



Analysis of Learning Obstacles in the *Ḍamāir* Rules Material in Arabic Language Learning

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Abstract: This study aims to analyze learning obstacles in mastering the rules of *Ḍamāir*, particularly *Ḍamāir munfaṣilah* and *Ḍamāir muttaṣilah*, in Arabic language learning among Grade X.1 students at Madrasah Aliyah Al Inayah, Bandung. The research employs a qualitative approach using a case study design. Data were collected through diagnostic tests and interviews, involving students who had previously studied the topic of *Ḍamāir*. Interview participants were selected using maximum variation sampling, a type of purposive sampling that considers the diversity in students' performance levels. The analysis revealed that students' learning obstacles can be classified into three categories based on Brousseau's theory: (1) ontogenic obstacles, related to students' limited vocabulary and cognitive readiness; (2) epistemological obstacles, involving misconceptions and conceptual errors in understanding the rules of *Ḍamāir*; and (3) didactical obstacles, resulting from unsystematic instructional approaches, particularly in explaining the function of *Ḍamāir* within *i'rāb* structures, which hinder students' comprehensive understanding of grammatical relations. The findings of this study are expected to serve as a basis for developing more targeted teaching strategies, thereby improving students' understanding of *Ḍamāir* rules and supporting the overall enhancement of their Arabic language proficiency.

Keyword : *Ḍamā'ir*; Didactical Design; Epistemological Obstacles; Learning Obstacles; Arabic Language Learning

Abstrak: Penelitian ini bertujuan untuk menganalisis learning obstacle (hambatan belajar) dalam penguasaan kaidah *Ḍamāir*, khususnya *Ḍamāir munfaṣilah* dan *Ḍamāir muttaṣilah* dalam pembelajaran bahasa Arab pada siswa kelas X.1 Madrasah Aliyah Al Inayah Kota Bandung. Penelitian menggunakan pendekatan kualitatif dengan desain studi kasus. Data dikumpulkan melalui tes diagnostik dan wawancara, dengan informan penelitian siswa kelas X.1 yang telah mempelajari materi kaidah *Ḍamāir*. Partisipan wawancara dipilih menggunakan teknik maximum variation sampling satu bentuk teknik purposive sampling yang mempertimbangkan variasi capaian nilai siswa. Hasil analisis menunjukkan bahwa learning obstacle siswa diklasifikasikan ke dalam tiga kategori menurut teori Brousseau: (1) ontogenic obstacle, berkaitan dengan keterbatasan kosa kata dan kesiapan kognitif siswa, (2) epistemological obstacle, terkait dengan miskonsepsi dan kesalahan konseptual dalam memahami kaidah *Ḍamāir*, dan (3) didactical obstacle, yang disebabkan oleh pendekatan pembelajaran yang kurang sistematis, khususnya dalam penjelasan fungsi *Ḍamāir* dalam struktur *i'rāb*, sehingga menyebabkan kesulitan siswa dalam memahami relasi gramatikal secara menyeluruh. Temuan dari penelitian ini diharapkan dapat menjadi dasar bagi pengembangan strategi

pembelajaran yang lebih tepat sasaran, sehingga dapat meningkatkan pemahaman siswa terhadap materi kaidah Ḍamāir serta mendukung peningkatan kompetensi berbahasa Arab secara menyeluruh.

Kata kunci : *Ḍamāir; Didactical Design; Epistemological Obstacle; Learning Obstacle; Pembelajaran Bahasa Arab*

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Introduction

Arabic is a vital subject in madrasahs and Islamic educational institutions, as it serves both as a foundation for understanding Islamic sources and as a language skill (Mamnunah et al., 2021). This importance is reflected in the objectives of Arabic language instruction in madrasahs (S. Inaku & Laubaha, 2022; Habibie et al., 2022). However, in practice, students' interest in learning Arabic remains relatively low (Fauziah et al., 2023; El-Omari & Bataineh, 2018). One of the main contributing factors is the perception that Arabic is difficult to learn, especially in the area of grammar or *qawā'id*, which is often viewed as complex (Dalimunthe & Rahmaini, 2023).

