Keywords— Quizizz, Fi'l Mu'tal, Bloom's Taxonomy, Arabic Language, Gamification

INTRODUCTION

The development of digital technology has transformed the landscape of teaching and learning, especially among the younger generation who prefer interactive and game-based approaches. In the context of 21st-century education, the integration of digital technology in teaching and learning (T&L) has become a vital necessity. Game-based learning approaches such as Quizizz, Kahoot! and Wordwall are increasingly popular among Arabic language educators. These approaches not only add elements of interactivity and motivation but also support active, student-centered learning.

In Arabic language learning, students often face difficulties in understanding morphological aspects such as fi'l mu'tal, which involves changes in verb forms. This category of verbs contains one of the weak letters (ا, ي, و) and undergoes structural changes when formed under different wazan (patterns). Confusion regarding these transformations often makes it difficult for students to accurately grasp morphological structures, which in turn affects their mastery of the language system.

Although previous studies have discussed the use of Quizizz in language learning, most focused on vocabulary, motivation, or other basic skills, with less emphasis on complex grammar and morphology topics such as fi'l mu'tal. Therefore, an assessment and training strategy that not only tests memorization but also measures comprehension, application, and students' higher-order thinking abilities is needed. Bloom's Taxonomy (Anderson & Krathwohl, 2001) provides a suitable framework for this purpose, encompassing six cognitive levels—remembering, understanding, applying, analyzing, evaluating, and creating.

Quizizz enables the development of questions according to these levels through engaging and varied formats. Thus, this study aims to evaluate how effectively Quizizz helps students understand and master the topic of fi'l mu'tal, as well as to analyze their acceptance of its use in learning. The use of gamified applications such as Quizizz has the potential to serve as an effective medium, as it combines entertainment with learning, thereby enhancing motivation, active engagement, and comprehension of difficult topics.

LITERATURE REVIEW

Fi'īl Mu'tal

Fi'īl mu'tal (الفعل المعتل) is an important topic in Arabic grammar (nahu) and morphology (sarf), referring to verbs that contain one of the weak letters—alif (ا), wau (و), or ya' (ي)—either at the beginning, middle, or end of the word. According to Ibn 'Aqil (1995), understanding the structure of fi'īl mu'tal is essential because it determines verb form changes across various wazan and tenses. In the context of Arabic as a foreign language, this topic is often identified as one of the most challenging grammatical aspects for students to master (Mufarokah et al., 2019), as it requires understanding complex morphological rules and the ability to analyze word structures. Mastery of fi'īl mu'tal not only helps students construct correct sentences but also strengthens their understanding of the root-based structure of the Arabic language.

Previous studies have shown that teaching fi'īl mu'tal requires a more interactive, student-centered approach. Al-Qarni (2020) found that using visual teaching aids such as verb change charts and morphological mind maps improved students' understanding of fi'īl mu'tal rules. Similarly, Shah and Yunus (2023) highlighted the effectiveness of gamified applications like Quizizz in helping students identify and memorize forms of fi'īl mu'tal more effectively through interactive quiz activities. This digital approach also aligns with Bloom's Taxonomy by encouraging students to think across various cognitive levels—from recalling verb forms, understanding their functions, to applying and evaluating verb structures in real contexts.

Bloom's Taxonomy in Language Teaching

Bloom's Taxonomy serves as a fundamental basis in curriculum and assessment design. According to Anderson & Krathwohl (2001), human cognitive development progresses through stages—from basic recall to creative thinking. In the context of Arabic language teaching, this approach allows educators to assess students not only in terms of linguistic knowledge but also their ability to analyze and use language structures creatively.

Bloom's learning theory encompasses three domains—cognitive, affective, and psychomotor—and remains one of the most widely applied frameworks in modern education (Winkel, 1989). The term taxonomy itself, derived from the Greek words taxis (arrangement/division) and nomos (law), refers to a hierarchical classification system (Enghoff, 2009; Santrock, 2007). Essentially, Bloom's Taxonomy serves as a structured framework for developing higher-order thinking from basic to advanced cognitive levels (Tanjung & Bakar, 2019).

