Improving Students' Pronunciation of the Mutamathilah Letters Through TikTok

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Abstract
Mastering the pronunciation of Arabic mutamathilah letters remains challenging for primary school learners because these letters share similar points of articulation and phonetic characteristics, which often lead to pronunciation errors. To address this challenge, Jawlah TikTok, a gamified, technology-based educational application, was developed as an alternative teaching aid to support pronunciation instruction in Arabic. This study evaluated the application's usability and explored experts' perceptions of its potential to facilitate the teaching of mutamathilah letter pronunciation. The application was developed following the ADDIE instructional design model, with the present study focusing on the Evaluation phase. Usability was assessed by seven Arabic language education experts, selected through purposive sampling, using the USE (Usefulness, Satisfaction, and Ease of Use) Questionnaire. The collected data were analyzed using the Percentage Calculation Method (PCM). The findings revealed an overall usability score of 92.42%, comprising usefulness (93.14%), ease of use (90.85%), ease of learning (92.85%), and satisfaction (92.85%), indicating a high level of expert agreement regarding the application's pedagogical usability. The experts also agreed that the gamified features of Jawlah TikTok have the potential to enhance students' motivation, engagement, and classroom interaction in Arabic language learning. These findings provide empirical evidence that Jawlah TikTok is a pedagogically sound and highly usable gamified application for supporting Arabic pronunciation instruction in primary education, while offering practical guidance for integrating digital technologies into Arabic language classrooms.

Keywords: Mutamathilah Letters; Pronunciation Skills; Jawlah TikTok; Primary Education; Educational Technology

INTRODUCTION

Arabic is a globally significant language that holds a distinctive status among Muslims because it is the language of the Qur'an. Nevertheless, many non-native Arabic learners, including school students and members of the wider community, continue to experience difficulties in producing accurate Arabic sounds. These pronunciation problems are especially evident in *mutamathilah* letters, which share similar articulation points (*makhraj*) and phonetic characteristics. In addition, learners' first language frequently influences their ability to articulate Arabic sounds accurately (Ali Huddin &

Sapar, 2022). Since pronunciation forms the foundation of oral language proficiency, learners should be exposed to accurate articulation from the early stages of education. Insufficient pronunciation instruction during primary schooling may result in persistent articulation errors that continue into later stages of language learning (Pennington, 2021). Previous studies have reported that Arabic instruction at preschool and primary school levels places limited emphasis on developing accurate pronunciation skills, particularly for *mutamathilah* letters, owing to inadequate pedagogical resources and instructional practices (Hussin & Mat Nuar, 2022; Othman et al., 2023). Furthermore, students' overall proficiency in Arabic, especially in reading, writing, and speaking, remains below the expected standard (Norlaila et al., 2025; Zaini et al., 2019).

One of the major pronunciation challenges encountered by learners is distinguishing *mutamathilah* letters, particularly *qāf* and *kāf*, due to their similar articulation points and phonetic properties. Inaccurate pronunciation may alter the intended lexical meaning and consequently reduce the effectiveness of oral communication (Ramli, 2021; Borham et al., 2026). In line with the Primary School Standard Curriculum (KSSR) for Arabic, students are expected to recognise and accurately pronounce Hijaiyah letters, words, and simple sentences through the integration of listening, speaking, reading, and writing skills (Curriculum Development Division, 2019). Consequently, pronunciation is regarded as a fundamental component of Arabic language instruction, as incorrect articulation may lead to misunderstanding during communication (Al Nabhani & Madiseh, 2025). Although numerous Arabic teaching materials and digital learning applications have been introduced, most focus primarily on vocabulary development, reading comprehension, or grammar acquisition rather than pronunciation training (Jaffar et al., 2025; Borham et al., 2024). Moreover, relatively few technology-based applications have been specifically developed to improve the pronunciation of *mutamathilah* letters among Malaysian primary school learners (Ramli et al., 2020; Ruslan et al., 2024b). This limitation highlights the need for a dedicated instructional application that combines gamification with a systematic instructional design framework to support pronunciation development among young Arabic language learners.

Recent research has demonstrated that technology-enhanced, gamified learning environments can positively influence learner engagement, motivation, and active participation in language learning activities, particularly among primary school learners (Md. Noor et al., 2025; Suryadarma et al., 2025), (Noe Manuel Quispe Ccoa et al., 2023). Likewise, technology-based innovations in Arabic language education have shown considerable potential for creating more engaging learning experiences, although most existing applications have not specifically addressed the pronunciation of *mutamathilah* letters (Jaffar et al., 2025; Ruslan et al., 2024a). These findings indicate the need for an educational application that integrates gamification with a systematic instructional design model to address this specific instructional challenge.