This issue affects students' learning outcomes and poses a significant challenge for teachers in achieving instructional goals. Students' inability to understand and apply *qawā'id* often becomes a major obstacle in developing their language skills, both spoken and written (Hamidah et al., 2024; Nidia et al., 2022). Based on these concerns, mastery of *qawā'id* is closely linked to students' learning outcomes in Arabic language instruction (Ismail et al., 2024).

A concrete example of this issue can be seen in the teaching of *Ḍamāir* (pronouns) in Grade X at Madrasah Aliyah Al Inayah, Bandung. The topic of *Ḍamāir*, the plural form of *Ḍamīr*, is one of the core components in grammar (*qawā'id*) instruction. Grammatically, *Ḍamāir* are categorized into two types based on their position in a sentence: *Ḍamāir munfaṣilah* (independent pronouns) and *Ḍamāir muttaṣilah* (attached pronouns). In Arabic sentence structure, a *Ḍamīr* functions to replace a previously mentioned noun or noun phrase (Kamalia, 2019). The topic of *Ḍamāir* falls under the study of *naḥwu* (syntax), and according to Alsayat & Elmitwally (2020) and Hastang & R. (2023), difficulties in understanding *naḥwu* rules, including the use of *Ḍamāir*, often become a source of learning obstacles for students. The complexity of Arabic morphology, including the variation in word forms and their functions, is frequently cited as a major source of difficulty in learning Arabic (Nurmala et al., 2022).

Based on empirical findings gathered by the researcher in Grade X.1 at Madrasah Aliyah Al Inayah, Bandung, it was found that students struggled to apply the rules of *ḍamāir*, both as subjects and objects within sentence structures. Most student responses on the semester exam demonstrated errors in selecting the appropriate *ḍamīr* form according to context. These findings indicate a fundamental problem in understanding *ḍamāir* rules, which potentially leads to learning obstacles and hampers students' ability to construct grammatically correct Arabic sentences. To identify the presence of such learning obstacles, a holistic approach that considers various aspects of the learning process is required (Musyrifah et al., 2022).

Brousseau (2002) classifies learning obstacles into three types: (1) ontogenic obstacles, which refer to the mismatch between instructional content and students' cognitive development level; (2) epistemological obstacles, which arise from students' limited experiences or knowledge contexts; and (3) didactical obstacles, which originate from the teacher's instructional strategies (Musyrifah et al., 2022). This classification broadens the analysis beyond student errors, offering a framework that includes the roles of teachers and the learning environment. Suryadi (2016) presents a similar classification, identifying ontogenic obstacles as those related to students' psychological readiness, didactical obstacles as resulting from ineffective teaching strategies, and epistemological obstacles as stemming from students' limited ability to apply concepts across various contexts. This theoretical framework is highly relevant to the field of education, as it emphasizes that accurately identifying learning obstacles can serve as a foundation for designing appropriate didactical solutions.

Although the concept of learning obstacles has been more widely applied in mathematics education, it is, in fact, part of didactical situation theory and is open-contextual in nature, making it applicable to learning processes in general (Nurhayati et al., 2023). Learning obstacles are an integral part of the educational process, as they arise from the interaction between students, instructional content, and teaching strategies that together form a didactical situation. As emphasized by Brousseau (2002), learning obstacles emerge when there is a breakdown in the interaction among key didactical components—namely, the teacher, the student, the object of knowledge, and the instructional scenario (Hendriyanto et al., 2024). An empirical study by Fajria (2024) has validated this conceptual framework in the context of English language learning. The study successfully identified three categories of learning obstacles based on Brousseau's classification. These findings clearly demonstrate that the application of learning obstacle theory is not limited to the domain of mathematics, but can be effectively implemented in analyzing

language learning processes, particularly in examining the triadic relationship between students, educators, and learning content.

