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Articulatory Errors in Qur'anic Recitation: A Qualitative Investigation of Makhārij al-Ḥurūf Mastery among Indonesian Tahfizh Students

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Abstract

The accurate articulation of Arabic letters is a fundamental requirement for proper Qur'anic recitation. However, pronunciation errors in *makhārij al-ḥurūf* remain prevalent among students participating in Qur'anic memorization programs. This study aims to investigate the forms of articulatory errors in Qur'anic recitation and identify the factors influencing *makhārij al-ḥurūf* mastery among tahfīẓ extracurricular students at SMA Negeri 2 Batang Anai, Indonesia. A qualitative descriptive approach was employed. Data were collected through recitation observations, semi-structured interviews, and document analysis involving students and tahfīẓ instructors selected through purposive sampling. Data were analyzed using the interactive model of Miles and Huberman, including data reduction, data display, and conclusion drawing, while credibility was ensured through source and technique triangulation. The findings revealed pronunciation errors in fourteen hijaiyah letters, with the highest error rates occurring in ḍād (ض) (100%), followed by ẓāʾ (ظ) and ghayn (غ) (80%), and ʿayn (ع) (60%). These errors were associated with inaccurate articulation points, limited mastery of *ṣifāt al-ḥurūf*, insufficient theoretical understanding of *makhārij al-ḥurūf*, inadequate recitation practice, inconsistent participation in tahfīẓ activities, suboptimal program implementation, and first-language interference. The originality of this study lies in its integration of articulatory phonetics and Qur'anic pedagogy to explain pronunciation difficulties among Indonesian tahfīẓ students. This study contributes to the literature by demonstrating that recitation errors are shaped by both linguistic and educational factors, highlighting the importance of combining tajwīd instruction with systematic articulatory training to improve Qur'anic recitation proficiency.

Keywords: *makhārij al-ḥurūf*, Qur'anic recitation, articulatory phonetics, tahfīẓ education, pronunciation errors, Arabic phonology.

Introduction

Islamic education aims not only to develop intellectual capacity but also to cultivate moral character and guide individuals to live according to Islamic values so that they attain obedience to Allah SWT (Aris, 2022). As the primary source of Islamic teachings, the Qur'an occupies a central position in the educational process because it serves as divine guidance for all aspects of human life (Oom Mukarrommah, 2013). Consequently, every Muslim is encouraged to learn, understand, and practice the teachings of the Qur'an through various forms of engagement, including reading, recitation, memorization, and reflection. The importance of reading is explicitly emphasized in Surah Al-'Alaq verses 1–5, which encourage believers to read and seek knowledge in the name of Allah (Nisa & Maharani, 2022). Furthermore, Allah commands Muslims to recite the Qur'an in a measured and orderly manner (tartīl), as stated in Surah Al-Muzzammil verse 4. According to Ibn Kathir's interpretation, tartīl refers to reciting the Qur'an slowly, clearly, and in accordance with the rules of tajwīd so that its meanings can be understood and contemplated properly (Putri & Muttaqin, 2024).

The ability to read the Qur'an correctly constitutes a fundamental competency in Islamic education because accurate recitation preserves both the linguistic form and intended meaning of the divine revelation. Scholars generally agree that mastery of tajwīd, makhārij al-ḥurūf (articulation points), and ṣifāt al-ḥurūf (phonetic characteristics of letters) represents the foundation of proper Qur'anic recitation (Mahdali, 2020). Among these elements, makhārij al-ḥurūf occupies a particularly crucial position because it determines where and how each Arabic phoneme is produced. Makhārij al-ḥurūf refers to the specific articulation points from which hijaiyah letters emerge during pronunciation (Ekayanti et al., 2019). Correct articulation enables readers to distinguish between letters that possess similar phonetic features but differ in their places of articulation, thereby preventing pronunciation errors that may alter sounds, meanings, and the integrity of Qur'anic recitation (Bilal Alfarobbi & Zaki Raihan Siregar, 2025).

