



Implementing the PEEC Technique through Classroom Action Research: A Strategy to Mitigate Adad–Ma’dūd Errors in Beginner-Level Arabic Writing

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ABSTRACT

Mastering writing skills is a fundamental yet challenging aspect of beginner-level Arabic language acquisition, particularly in applying complex grammatical constructs such as adad–ma’dūd (numeral-noun agreement). Conventional teacher-centered correction methods often fail to facilitate the deep processing required for rule internalization. This classroom action research (CAR) proposes the PEEC (Peer Editing and Error Correction) technique, a novel collaborative strategy integrating peer discussion with immediate corrective feedback to address this pedagogical gap. Conducted over two cycles with 36 first-year students in an intensive Arabic program at a state Islamic university in Malang, the study employed observation, writing tests, and document analysis of student drafts. Results demonstrated significant improvement in writing accuracy. The number of students achieving the mastery criterion rose from 12 (33.33%; average score: 61) in the pre-cycle, to 23 (63.89%; average: 73) in cycle I, and to 32 (88.89%; average: 84) in cycle II. This represents a 55.56% increase in completion rate and a 23-point average score gain, with marked enhancement in adad–ma’dūd application. The findings confirm PEEC as an effective intervention for developing beginner Arabic writing proficiency, warranting further exploration in diverse instructional contexts.

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INTRODUCTION

Writing in Arabic is a productive skill that involves complexity in morphology, syntax, and semantics (Guellil et al., 2021). In addition, Arabic writing skills also include several aspects such as vocabulary, language rules, and the individual's ability to convey ideas and thoughts through writing that can ultimately be understood by others (Shaalan,

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2019). Learning Arabic for students at the beginner level is not easy. Writing mistakes are not normal, but rather part of the learning process (Ismail et al., 2020).

For beginners, writing Arabic is a challenge in itself, including writing Arabic grammatical structures, such as *adad–ma'dūd* (numbers and countable objects). These mistakes are common because they require consistency between the form, type, and number of numbers and nouns (Marie, 2018). The rules in these rules are different from those in Indonesian, which students already know. Errors in grammatical application often occur for beginners. Therefore, students' ability to apply the *adad ma'dūd* rules needs to be supported by pedagogical strategies that are oriented towards conceptual understanding and intensive practice so that grammatical accuracy can be achieved continuously (Basir, 2023).

Arabic is taught not only in madrasas and Islamic boarding schools but also at the university level, where it often serves as a distinctive academic feature (Bourahouat et al., 2024). On many Islamic campuses, this distinction is reinforced by the implementation of compulsory intensive Arabic programs for new students (Sa'diyah & Wiranegara, 2023). In Malang, one state Islamic university runs a specialized intensive Arabic language program designed to equip students with foundational language skills, including writing competence (Salmas, 2024). Given the central role of Arabic as a primary reference language in Islamic studies, this program provides a concentrated and controlled educational environment, making it an ideal context for examining specific grammatical challenges such as *adad–ma'dūd* and for evaluating the effectiveness of targeted instructional techniques like PEEC (Khalifah, 2024).

Initial observations of new students participating in the intensive Arabic language program at the campus show that the majority of students have difficulty writing sentences using the *adad–ma'dūd* pattern (Almelhes, 2024). This difficulty is evident in the mismatch between numbers and nouns, both in terms of gender and singular and plural forms (Rudnicka & Klégr, 2024). In addition, students appear to be less enthusiastic and tend to be passive in learning to write. Students only expect corrections from lecturers without taking the initiative to improve their writing by learning from their own mistakes or those of their friends (Almalhes, 2024).

These conditions and realities indicate that writing skills for beginners require solutions packaged through learning techniques that can help students achieve learning objectives, one of which is understanding adad madud and applying it to writing (Sheerah & Yadav, 2022). With the right learning techniques, problems can be overcome and students have the opportunity to actively practice, discuss, and correct their writing mistakes (Rasool et al., 2023). Therefore, the results of this study emphasize the urgency of learning techniques that prioritize reflection on mistakes and student collaboration so that they can better understand the rules of language.