Based on a review of various academic sources, many studies in Arabic language education still primarily focus on teaching methods, without specifically exploring students' learning obstacles, particularly in relation to the topic of *ḍamāir* (Aji, 2022). Although some research has addressed challenges in understanding *naḥwu* (Sa'adah, 2019) and student errors in using *ḍamīr* with verbs (Salamah et al., 2024), no study has explicitly analyzed these phenomena using Brousseau's (2002) learning obstacle framework. Previous research on foreign language learning, such as Mandarin, by Zhong et al. (2021), has identified epistemological issues (e.g., students' beliefs about the difficulty of grammar) and didactical challenges (e.g., teachers' difficulties in integrating cultural elements), yet did not explicitly employ Brousseau's (2002) theoretical framework on learning obstacles.

This condition highlights a gap in research analyzing learning obstacles in Arabic language education, particularly concerning the topic of *ḍamāir* rules. Therefore, this study aims to analyze and identify the learning obstacles students face in understanding *ḍamāir* rules, including ontogenic, epistemological, and didactical obstacles. The findings of this research are expected to contribute to the development of more effective instructional strategies, enhance students' understanding of *ḍamāir* rules, and support the overall improvement of Arabic language proficiency.

Methods

This study employed a qualitative approach using a case study method. The case study was chosen to explore in depth the phenomena occurring within a real-life context (Diputra et al., 2023), namely the difficulties students face in understanding the grammatical concepts of *ḍamāir* in Arabic language instruction for Grade X.1 at Madrasah Aliyah Al Inayah, Bandung. The participants in this study were students from Grade X.1 at Madrasah Aliyah Al Inayah who had previously received instruction on *ḍamāir*.

Data were collected through a diagnostic test and semi-structured interviews. The test was designed to identify learning obstacles and map students' levels of understanding of *ḍamāir* rules. Consisting of 10 items, the test instrument was constructed to assess students' comprehension of *ḍamāir* based on their position within a sentence, covering both *ḍamāir munfaṣilah* and *ḍamāir muttaṣilah*. The development of the instrument was based on the integration of the Revised Bloom's Taxonomy framework (Nafiati, 2021) and Brousseau's (2002) classification of learning obstacles.

The instrument design systematically integrated cognitive levels (C1–C6) as a framework for assessing conceptual understanding of *ḍamāir*, along with specific

mechanisms to identify the three dimensions of learning obstacles as proposed by Brousseau (2002): ontogenic obstacles (related to students' psychological factors), epistemological obstacles (misconceptions about *Ḍamāir* rules), and didactical obstacles (inaccuracies in instructional delivery). Expert validation confirmed the instrument's suitability for measuring student competencies while comprehensively identifying learning obstacles.

To further analyze the types of learning obstacles experienced by students and to validate the findings from the diagnostic test, the researcher conducted semi-structured interviews with 10 students selected using maximum variation sampling, as proposed by Patton (2015). This is a form of purposive sampling that considers the range of student achievement on the diagnostic test to represent different levels of ability—high, medium, and low. This classification aimed to obtain a comprehensive overview of students' learning experiences and the types of learning obstacles identified. The data were analyzed using the Miles and Huberman model, which consists of three stages: (1) data reduction, (2) data display, and (3) conclusion drawing.

Results And Discussion

Results

To obtain an initial overview of students' understanding of *Ḍamāir* rules, a diagnostic test was administered to Grade X.1 students who had previously received instruction on the topic. The test results were used to identify students' levels of achievement and served as the basis for selecting interview participants. The selection process considered the variation in student scores as well as teacher recommendations to ensure a more representative sample. The data revealed a wide range of achievement levels. Table 1 presents the distribution of student scores based on the diagnostic test results.

Table 1. Distribution of Students' Diagnostic Test Scores

Score Achievement Range	Score Interval	Number of Students
A (Very High)	85 - 100	5
B (High)	70 - 84	7
C (Moderate)	55 - 69	8
D (Low)	40 - 54	8
E (Very Low)	0 - 39	1
Total		29 Students

A total of 13 out of 29 students fell into categories C, D, and E, indicating medium to low achievement levels and suggesting that half of the class struggled to understand the rules of *Ḍamāir*. This finding reinforces the need for further analysis, as presented in Table 2, which provides a summary of student performance based on individual test items and the corresponding indicators. The data show that students experienced difficulties across all indicators, with varying levels of complexity.