From a linguistic perspective, Arabic phonology contains several consonantal sounds that require precise articulatory movements involving the tongue, pharynx, palate, and vocal tract. Research in articulatory phonetics demonstrates that Arabic speech sounds, particularly emphatic and pharyngeal consonants, involve complex articulatory mechanisms that are often challenging for learners and non-native speakers (Buech et al., 2022). Studies on Arabic phoneme acquisition further reveal that sounds such as /ʕ/, /ħ/, /ṣ/, /ḍ/, /ṭ/, and /ẓ/ frequently become sources of pronunciation difficulties because they require articulatory configurations not commonly found in many other languages (Kfoury et al., 2026). Consequently, mastering makhārij al-ḥurūf is not merely a matter of memorizing tajwīd rules but also involves developing phonetic awareness and articulatory control through systematic practice and continuous guidance.

The significance of articulation accuracy has attracted increasing attention in recent studies on Arabic pronunciation and Qur'anic education. Research on Arabic phoneme production indicates that pronunciation errors often occur when learners substitute one phoneme with another that possesses a similar articulatory pattern, particularly among sounds produced in adjacent articulation zones (Lathifah et al., 2026). Likewise, advances in Arabic pronunciation assessment and speech-recognition technologies have demonstrated that accurate phoneme production is a key indicator of reading proficiency and language mastery (Al-Khatib et al., 2024; Tolba et al., 2023). In the context of Qur'anic recitation, precise articulation becomes even more essential because mistakes in pronouncing hijaiyah letters may affect the correctness of recitation and potentially alter textual meaning. Previous studies on Qur'anic phonetics have shown that articulation accuracy remains a major concern in tajwīd education and continues to require focused pedagogical interventions (Altalmas et al., 2015; Abdou & Rashwan, 2014).

Despite the growing development of Qur'anic education programs, articulation errors continue to be observed among learners at various educational levels. Several studies have reported persistent difficulties in distinguishing letters with similar makhraj characteristics, particularly those produced from al-lisān (the tongue) and al-ḥalq (the throat) regions (Hardilawaty, 2022). Batistuta (2022) found that students' Qur'anic reading ability is strongly associated with their mastery of tajwīd principles and articulation skills. Similarly, Ainunnisya et al. (2024) identified internal factors such as low learning motivation and external factors including instructional methods and limited learning resources as major contributors to pronunciation errors. Beyond Islamic educational contexts, broader phonological studies have also highlighted the influence of native-language interference, limited phonetic training, and insufficient exposure to accurate pronunciation models as recurring causes of articulatory errors among language learners (Farrah & Halahlah, 2020; Alkhaldi & Alruwaili, 2025).

In Indonesia, tahfīẓ programs have become increasingly popular as institutions seek to strengthen students' engagement with the Qur'an through memorization and recitation activities. Recent studies demonstrate that tahfīẓ education contributes positively to cognitive, spiritual, and character development (Al-Razi & Kusumasari, 2026). However, successful memorization does not automatically guarantee accurate pronunciation. The effectiveness of Qur'anic learning depends not only on the quantity of memorized verses but also on the quality of recitation, including fluency, tajwīd compliance, and articulation accuracy (Basir et al., 2024). This issue becomes particularly relevant in extracurricular tahfīẓ programs, where learning activities often prioritize memorization targets while articulation training may receive less systematic attention.

SMA Negeri 2 Batang Anai is one of the educational institutions that organizes an extracurricular tahfīẓ program to improve students' Qur'anic reading and memorization skills. Preliminary observations conducted on five participants revealed 49 pronunciation errors across ten hijaiyah letters from

115 potential occurrences, representing approximately 43% of all observed articulatory opportunities. The most frequent errors involved the letters ,ص ,ط ق, and ح. These findings indicate that students' mastery of makhārij al-ḥurūf, particularly within al-lisān and al-ḥalq articulation zones, remains suboptimal. Such conditions suggest a discrepancy between the objectives of the tahfīẓ program and students' actual recitation performance.