In Arabic learning, Al-Naseer (2018) found that applying Bloom's Taxonomy improves students' understanding of morphological and syntactic structures progressively. Examples of learning activities based on Bloom's six levels include:

Bloom's Taxonomy Level	Level Learning Activity
Remembering	Identifying word types (isim, fi'īl, harf)
Understanding	Explaining the function of fi'īl mu'tal in sentences
Applying	Changing verb forms according to wazan
Analyzing	Comparing sentences with different structures
Evaluating	Assessing sentence grammaticality
Creating	Constructing sentences or essays using specific patterns

Quizizz Application

Quizizz is an online gamified quiz platform created by Deepak Joy Cheenath and Ankit Gupta in 2015 while teaching remedial mathematics at a school in Bangalore, India. Alongside Kahoot, Quizlet, and Edpuzzle, Quizizz is one of the most popular game-based learning platforms. It offers a web-based interface containing a

variety of interactive quiz games used in classroom learning (Pu et al., 2022). It is widely utilized for classroom activities such as group work, pre-tests, reviews, exams, and unit assessments (Mia et al., 2022).

Features such as real-time feedback, answer review, and quiz retakes have been rated highly by users. Additional “fun features” like memes, music, avatars, and themes further enhance motivation and participation in learning. Quizizz also functions as a self-assessment and progress-tracking tool, providing flexible accessibility, engaging visuals, and time-based settings that encourage focus.

Empirical studies show that Quizizz positively impacts grammar mastery, self-assessment, and learning achievement. Dextre-Vilchez & Vásquez-Mercado (2022) found significant improvement in students’ grammar comprehension through self-assessment with Quizizz. Similarly, Mahmud & Law (2022) reported that university students found Quizizz-based grammar learning both engaging and beneficial.

Other studies further confirm these findings. Akhyar Hanif et al. (2023) demonstrated that Quizizz enhanced Arabic language proficiency and engagement among primary students. Qurratul ‘Aini et al. (2022) highlighted its effectiveness in boosting motivation and performance in post-pandemic Arabic vocabulary learning. Nor Fatini Aqilah Mohd Su’ad and Hakim Zainal (2022) found that Quizizz increased motivation and made Arabic learning more enjoyable, while Soo Yan Mee et al. (2018) reported improved comprehension among non-native university learners. Similarly, Anisa Elita Rahmawati et al. (2023), using the ADDIE model, confirmed high effectiveness and positive reception of Quizizz as an assessment tool.

At higher levels, Zaharo and Lili Fitriani (2024) proved that Quizizz enhanced Arabic reading comprehension by creating an interactive and engaging learning environment. Muhammad Infithar al-Ahqaf and Ridha Darmawati (2021) emphasized that Quizizz offered a more enjoyable alternative to traditional assessments, especially during online learning in the pandemic. Likewise, Annindita Hartono Putri et al. (2021) demonstrated that Quizizz-based Arabic quiz games effectively enriched vocabulary and increased university students’ interest in language learning.

In summary, previous studies have shown that learning *fi’l mu’tal* presents significant challenges for students due to its complex morphological rules and variations in verb patterns. To overcome these difficulties, effective teaching must go beyond memorization and focus on developing students’ cognitive understanding and practical application. The use of Bloom’s Taxonomy offers a systematic framework that encourages learners to progress from basic recall of verb forms to higher levels of thinking such as understanding, application, and evaluation, thereby deepening their grasp of Arabic grammar concepts.

Meanwhile, literature on Quizizz demonstrates its effectiveness as a gamified learning tool that promotes active participation, motivation, and immediate feedback. When integrated with Bloom’s Taxonomy, Quizizz provides a dynamic and student-centered platform that supports all levels of cognitive engagement. This combination allows learners to interact meaningfully with grammatical content, reinforcing both conceptual understanding and critical thinking. Therefore, the integration of Quizizz with Bloom’s cognitive framework represents an innovative and effective approach for enhancing the teaching and learning of *fi’l mu’tal* in Arabic language education.