Table 2. Analysis Results of Diagnostic Test Items on *Ḍamāir*

No	Question Indicator	Mastery Percentag (%)
1	Explaining the equivalent terms of <i>Ḍamāir munfaṣilah</i> and <i>Ḍamāir muttaṣilah</i> in Indonesian	85.06
2	Providing concrete examples of <i>Ḍamāir munfaṣilah</i> and <i>Ḍamāir muttaṣilah</i> in Arabic	78.16
3	Explaining the grammatical reason for the attachment of <i>Ḍamāir muttaṣilah</i> to verbs or nouns	51.72
4	Identifying the function of <i>Ḍamāir</i> in <i>i'rāb (rafa', naṣb, dan jarr)</i> and giving examples	50.57
5	Transforming <i>Ḍamāir</i> in a sentence based on a new context (structure transformation)	49.43
6	Completing sentences with the correct <i>Ḍamāir</i> based on context	64.37
7	Identifying errors in the use of <i>Ḍamāir muttaṣilah</i> in a sentence	42.53
8	Indicating the position of <i>Ḍamāir muttaṣilah</i> in <i>i'rāb (rafa', naṣb, dan jarr)</i>	41.38
9	Summarizing general usage patterns of <i>Ḍamāir munfaṣilah</i> in the nominative case (<i>bi ar-raf'</i>) from examples	57.47
10	Composing an original dialogue using <i>Ḍamāir munfaṣilah</i> and <i>Ḍamāir muttaṣilah</i>	63.22

The analysis of the diagnostic test results in Table 2 indicates that students' grammatical proficiency, particularly for items 4, 5, 7, and 8, remains relatively low. Student responses to the essay questions were evaluated using an analytic rubric with a 0–3 scale: a score of 0 was assigned to blank responses, 1 to irrelevant answers, 2 to incomplete or partially incorrect answers, and 3 to accurate and complete responses. This scoring system was based on the principles of objective and systematic assessment as outlined in Danielson's rubric theory (1997).

Meanwhile, the highest percentages of mastery were observed in items 1 and 2, which focused on understanding the definition and classification of *ḍamāir*. However, interview data revealed that this performance did not fully reflect students' actual comprehension.

This indicates a tendency among students to memorize the forms of *ḍamāir* without understanding their functions, as well as difficulty in transferring knowledge to new contexts. The test results are supported by interview data gathered from 10 students representing various levels of achievement. According to the interviews, students admitted to relying primarily on rote memorization without a deep conceptual understanding. The following is an excerpt from an interview with a respondent from the D (low achievement) category:

R: Why did you answer that way? The question asked for an explanation, but your response was more of an example.

S8: Because I don't know the definition.

R: Then how were you able to give that example if you don't know the meaning of *ḍamāir*?

S8: I just remembered it from the *taṣrīf* (conjugation) pattern.

On the other hand, students with a pesantren (Islamic boarding school) background tended to rely on memorization of classical texts such as *Amtsīlati* and *Jurumiyah*. However, they still encountered difficulties when applying grammatical rules in different contexts. When using *ḍamāir* in sentence structures, students often relied on memorized terminology and guessed answers based on the appearance of the word rather than its grammatical function. One student, for example, chose the incorrect form of *ḍamīr* – أَنْتَ – to match the verb يَفْرَأُ in a question that required selecting the appropriate *ḍamīr* based on context. The following is an excerpt from an interview with a respondent from the A (very high achievement) category:

R: Can you explain your answer? Why did you choose that?

S2: Because *ya* is for *muẓakkkar* (masculine), and *ta* is for *mu'annaṣ* (feminine).

Pedagogical issues were also identified among students who reported that the teacher's explanation in class lacked depth. The following is an excerpt from an interview with a respondent in the A (very high) score category:

R: Since *ḍamāir* is part of grammar rules, how did the teacher explain it in class?

S3: It was explained fairly well, but there were some parts the teacher didn't cover yet, like the explanation of the positions of *rafa'*, *naṣb*, and *jarr*. But a few *harf jarr* had already been explained.