Although previous studies have examined tajwīd learning, Qur'anic reading ability, and pronunciation errors, several limitations remain evident. First, most studies focus on elementary or junior secondary students, while research involving senior high school students participating in extracurricular tahfīẓ programs remains limited. Second, previous investigations generally emphasize tajwīd achievement or Qur'anic reading proficiency without providing a detailed analysis of specific articulation errors and their phonetic distribution across hijaiyah letters. Third, existing studies tend to examine instructional outcomes rather than exploring the underlying factors that contribute to articulatory inaccuracies in authentic learning settings. Consequently, there is still insufficient understanding of how articulation errors manifest among adolescent tahfīẓ learners and what contextual factors sustain these errors within extracurricular Qur'anic learning environments.

This study addresses these gaps by focusing specifically on articulatory errors related to makhārij al-ḥurūf among Indonesian senior high school students participating in a tahfīẓ extracurricular program. Unlike previous studies that primarily assess general reading competence, this research provides a detailed qualitative investigation of the forms, patterns, and causes of articulation errors in Qur'anic recitation. By integrating perspectives from tajwīd studies, Arabic phonetics, and Qur'anic pedagogy, this study contributes to a deeper understanding of articulation challenges encountered by adolescent Qur'an learners. The findings are expected to enrich the literature on Qur'anic recitation, inform the development of more effective articulation-focused instructional strategies, and support efforts to improve the quality of tahfīẓ education in contemporary Islamic educational settings.

Accordingly, this study aims to analyze the forms of makhārij al-ḥurūf errors in the Qur'anic recitation of students participating in the tahfīẓ extracurricular program at SMA Negeri 2 Batang Anai and to identify the factors contributing to these pronunciation errors. Through this investigation, the study seeks to provide empirical evidence that can serve as a basis for evaluating and improving Qur'anic recitation instruction, particularly in relation to articulation mastery and phonetic accuracy.

Method

This study employed a qualitative descriptive design to obtain an in-depth understanding of the forms of makhārij al-ḥurūf errors and the factors contributing to these errors among students participating in the tahfīẓ extracurricular program at SMA Negeri 2 Batang Anai. A qualitative approach was selected because the study aimed to explore and interpret pronunciation

phenomena within their natural educational context rather than to test hypotheses or produce statistical generalizations (Siyoto & Sidik, 2015). Qualitative research enables researchers to investigate linguistic behavior, learning experiences, and contextual factors underlying observed phenomena through detailed interaction with participants and data sources. Furthermore, descriptive qualitative research is particularly appropriate for identifying patterns of articulation errors and understanding the pedagogical conditions that influence students' Qur'anic recitation performance (Syahrizal & Jailani, 2023).

The research was conducted at SMA Negeri 2 Batang Anai, West Sumatra, Indonesia, from 20 April to 20 May 2025. The study was undertaken in the natural setting of the school's tahfīẓ extracurricular activities to capture authentic recitation practices and learning experiences. In qualitative inquiry, naturalistic observation is essential because it allows researchers to examine phenomena as they occur in real educational contexts without experimental manipulation (Sugiyono, 2013).

Participants were selected using purposive sampling based on their relevance to the research objectives. The primary participants consisted of ten students actively enrolled in the tahfīẓ extracurricular program and one tahfīẓ instructor responsible for guiding Qur'anic recitation and memorization activities. The student participants were selected because they regularly engaged in Qur'anic recitation practices and were considered capable of providing information regarding pronunciation difficulties encountered during learning activities. The instructor was included to provide pedagogical perspectives concerning students' articulation performance, instructional practices, and factors influencing recitation accuracy.

The study utilized both primary and secondary data sources. Primary data consisted of students' Qur'anic recitation performances, observation notes, interview transcripts, and documentation records. Secondary data were obtained from books, journal articles, institutional documents, and previous studies concerning tajwīd, makhārij al-ḥurūf, Qur'anic recitation, Arabic phonetics, and pronunciation error analysis. The integration of multiple data sources enabled a more comprehensive understanding of the phenomenon under investigation and strengthened the credibility of the findings.