To address this gap, the present study developed Jawlah TikTok, a technology-based educational application designed to facilitate the learning of Arabic *mutamathilah* letters. The application was developed using the ADDIE instructional design model to ensure a systematic development process and rigorous expert evaluation. By incorporating a gamified edutainment approach, Jawlah TikTok aims to enhance learners' motivation while providing teachers with an interactive instructional resource for pronunciation practice. The application focuses on four *mutamathilah* letters; ***ta, tho, qāf,***

and *kāf* which also inspired its name. It was specifically developed to support Year Five Arabic language instruction by offering an engaging and interactive learning environment for pronunciation practice. This study contributes to Arabic language education by introducing a gamified instructional application specifically designed to improve the pronunciation of *mutamathilah* letters among Malaysian primary school learners. The application was systematically developed using the ADDIE instructional design model and subsequently validated through expert usability evaluation.

The objectives of this study are threefold: (1) to evaluate the usability of Jawlah TikTok in terms of usefulness, ease of use, ease of learning, and satisfaction; (2) to examine its pedagogical potential for supporting the pronunciation of *mutamathilah* letters; and (3) to provide practical guidance for primary school Arabic teachers in integrating the application into classroom instruction. By addressing these objectives, this study contributes to the growing body of knowledge on technology-enhanced Arabic language learning by providing empirical evidence regarding the usability of a pronunciation-focused gamified application while offering practical insights for integrating digital technologies into primary Arabic language education.

METHOD

This study adopted a quantitative survey approach involving expert evaluation to examine the usability of the Jawlah TikTok application. The application was developed following the ADDIE instructional design model, which consists of five sequential phases: Analysis, Design, Development, Implementation, and Evaluation. The present research concentrated on the Evaluation phase, during which a panel of experts examined the usability of the completed application. This phase enables a systematic assessment of instructional innovations to determine their usability and suitability before classroom implementation (Hussin & Marosadee, 2019; Ruslan et al., 2024a).

A panel of seven experts was recruited through purposive sampling to evaluate the usability of the Jawlah TikTok application. This sampling technique was considered appropriate because the study required participants with substantial expertise in Arabic language education, curriculum development, and instructional practice who were able to provide informed professional judgements regarding the application's usability. Previous studies have suggested that involving between five and ten domain experts is sufficient to obtain reliable and meaningful evaluations of educational products (Ellis & Levy, 2010; Amin et al., 2022).

Table 1. Profile of the Expert Panel

Expert	Position & Qualification	Field of Expertise	Experience
1	Academic Lecturer, PhD	Arabic Language	17 years
2	Outstanding Teacher DG48, Bachelor	Arabic Language	17 years
3	Outstanding Teacher DG48, Master	Arabic Language	15 years
4	Principal Trainer, Master	Arabic Language	16 years
5	Head of Arabic Department, Master	Arabic Language	13 years
6	Arabic Teacher, Bachelor	Arabic Language	15 years
7	Arabic Teacher, Bachelor	Arabic Language	10 years

The expert panel comprised an academic lecturer from the Institute of Teacher Education (IPG), who contributed to the development of the Primary School Standard Curriculum (KSSR) for Arabic, authored the Year Five Arabic textbook, and serves as a Lead Master Trainer; two Excellent Teachers of Arabic; one Primary School Arabic

Master Trainer who was also involved in developing the Arabic Language Curriculum and Assessment Standard Document (DSKP); one Head of the Arabic Language Panel; and two Arabic language teachers, each with more than ten years of teaching experience. Their selection was based on their academic qualifications, professional experience, and extensive involvement in Arabic language curriculum development and classroom instruction. A summary of their professional backgrounds is presented in Table 1.

Data were collected using the USE Questionnaire developed by Lund (2001), a widely recognised instrument for evaluating the usability of interactive products. The questionnaire measures four usability dimensions, namely usefulness, ease of use, ease of learning, and satisfaction. It comprised three sections. Section A gathered demographic information about the expert evaluators, Section B assessed the usability of the Jawlah TikTok application for teaching *mutamathilah* letters based on the four usability constructs, while Section C contained open-ended questions that enabled experts to provide comments on the application's strengths, limitations, and recommendations for improvement.

The evaluation procedure followed the framework proposed by Amin et al. (2022), which recommends selecting appropriate evaluation methods, implementing procedures supported by previous research, and ensuring the acceptability of the developed educational innovation. The researchers distributed the USE Questionnaire together with a Google Drive link that allowed the experts to access and explore the Jawlah TikTok application. Before completing the evaluation, the experts participated in a briefing session conducted via Google Meet and telephone communication, during which the application's features and learning activities were demonstrated. After exploring the application independently, the experts completed the questionnaire and subsequently provided qualitative feedback regarding its strengths, limitations, and suggestions for further enhancement.