Method

This study adopts a quantitative survey method, using a questionnaire as the research instrument. This design was chosen as it allows data collection from a larger group of respondents efficiently. The study population consisted of 75 students. Based on the Krejcie and Morgan (1970) sample size table, 60 second-semester students enrolled in the Programme in Professional Arabic Communication at Universiti Teknologi MARA (UiTM), Shah Alam, Selangor, Malaysia, were randomly selected as the sample.

The questionnaire was developed based on five main components related to the use of Quizizz in learning *fi’l mu’tal*, with each item representing a level of Bloom’s Taxonomy. A five-point Likert scale was used (1 = strongly disagree, 5 = strongly agree). Data were analyzed using descriptive statistics to determine the mean,

standard deviation, and interpretation levels. The interpretation of mean scores followed the guidelines of Alias Baba (1999).

Table 1: Mean Score

Mean Score	Interpretation
1.00-1.80	Very Low
1.81-2.60	Low
2.61-3.40	Moderate
3.41-4.20	High
4.21-5.00	Very High

RESULTS AND DISCUSSION

Respondents' Demographic Information

The demographic analysis provides a clear description of the background of respondents involved in this study. A total of 60 respondents were second-semester students from the Arabic Language course at Universiti Teknologi MARA (UiTM) Shah Alam. The demographic analysis includes gender, age, prior experience using the Quizizz application for Arabic language learning, and the frequency of using the application. The descriptive analysis employed frequency and percentage methods. The sample distribution is shown in Table 2.

Table 2: Demographic Analysis

Variable	Category	Frequency	Percentage (%)
Gender	Male	21	35.0
	Female	39	65.0
Age	18 – 20 Years	15	25.0
	21 – 23 Years	41	68.3
	24 years and above	4	6.7
How you ever used Quizizz for Arabic language learning?	Yes	58	96.7
	No	2	3.3
Frequency of using Quizizz	Daily	1	1.7
	Several times a week	13	21.7
	Several times a month	25	41.7
	Rarely	21	35.0
Total		60	100

Based on Table 2, the demographic analysis used frequency and percentage. Out of 60 respondents, 21 were male students (35.0%) and 39 were female students (65.0%). In terms of age, 15 respondents (25.0%) were between 18–20 years old, 41 respondents (68.3%) were between 21–23 years old, and 4 respondents (6.7%) were 24 years old and above.

For the item regarding the use of Quizizz to support Arabic language learning, 58 respondents (96.7%) had used the Quizizz application, while only 2 respondents (3.3%) had not. Regarding the frequency of use, 1 respondent

(1.7%) used Quizizz daily, 13 respondents (21.7%) several times a week, 25 respondents (41.7%) several times a month, and 21 respondents (35.0%) rarely used it.

Perceptions Toward the Use of Bloom's Taxonomy in Fi'l Mu'tal

This construct aims to identify the perception level toward the use of Bloom's Taxonomy in learning fi'l mu'tal. The analysis employed mean and standard deviation for each item.

Table 3: Perception towards the use of Bloom's Taxonomy in Fi'il Mu'tal

No.	Item	Mean	S.D.	Input
C1	The Quizizz application helps recall the concept of fi'l mu'tal more easily through repetitive quiz exercises.	4.20	0.576	High
C2	The questions in Quizizz help better understand the meaning and usage of fi'l mu'tal in sentence form.	4.23	0.500	Very High
C3	Using Quizizz allows the application of knowledge about fi'l mu'tal in answering questions and constructing Arabic sentences more easily.	4.10	0.543	High
C4	Quizzes created through Quizizz help identify differences between types of fi'l mu'tal more clearly.	4.22	0.585	Very High
C5	Using Quizizz provides an opportunity to evaluate one's level of understanding of fi'l mu'tal before tests or exams.	4.20	0.632	High
Overall Mean		4.1900	0.49187	High

Based on Table 4, the overall mean score for students' perceptions toward the use of Bloom's Taxonomy in learning fi'l mu'tal is high ($M = 4.19$, $SD = 0.491$). This finding reinforces previous studies that demonstrated Quizizz enhances students' focus, motivation, and comprehension in language learning contexts (Al-Harthy, 2020; Shah & Yunus, 2023). Nawawi et al. (2022) also found that students show higher interest in content delivered through gamified platforms compared to traditional approaches, due to their interactive elements and the immediate feedback provided, which make learning more enjoyable and meaningful.