Data were collected through three complementary techniques: observation, semi-structured interviews, and documentation. Observation was conducted during tahfīẓ learning activities using audio-recording and note-taking techniques. Students were asked to recite selected Qur'anic passages containing various hijaiyah letters representing different articulation points. The recitation recordings served as the primary corpus for identifying pronunciation errors. Audio recording has been widely recognized as an effective procedure for examining articulatory performance and phonological errors because it enables repeated listening and detailed phonetic analysis (Lathifah et al., 2026).

Semi-structured interviews were conducted with both students and the tahfīẓ instructor. The interviews explored participants' experiences in learning Qur'anic recitation, challenges encountered in pronouncing specific hijaiyah letters, perceptions of tajwīd learning, frequency of practice, and instructional support received during extracurricular activities. The semi-structured format allowed flexibility for probing participants' responses while maintaining consistency across interviews. This approach is considered particularly useful for investigating factors underlying pronunciation difficulties and language-learning experiences (Farrah & Halahlah, 2020).

Documentation techniques were employed to complement observational and interview data. Documentation included students' attendance records, tahfīẓ activity schedules, learning materials, assessment documents, field notes, and audio recordings of recitation performances. These materials provided contextual information that facilitated data interpretation and triangulation.

The principal unit of analysis in this study was the pronunciation of hijaiyah letters during Qur'anic recitation. Each occurrence of a target letter was examined according to its corresponding makhraj and compared with established tajwīd principles. Error identification focused on substitutions, distortions, omissions, and inaccurate articulatory production of hijaiyah letters. Particular attention was given to letters commonly associated with articulation difficulties, including pharyngeal, emphatic, and tongue-based consonants. Previous phonetic research has shown that such phonemes frequently present articulatory challenges due to their complex production mechanisms and close articulatory proximity to other Arabic sounds (Buech et al., 2022; Kfoury et al., 2026).

Data analysis employed the interactive model developed by Miles and Huberman, consisting of data reduction, data display, and conclusion drawing or verification (Sugiyono, 2023). During the data reduction stage, audio recordings, observation notes, interview transcripts, and documentation records were organized, coded, and categorized according to emerging themes. Relevant data related to pronunciation errors and causal factors were retained, while unrelated information was excluded. Subsequently, data were displayed through descriptive tables, frequency summaries, error classifications, and thematic matrices to facilitate interpretation. The final stage involved drawing conclusions and continuously verifying findings by comparing evidence across different data sources.

In addition to the interactive analysis model, this study adopted an error analysis framework to systematically identify, classify, and interpret makhārij al-ḥurūf errors. Error analysis is widely used in phonological and pronunciation studies because it enables researchers to examine recurring patterns of misarticulation and determine their possible causes (Lathifah et al., 2026). The analytical procedure consisted of four stages: (1) identifying pronunciation errors from recorded recitations, (2) classifying errors according to articulation points and error types, (3) interpreting the linguistic and

instructional factors associated with the errors, and (4) drawing pedagogical implications for Qur'anic recitation instruction. This framework facilitated a detailed understanding of both the forms and causes of articulation errors among tahfiẓ students.

To ensure trustworthiness, the study employed triangulation techniques, including source triangulation and methodological triangulation (Sugiyono, 2013). Source triangulation was conducted by comparing information obtained from students, the tahfiẓ instructor, and supporting documents. Methodological triangulation involved comparing findings derived from observations, interviews, and documentation. Furthermore, prolonged engagement during the data collection period, repeated examination of recitation recordings, and peer discussion regarding error classification were conducted to enhance analytical consistency and reduce researcher bias. Such procedures are recommended in qualitative studies investigating pronunciation and language-learning phenomena because they strengthen credibility, dependability, and confirmability of the findings (Baagbah & Ganapathy, 2025).

Ethical considerations were observed throughout the research process. Participation was voluntary, and all participants were informed about the purpose of the study prior to data collection. Confidentiality and anonymity were maintained by using coded identifiers in reporting findings, while audio recordings and interview data were used exclusively for research purposes.

Results and Discussion

Forms of Makhārij al-Ḥurūf Errors in Qur'anic Recitation

Based on the Qur'anic recitation test administered to ten students participating in the tahfiẓ extracurricular program at SMA Negeri 2 Batang Anai, pronunciation errors were identified in fourteen hijaiyah letters. The percentage of errors was calculated according to the number of students who mispronounced each letter. The results are presented in Table 1.