Previous studies and research have discussed the urgency of feedback in writing learning. In their research, (Cao, 2021) emphasized that the role of corrective feedback in improving the accuracy of language rules for foreign language (L2) writers is important. In addition, peer feedback has been proven to increase students' learning responsibility and strengthen their linguistic awareness (Wahyudi & Hidayat, 2021). The results of other studies also mention that peer editing has been proven effective in improving the quality of students' writing, while another previous study by (Ilyas, 2024) emphasizes that error correction plays an important role in strengthening students' linguistic awareness. In research on learning languages other than Arabic (Azaza, 2020) such as Mandarin, it is mentioned that peer feedback can improve the quality of students' writing and their self-confidence. Meanwhile, in English language learning, (Al-Hamzi et al., 2023) in Yemen found that analyzing errors can reduce the level of errors made by students in terms of grammar.

Students learning Arabic in intensive programs tend to be less active in the writing improvement process because they often perceive errors as failures rather than learning opportunities. However, interlanguage theory emphasizes that errors are a natural and productive part of second language development, particularly when learners engage in reflection and social interaction (Tsvetkova, 2023). Although previous studies have examined peer editing or error correction in Arabic and other language learning contexts, research that systematically integrates both techniques into a single instructional framework remains limited, especially for addressing specific grammatical structures such as adad–ma‘dūd at the beginner level within intensive Arabic programs in Indonesia. Existing studies have largely focused on intermediate learners or general writing skills,

leaving a clear gap in understanding how a combined peer editing and error correction approach can support beginners in mastering complex number–noun agreement. Therefore, this study positions the PEEC technique as a novel pedagogical intervention that integrates collaborative peer discussion with direct corrective feedback to address this specific gap in beginner-level Arabic writing instruction.

Based on the description above, the objectives of this study are to: 1) describe the problems of writing skills of new students in intensive Arabic language programs, especially in the *adad–ma'dūd* structure; 2) analyze the effectiveness of applying the PEEC technique in improving the writing skills of beginner students; 3) derive a practical framework for implementing the PEEC technique in intensive Arabic writing classes within Islamic universities. This study is expected to contribute both theoretically and practically to the development of more contextual and learner-responsive approaches to Arabic writing instruction for beginner students.

METHOD

This study uses a Classroom Action Research (CAR) approach with the Kemmis & McTaggart spiral model. This approach was chosen because it is suitable for continuously improving learning practices through four stages, namely the planning stage, the action stage, the observation stage, and the reflection stage (Soh, 2024). These four stages are cyclical, allowing for improvements to be made in each cycle (Kunlasomboon et al., 2015).

The subjects in this study were 36 new students who participated in an intensive Arabic language program at a state Islamic university in Malang in the 2025/2026 academic year. The subjects were selected purposively, in accordance with the characteristics of action research, which focuses on solving real problems that occur in the classroom (Mertler, 2024). All subjects were at the beginner level with limited writing skills and still made basic mistakes, including in the discussion of the *adad–ma'dūd* structure.

The research was conducted in two cycles. Each cycle consisted of four stages. The first stage was planning, in which the lecturer prepared pictures with the theme of home, vocabulary tables (اسم، جمع، عدد، معدود، جملة), observation instruments, and writing tests.

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The second stage was the action stage, which involved the systematic implementation of the PEEC technique in the classroom. In this stage, students were first asked to write a short paragraph incorporating adad–ma‘dūd structures based on a given prompt or picture. They then exchanged their written work with a peer for editing using a structured checklist that focused on number–noun agreement and related grammatical accuracy. After receiving peer feedback, students revised their drafts accordingly and submitted the final version to the lecturer for direct error correction and scoring. The third stage was observation, during which the lecturer recorded student activities using an observation sheet and analyzed students’ written products to identify error patterns and learning progress across cycles. The final stage was reflection, in which lecturers evaluated the results to determine improvements for the next cycle. These four stages followed the principles of classroom action research, which emphasizes a cycle of continuous improvement (Oğuz & Atik, 2024).

The instruments used in this study consisted of writing tests, observation sheets, and documentation. The writing test required students to compose a set of descriptive sentences using specified adad–ma‘dūd pairs to assess grammatical accuracy. The observation sheet focused on indicators of student engagement during the PEEC activities, including participation in peer discussion, frequency of consulting grammatical references, and initiative in making corrections. Documentation included annotated student writing drafts and photographic records of student interaction during the learning process. This is in line with the opinion (Vivek, 2023) that the validity of research data can be improved by using various instruments triangulatively.

The data in this study were analyzed qualitatively and quantitatively. Qualitative data were obtained from classroom observations of student activities and were analyzed as supporting evidence for the quantitative findings. Qualitative improvement was operationally defined as a minimum 20% increase in the number of students categorized as “active” based on the observation sheet indicators, including participation in peer discussion, providing feedback to peers, and consulting learning resources, from Cycle I to Cycle II. Meanwhile, quantitative data were the results of student writing tests, calculated as percentages and average class scores. Furthermore, this study was considered successful if it achieved a minimum classical completion rate of 80% and an

average individual writing score of ≥ 75 , accompanied by an increase in student activity during peer editing and error correction across cycles.