The item with the highest mean score is C2 ("The questions in Quizizz help better understand the meaning and usage of fi'l mu'tal in sentence form") with a mean of 4.23 and a standard deviation of 0.500. This is followed by C4 ("Quizzes created through Quizizz help identify differences between types of fi'l mu'tal more clearly") with a mean of 4.22 and a standard deviation of 0.585. These findings indicate that Quizizz effectively strengthens understanding of the meaning and differentiation of fi'l mu'tal types. Students can distinguish and identify ajwaf, mithāl, and nāqīṣ forms more easily through repeated exercises and immediate feedback from the application. This aligns with Al-Qarni's (2020) view that repetition and visual interaction in Arabic morphology learning help students understand verb form changes progressively. In this context, Quizizz functions not only as an assessment tool but also as an adaptive learning tool that supports students' cognitive needs.

From a pedagogical perspective, these results show that Quizizz successfully integrates Bloom's Taxonomy comprehensively within learning activities.

- At C1 (Remembering), quizzes introducing hurūf mu'tal (e.g., alif, wāw, yā') help students memorize verb forms more systematically.
- At C2 (Understanding), sentence-based questions enhance comprehension of meaning and syntactic function.
- At C3 (Applying), students construct new sentences using correct fi'l mu'tal forms.

- At C4 (Analyzing), they compare wazan transformations among verb types.
- Finally, at C5 (Evaluating), students use quiz feedback and scores to assess their own mastery and identify learning weaknesses.

This approach aligns with Anderson and Krathwohl's (2001) assertion that cognitive skills can be developed through self-assessment and reflective activities. The findings confirm that Quizizz can serve as an effective formative assessment tool, consistent with Wahyuni and Setiawan's (2021) claim that gamified platforms enhance active learning by emphasizing immediate feedback and intrinsic motivation. In the context of fi'l mu'tal teaching, Quizizz's effectiveness can also be explained through Vygotsky's (1978) social constructivist theory, which posits that learning occurs actively through interaction and self-exploration.

Thus, Quizizz not only helps students memorize verb forms but also enables them to understand the linguistic rationale behind letter changes and morphological patterns, thereby promoting higher-order thinking skills (HOTS). The implications suggest that integrating gamification technology into Arabic grammar instruction should continue to ensure that grammar learning remains contextual, dynamic, and student-centered.

CONCLUSIONS AND RECOMMENDATION

Conclusions

The findings of this study indicate that the integration of Quizizz based on Bloom's Taxonomy successfully enhances students' understanding and engagement in learning fi'l mu'tal within Arabic grammar. The gamified and interactive features of Quizizz provide a stimulating environment that encourages active participation, reinforces comprehension, and promotes meaningful learning. Students benefit from the immediate feedback and repeated practice that help them recognize and apply grammatical patterns more effectively. Overall, Quizizz serves not only as an assessment tool but also as an effective instructional aid that supports higher-order thinking, self-evaluation, and learner motivation.

Recommendation

Based on the results, it is recommended that educators continue to integrate gamified platforms such as Quizizz into the teaching of Arabic language, particularly in grammar lessons that require continuous practice and conceptual understanding. Lesson designs should be aligned with the stages of Bloom's Taxonomy to ensure balanced development of cognitive skills—from remembering to evaluating. Institutions are encouraged to provide training and resources that support teachers in designing effective digital learning activities. Future research may also explore the application of other gamification tools or investigate their long-term effects on students' performance and motivation in different areas of Arabic language learning.

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