Table 1. Forms of Makhārij al-Ḥurūf Errors among Tahfiẓ Extracurricular Students of SMA Negeri 2 Batang Anai

No.	Surah	Letter	Number of Errors	Percentage
1	QS. At-Takāthur (102): 4	Tha (ث)	4	40%
2	QS. Al-Fīl (105): 1	Ḥāʾ (ح)	5	50%
3	QS. Al-Humazah (104): 4	Dhāl (ذ)	2	20%
4	QS. Ash-Shams (91): 1	Sīn (س)	4	40%
5	QS. Quraysh (106): 2	Shīn (ش)	1	10%
6	QS. Al-Māʿūn (107): 4	Ṣād (ص)	1	10%

7	QS. Al-Qāriʿah (101): 7	Ḍād (ض)	10	100%
8	QS. Al-Masad / Al-Lahab (111): 4	Ṭāʾ (ط)	3	30%
9	QS. Al-Layl (92): 14	Ẓāʾ (ظ)	8	80%
10	QS. Al-Kawthar (108): 1	ʿAyn (ع)	6	60%
11	QS. An-Nāziʿāt (79): 1	Ghayn (غ)	8	80%
12	QS. Ash-Shams (91): 2	Qāf (ق)	3	30%
13	QS. Al-Bayyinah (98): 3	Kāf (ك)	1	10%
14	QS. Al-ʿAlaq (96): 9	Hāʾ (ه)	2	20%

As shown in Table 1, the frequency of pronunciation errors varied considerably across the hijaiyah letters. The letter ḍād (ض) exhibited the highest error rate (100%), followed by ẓāʾ (ظ) and ghayn (غ) (80%), and ʿayn (ع) (60%). In contrast, the letters ṣād (ص), shīn (ش), and kāf (ك) showed the lowest error rates (10%). These findings indicate that the articulatory complexity of Arabic phonemes differs substantially, resulting in varying levels of pronunciation difficulty among students.

In general, the letters with the highest error rates belong to a group of Arabic phonemes that require complex articulatory movements and precise control of the speech organs. Studies in Arabic phonetics have demonstrated that phonemes such as ḍād, ẓāʾ, ʿayn, and ghayn are among the most challenging sounds for learners because they involve unique articulatory configurations that are absent from many non-Arabic languages (Buech et al., 2022; Kfoury et al., 2026). Therefore, the pronunciation difficulties observed in this study cannot be attributed solely to insufficient knowledge of tajwīd rules but also to limitations in articulatory competence and phonological awareness.

Errors in the Pronunciation of Ḍād (ض)

The letter ḍād (ض) demonstrated the highest error rate, with all participants mispronouncing the word رَّاضِيَةٌ (rāḍiyah) as رَّادِيَةٌ (rādiyah). This error involved the substitution of ḍād (ض) with dāl (د).

According to Al-Jazari (2015), the articulation point of ḍād is located at the side of the tongue in contact with the upper molars, whereas dāl is articulated by the tip of the tongue touching the roots of the upper front teeth. This substantial articulatory difference makes ḍād one of the most distinctive and difficult consonants in the Arabic language. Contemporary phonetic studies classify ḍād as an emphatic consonant requiring coordinated tongue retraction and pharyngealization during production (Buech et al., 2022).

This finding is consistent with Lathifah et al. (2026), who reported that Arabic language learners frequently replace difficult phonemes with more

familiar and easier sounds. Such substitutions reflect a process of phonological simplification, whereby speakers reduce articulatory complexity by selecting sounds that require less effort and greater familiarity.

Errors in the Pronunciation of Ẓāʾ (ظ)

The letter ẓāʾ (ظ) exhibited an error rate of 80%, with most students pronouncing تَلَظَّىas تَلَزَّى, thereby substituting ẓāʾ with zāy (ز).

Phonetically, ẓāʾ is an emphatic interdental fricative requiring the tongue to be positioned between the upper and lower teeth. In contrast, zāy is an alveolar fricative produced without interdental articulation. Consequently, ẓāʾ demands greater articulatory precision and motor control.