This finding was confirmed through an interview with the Arabic language teacher. Based on the information obtained, it is true that the lesson on *ḍamāir* rules was not explained in depth. This was due to concerns that students –

especially those with no prior exposure to Arabic – would be overwhelmed by an excess of information. If some students were able to answer correctly, it is highly likely that they already possessed prior knowledge of Arabic and relied on that understanding, rather than learning acquired from the current classroom instruction.

Based on the analysis of diagnostic tests and interviews, it was found that the learning obstacles experienced by students can be classified into three categories according to Brousseau (2002). Ontogenic obstacles were evident in students' tendency to guess answers based on visual cues or the initial letters of words, as well as their limited ability to construct dialogues and recognize grammatical patterns. Epistemological obstacles included difficulties in distinguishing types of ḍamāir, conceptual misconceptions, and failure to transfer knowledge to new contexts. Didactical obstacles were identified in the students' weak mastery of *i'rāb* (grammatical inflection), largely due to the lack of depth in instructional explanations. These three types of obstacles will be further analyzed in the discussion section.

Discussion

Based on the conducted research, the findings from both diagnostic tests and interviews indicate that the learning obstacles encountered by students in understanding the rules of ḍamāir can be classified into three types of learning obstacles as proposed by Brousseau (2002). These three categories reflect the complexity of the student learning process, which involves not only the content of the material but also cognitive readiness and instructional strategies. The following is an in-depth analysis of each type of obstacle based on the research findings.

Ontogenic Obstacle

Ontogenic obstacles are technical barriers that arise because students have not yet mastered the fundamental aspects essential to the learning process (Suryadi, 2019). This type of obstacle was evident in several situations. One such finding was identified in a student who incorrectly selected a ḍamīr based on the initial letter of the word. In completing the sentence *يَقْرَأُ الْكِتَابَ فِي الْمَكْتَبَةِ ...* the student chose the pronoun *anta* (أَنْتَ), relying on visual cues from the first letter rather than the grammatical position. The student confused letter forms with markers of masculine (*muẓḍakkār*) and feminine (*mu'annaṣ*). This aligns with the findings of Al Alawiy (2013), who noted that students tend to guess the appropriate ḍamīr based on visual features rather than understanding grammatical principles. This represents an ontogenic obstacle because the student lacks the cognitive structure necessary to process the relationship between *fā'il* (subject), *fi'il* (verb), and the appropriate form of ḍamīr (pronoun).

In addition, ontogenic obstacles were also reflected in students' inability to construct simple dialogues using *ḍamāir*, as well as their limited vocabulary mastery. The following is an example of a student's response that illustrates this type of obstacle:

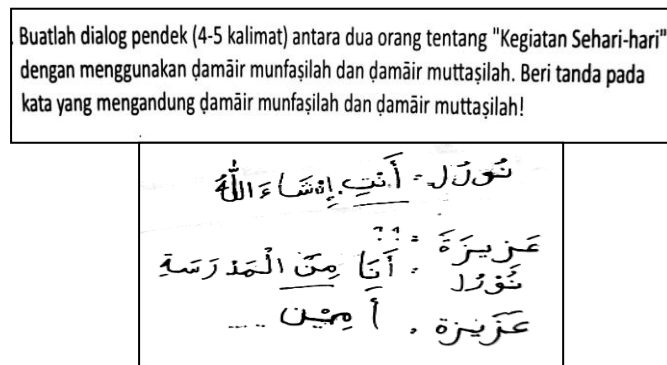


Figure 1. Findings Related to Ontogenic Obstacles

As shown in the student's response, which was written using Latin letters and presented in an incorrect structure, the student was unable to differentiate between types of *ḍamāir* and misidentified sentence elements—for example, citing "مِنْ" as an example of *ḍamāir munfaṣilah*, which is clearly incorrect since "مِنْ" is a *ḥarf jarr* (preposition). This limitation affected the student's ability to construct a coherent dialogue. This finding aligns with Fitria et al. (2024), who emphasized that errors in using *ḍamār* are strongly associated with poor understanding of sentence structure and limited vocabulary. This represents an ontogenic obstacle caused by insufficient mastery of vocabulary and the structural functions of *ḍamāir*.