Data Analysis

Quantitative data obtained from the USE Questionnaire were analysed using the Percentage Calculation Method (PCM) to determine the degree of agreement among the expert panel across the four usability dimensions: usefulness, ease of use, ease of learning, and satisfaction. The percentage of agreement was calculated by dividing the total score awarded by all experts by the maximum possible score and multiplying the result by 100 (Sidek & Jamaludin, 2005). A percentage exceeding 70% indicated satisfactory agreement among the experts, suggesting that the evaluated usability dimensions had achieved an acceptable level of consensus and that the application demonstrated satisfactory overall usability. The PCM calculation procedure adopted in this study is presented in Figure 1.

Figure 1. Percentage Calculation Method (PCM)

$$\text{Percentage Calculation Method (PCM)} : \frac{\text{Total expert score}}{\text{Full score}} \times 100$$

Figure 2 illustrates selected interfaces of the Jawlah TikTok application. The application comprises several learning components, including instructional notes, interactive games, and assessment activities. Its content is organised progressively, beginning with individual Arabic letters, followed by words and simple sentences

containing the targeted *mutamathilah* letters, thereby supporting a gradual development of pronunciation skills.

Figure 2. Jawlah TikTok Interface Development

RESULTS AND DISCUSSION

This section reports the results of the expert usability evaluation of the Jawlah TikTok application based on the four constructs measured by the USE Questionnaire: usefulness, ease of use, ease of learning, and satisfaction. The findings are subsequently discussed in relation to previous studies to determine the pedagogical usability of the application for supporting the teaching and learning of Arabic *mutamathilah* letters.

Overall Usability of Jawlah TikTok

The usability of Jawlah TikTok was assessed using the USE (Usefulness, Satisfaction, and Ease of Use) Questionnaire developed by Lund (2001), while the collected data were analysed using the Percentage Calculation Method (PCM). The evaluation examined four usability dimensions, namely usefulness, ease of use, ease of learning, and satisfaction. As summarised in Table 2, the application obtained an overall usability score of 92.42%**.** The individual expert agreement scores were 93.14% for usefulness, 90.85% for ease of use, 92.85% for ease of learning, and 92.85% for satisfaction. These results demonstrate a strong level of expert consensus, indicating that Jawlah TikTok is highly usable for supporting the teaching of Arabic *mutamathilah* letters. The consistently high scores across all four usability dimensions suggest that the experts regarded the application as useful, easy to operate, easy to learn, and satisfactory for classroom use. These findings are consistent with previous studies demonstrating that technology-enhanced instructional materials contribute positively to learner engagement and enrich language learning experiences (Ramli et al., 2019; Suryadarma et al., 2025). The overall usability results are presented in Table 2**.**

Table 2. Overall Usability Evaluation of Jawlah TikTok

Aspect	Percentage of Expert Agreement	Overall Usability
Usefulness	93.14%	92.42%
Ease of Use	90.85%	
Ease of Learning	92.85%	
Satisfaction	92.85%	

The usefulness dimension evaluates the extent to which the application facilitates learners in improving the pronunciation of *mutamathilah* letters. As presented in Table 3, the expert panel reported a high level of agreement, with an overall percentage of 93.14% and an agreement coefficient of 0.93. These results indicate that the experts considered Jawlah TikTok to be highly beneficial for supporting pronunciation learning.

The experts acknowledged that the application provides meaningful pedagogical support by promoting accurate pronunciation and reinforcing the correct articulation of *mutamathilah* letters. This finding is consistent with previous studies suggesting that effective pronunciation tools should provide structured learning support to facilitate language acquisition (Ruslan et al., 2024b). Moreover, the systematic learning activities incorporated into the application create meaningful learning experiences that assist learners in developing accurate pronunciation skills (Mohamed et al., 2024). The detailed findings for the usefulness dimension are presented in Table 3.

Table 3. USE Questionnaire Results – Usefulness

Item	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Expert 6	Expert 7	Total	PCM Average (%)	PCM Coefficient Average (1.00)
1	5	5	5	5	5	5	5	35	93.14	0.93
2	5	4	5	4	4	5	4	31		
3	5	5	4	5	5	5	5	34		
4	4	4	5	5	5	5	4	31		
5	5	4	5	4	4	4	5	32		

The ease of use dimension assesses the extent to which the application can be operated conveniently by both teachers and students. As shown in Table 4, this dimension achieved an overall expert agreement of 90.85%**,** with an agreement coefficient of 0.91. Although this was the lowest score among the four usability dimensions, it remained substantially higher than the minimum acceptable agreement level, indicating that the application is highly accessible for classroom implementation.