The findings support the results of Alkhaldi and Alruwaili (2025), who found that phonemes lacking direct equivalents in learners' first language tend to produce higher rates of pronunciation errors. Because Indonesian does not contain an interdental emphatic consonant comparable to ẓāʾ, students often substitute it with acoustically similar sounds that are easier to articulate.

Errors in the Pronunciation of Ghayn (غ)

The letter ghayn (غ) showed an error rate of 80%. Five students pronounced it similarly to the Indonesian consonant "g," while three others replaced it with qāf (ق), resulting in the pronunciation of غَرْفًاas قَرْفًا.

This pattern reflects the influence of the learners' native language on Arabic pronunciation. According to phonological transfer theory, learners tend to associate unfamiliar sounds with the closest equivalents available in their first-language phonological system (Farrah & Halahlah, 2020). Consequently, the uvular fricative ghayn is frequently approximated by the velar stop "g" or replaced with other Arabic sounds perceived as articulatorily similar.

Research by Kfoury et al. (2026) indicates that pharyngeal and uvular consonants are among the most difficult Arabic phonemes to acquire because they require articulatory gestures involving regions of the vocal tract that are rarely activated in many non-Arabic languages.

Errors in the Pronunciation of ʿAyn (ع)

The letter ʿayn (ع) recorded an error rate of 60%. Most students pronounced اَعْطَيْنٰكَas اَأَطَيْنٰكَ, replacing ʿayn with hamzah (ء).

This finding indicates that students experienced difficulty activating the middle pharyngeal region required for producing the sound ʿayn. Linguistically, ʿayn belongs to the category of pharyngeal consonants, which require precise muscular control within the pharynx and are generally regarded as challenging for second-language learners (Kfoury et al., 2026).

Similar difficulties have been documented in studies of Arabic phonological acquisition, which consistently identify ʿayn as one of the most problematic phonemes for both Arabic learners and non-native Qur'anic reciters (Tolba et al., 2023).

Overall Patterns of Pronunciation Errors

Overall, the four letters with the highest error rates (ḍād, ẓāʾ, ghayn, and ʿayn) share a common characteristic: they represent Arabic phonemes with high articulatory complexity and no direct equivalents in Indonesian. These findings suggest that makhārij al-ḥurūf errors are influenced not only by insufficient knowledge of tajwīd but also by broader phonetic and phonological factors affecting speech production.

The results extend the findings of Lathifah et al. (2026) by demonstrating that similar pronunciation difficulties occur within the context of Qur'anic recitation and tahfīẓ education. Consequently, tajwīd instruction should incorporate articulatory phonetics training to help learners understand not only the theoretical locations of articulation but also the physiological mechanisms involved in producing Arabic sounds accurately.

Factors Contributing to Makhārij al-Ḥurūf Errors

Analysis of observational, interview, and documentary data revealed five major factors contributing to students' pronunciation errors.

Limited Mastery of Makhārij al-Ḥurūf Theory

The findings indicate that several students had not yet developed a comprehensive understanding of the articulation points of hijaiyah letters. As a result, they experienced difficulty distinguishing between phonetically similar sounds.

This finding supports Sulaiman and Alawiyah (2024), who identified mastery of makhārij al-ḥurūf as a fundamental indicator of Qur'anic reading competence. It is also consistent with Lathifah et al. (2026), who emphasized that insufficient phonemic awareness contributes significantly to pronunciation inaccuracies.

Insufficient Practice and Recitation Habituation

Interview and observation data revealed that many students rarely practiced Qur'anic recitation outside the extracurricular program. Consequently, articulatory habits and pronunciation automaticity had not yet been fully developed.

From the perspective of phonetic learning theory, articulation skills improve through repeated practice that strengthens motor memory and speech coordination (Baagbah & Ganapathy, 2025). Therefore, limited recitation practice contributes directly to persistent pronunciation errors.

Low Participation in Tahfīẓ Activities

Students who participated inconsistently in extracurricular activities had fewer opportunities to receive corrective feedback from instructors. As a result, pronunciation errors tended to persist and become habitual.