Another finding that illustrates students' cognitive limitations is their inability to generalize patterns of *ḍamāir* from the test items. Students struggled to infer general patterns from the examples provided, offering merely descriptive answers such as "because it's male," "because it's female," or "because it's plural." This type of response indicates a tendency to rely on lexical associations rather than grammatical reasoning. For instance, students interpreted the word *ṭālibun* (طَالِبٌ) as meaning "male" based on its lexical meaning rather than recognizing it as a *mufrad mudakkar* form within the *i'rāb* structure. Similarly, *ṭālibah* (طَالِبَةٌ) was associated with the sound "tun-tun" as a marker of femininity, without understanding that this morphological change reflects the agreement between the noun form and the type of *ḍamār* used.

This finding is consistent with Rehardian et al. (2022), who reported that common errors in the use of *ḍamār* هِيَ and هُوَ stem from students relying solely on perceived gender rather than applying grammatical rules. Furthermore, Tambunan et al. (2024) found that similar mistakes occur when students fail to distinguish between *mufrād*, *muṣanna*, and *jamā'* forms due to a lack of internalization of Arabic

morphological systems. This represents an ontogenic obstacle, as students depend on surface-level cues rather than engaging in grammatical analysis. Overall, the ontogenic obstacles identified in this study indicate that students lack the necessary cognitive prerequisites and learning experiences to understand and apply the rules of *ḍamāir* across various contexts.

Epistemological Obstacle

Difficulties classified as epistemological obstacles most commonly emerged when students attempted to understand fundamental concepts and apply the rules of *ḍamāir* in more complex contexts. This type of obstacle is generally caused by limited conceptual understanding and a gap between students' prior knowledge and the new grammatical structures being introduced (Rohimah, 2017).

One of the findings clearly emerged when students struggled to distinguish between *ḍamāir munfaṣilah* and *ḍamāir muttaṣilah*. Although they were familiar with the terms, they had difficulty recalling them accurately, resulting in reversed responses. This indicates that students faced challenges in developing a deep conceptual understanding. These initial errors affected subsequent items, such as providing incorrect examples of *ḍamāir munfaṣilah* and *ḍamāir muttaṣilah*, suggesting that misunderstanding in one area triggered a chain of errors in others. This represents an epistemological obstacle, as there is a mismatch between the students' existing knowledge structures and the conceptual framework actually required to comprehend the material.

A similar obstacle emerged when students were asked to relate the term *ḍamāir* to its equivalent in the Indonesian language. Instead of providing an accurate translation, students wrote examples of *ḍamāir* in Arabic. This indicates that their understanding was limited to memorized forms without grasping the underlying theoretical concepts. It reflects the tendency of students to rely solely on rote memorization rather than conceptual comprehension, as highlighted by Mohamed (2022) regarding the prevalence of grammatical memorization approaches in Arabic language education in Indonesia. This represents an epistemological obstacle, as students have not yet developed the appropriate cognitive structures to distinguish between a definition and an example.

An epistemological obstacle also emerged in students' processing of grammatical relationships between sentence elements. Students misunderstood the syntactic attachment of *ḍamāir muttaṣilah* in the sentence “هُم طُلَّابٌ، يَذْهَبُونَ إِلَى الْمَدْرَسَةِ مَعَ ”صَاحِبِهِ”. Although some students correctly identified that the appropriate *ḍamāir* was هُمْ, one student mistakenly suggested changing صَاحِبِهِ to صَاحِبَةٌ, indicating a misinterpretation of grammatical gender. However, the same student later changed صَاحِبِهِ to صَاحِبُهُمْ, demonstrating inconsistency in application. This finding aligns with Sovinaz and Rusady (2023), who noted that errors in using *ḍamāir*

muttaṣilah frequently stem from students' failure to consistently adjust word forms when attaching pronominals, particularly when they do not recognize morphological changes. This represents an epistemological obstacle, as the students have not yet internalized the fundamental rules of word relationships and are therefore unable to construct a comprehensive understanding of the role of *ḍamīr* in sentence structures.