Table 4. USE Questionnaire Results – Ease of Use

Item	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Expert 6	Expert 7	Total	PCM Average (%)	PCM Coefficient Average (1.00)
1	5	5	5	5	5	5	5	35	90.85	0.91
2	4	5	4	4	5	5	4	31		
3	5	5	5	5	4	4	4	32		
4	5	4	5	5	4	4	5	32		
5	5	4	4	4	4	4	4	29		

According to the expert evaluation, the interface design, navigation, and instructional guidance provided by Jawlah TikTok enable users to operate the application with minimal difficulty during teaching and learning activities. This finding supports

previous research demonstrating that well-designed multimedia learning materials can reduce cognitive load while improving learning efficiency and usability for both teachers and students (Omar & Hashim, 2022; Md. Noor et al., 2026). The complete results for this dimension are summarised in Table 4.

The ease of learning dimension examines how effectively the application supports learners in understanding and mastering the pronunciation of *mutamathilah* letters. As illustrated in Table 5, this dimension recorded an overall agreement of 92.85%**,** with an agreement coefficient of 0.93, indicating that the application effectively facilitates pronunciation learning. The experts observed that Jawlah TikTok encourages independent learning by providing structured instructional activities and repeated opportunities for pronunciation practice. Such features enable learners to gradually develop their pronunciation skills while strengthening their understanding of the targeted Arabic letters. These findings are in agreement with previous studies reporting that learner-centred interactive instructional media enhance both comprehension and long-term retention of fundamental language skills (Dawod & Ghani, 2026; Borham et al., 2026). The detailed findings are presented in Table 5.

Table 5. USE Questionnaire Results – Ease of Learning

Item	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Expert 6	Expert 7	Total	PCM Average (%)	PCM Coefficient Average (1.00)
1	5	5	5	5	5	5	5	35	92.85	0.93
2	4	4	4	4	4	4	5	29		
3	5	4	5	4	5	4	5	32		
4	5	5	5	4	5	5	5	34		

The satisfaction dimension represents the experts' overall evaluation of the application's interface design, interactivity, motivational features, and pedagogical suitability. As presented in Table 6, this dimension achieved an overall agreement of 92.85%**,** accompanied by an agreement coefficient of 0.93, reflecting a high level of expert satisfaction with the developed application. The findings suggest that the experts regarded Jawlah TikTok as an engaging and pedagogically appropriate instructional application for teaching *mutamathilah* letters. Its combination of interactive learning activities and gamified elements was considered capable of encouraging learners to participate more actively in pronunciation practice. These findings are consistent with previous research indicating that higher learner motivation contributes to greater participation in repeated pronunciation practice and ultimately improves learning outcomes (Ramli, 2021; Ruslan et al., 2024b). The detailed results for this dimension are presented in Table 6.

Table 6. USE Questionnaire Results – Satisfaction

Item	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Expert 6	Expert 7	Total	PCM Average (%)	PCM Coefficient Average (1.00)
1	5	5	5	5	5	5	5	35	92.85	0.93
2	5	4	4	5	4	4	5	31		
3	5	4	5	4	5	4	5	32		
4	5	4	5	4	5	4	5	32		

Taken together, the findings demonstrate that Jawlah TikTok achieved a high level of usability across all four dimensions assessed by the USE Questionnaire. The consistently high percentage of expert agreement indicates that the application has considerable potential to support the teaching and learning of Arabic *mutamathilah* letters in Malaysian primary schools. Developed using the ADDIE instructional design model, the application combines a systematic instructional framework with gamified learning features that encourage learner engagement, motivation, and independent learning. Consequently, Jawlah TikTok may serve as an effective digital instructional resource to support pronunciation instruction while enriching Arabic language teaching practices in primary education.

CONCLUSION

The expert evaluation demonstrated that Jawlah TikTok achieved a high level of usability across the four dimensions assessed by the USE Questionnaire, namely usefulness, ease of use, ease of learning, and satisfaction. The consistently high level of expert agreement indicates that the application is a promising instructional resource for supporting the teaching and learning of Arabic *mutamathilah* letters, particularly those characterised by similar articulation points and phonetic features. In addition, the incorporation of gamified learning elements was perceived by the experts to enhance students' motivation, engagement, and participation during Arabic language learning activities.

This study enriches the field of Arabic language education by presenting a systematically developed and expert-validated gamified application for pronunciation instruction at the Malaysian primary school level. Despite these contributions, the findings should be interpreted in light of several limitations, including the relatively small number of expert evaluators and the focus on a single primary school year level. Future studies are encouraged to examine the application with a larger and more diverse sample of learners across different schools and educational settings. Moreover, experimental or quasi-experimental research designs are recommended to investigate the effectiveness of Jawlah TikTok in improving learners' pronunciation accuracy of *mutamathilah* letters. Further work may also explore the integration of emerging technologies, including artificial intelligence and adaptive learning, to strengthen the effectiveness of digital pronunciation instruction in Arabic language education.

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