This finding aligns with Ahmad et al. (2022), who reported that active engagement is a crucial factor in the success of tahfīẓ programs and the maintenance of recitation quality.

Suboptimal Implementation of the Tahfīẓ Program

Interviews with the instructor revealed that extracurricular activities were not always conducted according to schedule because of competing school programs. This reduced students' opportunities to receive systematic guidance and articulation training.

These findings support Basir et al. (2024), who argued that the effectiveness of Qur'anic reading instruction depends on the continuity of learning activities, instructional quality, and the availability of consistent feedback.

Environmental and Linguistic Interference

The influence of local dialects and daily language habits emerged as another important factor contributing to pronunciation errors. Some students transferred pronunciation patterns from their native language into their Qur'anic recitation.

This phenomenon can be explained through phonological interference theory, which states that first-language phonological structures often influence the production of sounds in another language (Farrah & Halahlah, 2020). In the present study, students tended to replace difficult Arabic phonemes with sounds that were more familiar within Indonesian or regional dialect phonology.

Synthesis of Findings

Taken together, the findings suggest that makhārij al-ḥurūf errors arise from the interaction of linguistic and pedagogical factors. Linguistic factors include articulatory complexity, phonological interference, and limited phonemic awareness, whereas pedagogical factors involve insufficient theoretical mastery, limited practice, inconsistent participation, and suboptimal instructional implementation. These findings highlight the need for an integrated instructional approach that combines tajwīd theory, articulatory phonetics training, intensive recitation practice, continuous corrective feedback, and a supportive learning environment to improve the accuracy of Qur'anic recitation among tahfīẓ students.

Conclusion

This study found that articulatory errors in the pronunciation of *makhārij al-ḥurūf* among tahfīẓ extracurricular students at SMA Negeri 2 Batang Anai were more substantial than previously assumed. Errors were identified in fourteen hijaiyah letters, with the highest frequencies occurring in the pronunciation of ḍād (ض), ẓāʾ (ظ), ghayn (غ), and ʿayn (ع). These findings indicate that students' difficulties extend beyond the application of tajwīd rules and involve deeper challenges related to articulatory competence and phonological awareness. The prominence of errors in these particular letters, which are characterized by complex articulation and limited equivalents in the Indonesian phonological system, challenges the common assumption that

regular Qur'anic reading practice alone is sufficient to ensure accurate pronunciation.

From a scholarly perspective, this study reinforces previous findings regarding the influence of articulatory complexity and first-language interference on the acquisition of Arabic phonemes. At the same time, it provides additional evidence that pronunciation difficulties in Qur'anic recitation are shaped not only by linguistic factors but also by pedagogical conditions, including insufficient mastery of *makhārij al-ḥurūf* theory, limited practice opportunities, inconsistent participation in tahfīẓ activities, and suboptimal program implementation. By integrating phonetic, phonological, and educational perspectives, this study contributes to a more comprehensive understanding of factors affecting the quality of Qur'anic recitation among Indonesian learners and enriches current discussions in the fields of Qur'anic education and Arabic phonetics.

Nevertheless, this study has several limitations. The research was conducted with a relatively small number of participants and focused on a single educational setting, which limits the generalizability of the findings to broader populations. In addition, the study employed a qualitative approach that prioritized in-depth exploration rather than large-scale measurement. Therefore, future studies involving larger and more diverse samples from different educational institutions are needed to obtain a more comprehensive understanding of *makhārij al-ḥurūf* mastery and its influencing factors.

Based on these findings, it is recommended that Qur'anic learning programs incorporate more systematic training in articulatory phonetics alongside traditional tajwīd instruction. Teachers and tahfīẓ supervisors should provide continuous corrective feedback, increase opportunities for guided recitation practice, and create supportive learning environments that encourage consistent participation. Future research may also examine the effectiveness of technology-assisted pronunciation training, phonetic-based instructional models, or experimental interventions designed to improve students' mastery of *makhārij al-ḥurūf* and overall Qur'anic recitation proficiency.

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