Meanwhile, in the sentence transformation task, although students were able to correctly change the pronoun أَنَا to نَحْنُ, they failed to adjust the corresponding verb form for أَنْتَ, which should have been تَدْرُسِينَ اللُّغَةَ الْعَرَبِيَّةَ. Students did not understand that changing the *ḍamīr* requires a corresponding adjustment in the verb form, resulting in responses where only one element was altered while the syntactic relationship between components was overlooked. This is consistent with the findings of Nurbayan et al. (2020), who reported that errors in verb conjugation often occur due to mismatches between the *ḍamīr* and both the verb (*fi'il*) and the subject (*fā'il*), in terms of both gender and number. This represents an epistemological obstacle, as students have not yet developed the ability to connect the form of the *ḍamīr* with changes in verb conjugation. It indicates that their understanding remains partial and lacks conceptual integration.

Students' difficulty in constructing general patterns of *ḍamāir* usage also falls under this category of obstacle. The following is an example of a student's response that illustrates this type of learning difficulty:

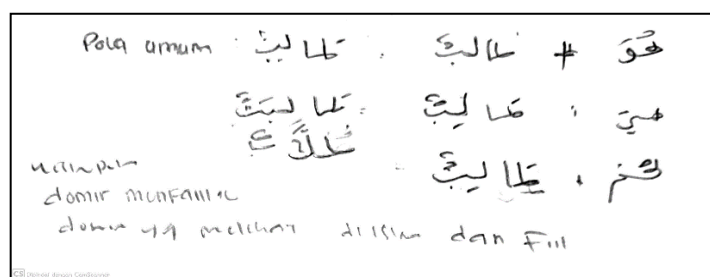


Figure 2. Finding of Epistemological Obstacle

The student's response demonstrates a slightly more systematic approach by using analogy and *qiyās* (comparison), such as a formulaic addition of *ḍamīr* and *ism*: طَالِبٌ = طَالِبٌ + هُوَ, طَالِبَةٌ = طَالِبٌ + هِيَ, طَالِبَاتٌ = طَالِبٌ + هُنَّ. While the student was able to construct a basic pattern, they were unable to explain the rationale behind the morphological changes in the *ism* that follow the *ḍamīr*. This aligns with the findings of Zulaeha et al. (2024), which revealed that students often make errors in constructing *tarkīb* and derivation due to a lack of understanding of the syntactic function of sentence elements, despite being technically capable of forming them. This represents an epistemological obstacle because the students' conceptual

understanding is not strong enough to explain or generalize grammatical phenomena.

Overall, the epistemological obstacle reflects a partial conceptual understanding and an inability to recognize the systemic relationships between grammatical elements. These findings indicate a gap between students' prior knowledge and the newly introduced conceptual structures. Students show limited ability to transfer knowledge from one context to another. As explained by Sari et al. (2019), it is assumed that students experience epistemological obstacles due to their understanding being confined to specific contexts only.

Didactical Obstacle

The didactical obstacle in the context of teaching *ḍamāir* arises from instructional strategies that fail to support students in developing a coherent understanding of complex grammatical structures. This constitutes a didactical obstacle because students' difficulties are not solely the result of individual cognitive limitations, but rather stem from the inadequacy of instructional delivery in fostering conceptual comprehension (Rohimah et al., 2022).

This obstacle is evident when students answered questions regarding the identification of *ḍamāir muttaṣilah* in the positions of *rafa'*, *naṣb*, and *jarr* by relying solely on '*alāmat al-'irāb* (diacritical marks) rather than understanding the syntactic role within the sentence. Interview responses revealed that students generally associated *naṣb* with the *fathah* vowel, *rafa'* with *ḍammah*, and *jarr* with *kasrah*. However, in *qawā'id al-lughah al-'arabiyyah*, grammatical function is not sufficiently determined by surface forms (diacritical marks); rather, it must be supported by syntactic context and relational structure (Remmache & Harrar, 2024). This finding aligns with S. Ismail et al. (2021), who reported that Malay students as L2 learners face significant challenges in applying Arabic syntactic aspects due to their inability to distinguish between form and structure, often relying merely on superficial cues such as diacritical marks.

A similar issue was found in students' lack of understanding regarding the grammatical functions of *ḍamāir* in the forms of *rafa'*, *naṣb*, and *jarr*. Students' written responses referred to changes in '*alāmat al-'irāb* without identifying the specific *ḍamīr* forms or explaining their grammatical functions, and often included irrelevant examples. Interview data revealed that students' answers were based on guessing rather than comprehension. This aligns with the findings of Al 'Alawy (2013), whose study indicated that errors in the use of *ism ḍamīr* are generally caused by a mismatch between the form of the *ḍamīr* and its syntactic function, as well as a weak understanding of *naḥwu* rules, particularly in the structure of '*irāb* in *rafa'*, *naṣb*, and *jarr* positions.

This represents a didactical obstacle, as the students' difficulties stem from the lack of explicit teacher explanations regarding the grammatical functions of *ḍamāir* in the context of *i'rāb*. Student interviews revealed that essential aspects, such as morphological changes resulting from syntactic positions, were not explicitly taught. As noted by Pauji et al. (2023), didactical obstacles may arise from the sequencing and staging of instructional content that fails to build coherent understanding. This includes both the interconnection of concepts presented progressively and the cognitive flow students require to advance from basic to more complex levels of comprehension. In this case, the didactical obstacle is evident in the superficial instructional approach to structural aspects of *i'rāb* (*rafa'*, *naṣb*, and *jarr*) within the topic of *ḍamāir* rules. Teachers did not provide sufficient explanation regarding the role of *i'rāb* in altering *ḍamāir* forms, leading to student difficulties—particularly among those without strong prior knowledge—when attempting to comprehend the material or answer questions related to these indicators. Conversely, students who answered correctly typically relied on previously acquired knowledge rather than the instruction received in the current class.

Conclusion

This study reveals that the errors made by Grade X.1 students at Madrasah Aliyah Al Inayah, Bandung, in understanding the rules of *ḍamāir* are not merely technical in nature, but constitute interrelated learning obstacles that operate systemically. Based on data analysis, three types of learning obstacles were identified in the students' learning process: ontogenic obstacles, epistemological obstacles, and didactical obstacles. Ontogenic obstacles arise when students guess the form of *ḍamāir* based on initial letters, struggle to construct simple dialogues, and fail to infer general patterns from test items. Epistemological obstacles are evident in students' inability to distinguish between forms of *ḍamāir*, leading to incorrect answers, the formulation of equivalents based on personal assumptions, and the failure to apply word form changes in accordance with sentence structure. Didactical obstacles emerge due to the lack of systematic instruction on the function of *ḍamāir* within *i'rāb* structures, causing students to rely solely on surface indicators such as *'alāmat al-i'rāb* (diacritical marks) without fully understanding the underlying grammatical relationships.

Academically, this study contributes a new perspective to the field of *qawā'id* instruction, particularly in teaching *ḍamāir*, by applying the learning obstacle framework, which is more commonly used in mathematics education. Through analysis based on Brousseau's classification of ontogenic, epistemological, and didactical obstacles, this research not only confirms the existence of learning difficulties in *ḍamāir* instruction—as previously reported—but also expands the

understanding of how these obstacles interact and relate to the instructional design used in the classroom. Thus, the study not only reinforces earlier findings regarding students' weak mastery of Arabic grammatical structures but also broadens the theoretical approach to investigating language learning difficulties in a more structured and theory-driven manner.

This study employed a relatively large number of test items to identify learning obstacles in depth across different domains of understanding. While this approach proved effective in mapping the types of learning obstacles – ontogenic, epistemological, and didactical – it is recommended that future research develop more concise yet substantial and representative assessment instruments. By designing more efficient tools that still comprehensively capture various types of learning obstacles, data collection can be optimized without compromising the depth of analysis. This would also allow for more flexible implementation across different educational contexts and learning levels.

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