These benchmarks align with the minimum competency standards applied in the intensive Arabic language program for beginner-level writing and were deemed appropriate and realistic targets for measuring instructional improvement within the two-cycle Classroom Action Research (CAR) framework. This criterion is consistent with the view of Zapata et al. (2019), who suggest that individual learning completeness is indicated by a score of ≥ 75 and classical completeness by a minimum achievement of 80%.

RESULT AND DISCUSSION

Results

Pre-Cycle: Identification of Student Writing Problems in Adad–Ma'dūd Structures

Analysis of pre-cycle writing tests revealed three predominant types of errors in students' use of adad–ma'dūd structures: morphological errors, syntactic errors, and sentence construction errors. Morphological errors were reflected in incorrect plural forms that did not follow standard Arabic patterns, such as the misuse of plural nouns (e.g., بيوت، أبواب، غرف). Syntactic errors mainly involved inconsistencies between numbers and nouns in terms of gender agreement (mudzakkar–muannats), which is a key feature of adad–ma'dūd usage at the beginner level. In addition, sentence construction errors were identified when students produced incomplete expressions consisting only of numbers and nouns without forming full subject–predicate structures.

The pre-cycle results quantitatively confirmed these difficulties. Only 12 out of 36 students (33.33%) met the minimum completion criterion, with an average writing score of 61. Most students' errors were dominated by incorrect number–noun agreement, improper pluralization, and inaccurate gender selection. Furthermore, many students failed to produce complete sentences, instead writing isolated numerical expressions such as أربعة غرفة without syntactic completeness.

These findings indicate that students' understanding of the adad–ma'dūd structure remains weak, particularly in relating number forms, noun types, and grammatical functions within sentence contexts. Frequent errors such as أربعة غرفة instead of أربع غرف or

باب instead of ثلاثة أبواب demonstrate that learners are still operating at a vocabulary-recognition level rather than applying grammatical rules in communicative sentence construction.

Moreover, the data suggest that prior learning activities, which relied heavily on vocabulary memorization, did not sufficiently support productive writing. The lack of exposure to contextualized examples and model texts further contributed to the low structural quality of students' writing. This condition aligns with previous findings that writing is the most complex language skill for beginner learners due to its demands for grammatical accuracy, lexical selection, and sentence organization (Abdullah & (Al Khateeb & Hassan, 2022); Yaseen et al., 2024).

Overall, the pre-cycle findings highlight the need for a more structured and contextual instructional intervention that integrates guided practice, collaborative interaction, and corrective feedback. Such an approach is essential to help learners move beyond the interlanguage phase and apply adad–ma‘dūd rules consistently and accurately in meaningful Arabic writing.

Cycle I: Initial Implementation of PEEC (Peer Editing and Error Correction)

In Cycle I, students participated in the peer editing process in pairs using a simple guide sheet in the form of a checklist. After completing an individual writing task in each session, students exchanged their drafts with their partners and reviewed them based on basic indicators, including the accuracy of adad–ma‘dūd usage, word order, and spelling. Following peer editing, the lecturer conducted error correction by identifying recurring errors found across student drafts and explaining them through brief class-wide feedback. The implementation of peer editing and error correction in Cycle I led to a measurable improvement in learning outcomes. Classical mastery reached 63.89%, with an average writing score of 73, indicating that 23 out of 36 students achieved the minimum mastery criterion.

In the cycle, the students' understanding of the use of nouns and numbers in sentences was better than in the pre-cycle. In addition, sentences were constructed using the correct Arabic language structure, for example, the sentences لدي ثلاثة أطباق (I have three trays) and في البيت أربع غرف (there are 4 rooms in the house). However, based on observations

of the learning process, there were students who made mistakes, such as constructing sentences that did not conform to the structure and writing sentences in which the numbers and nouns did not match in gender (mudzakkar and muannats). The sentence ثلاث أبواب؛ خمسة نوافذ؛ أربع كراسي was found in a student's writing, which should have been constructed as ثلاثة أبواب؛ خمس نوافذ؛ أربعة كراسي. This error is an indication of the need for students to undergo intensive training in the implementation of the adad-ma'dud structure.

Based on observations, in this cycle, students also appeared to be active in peer editing activities by providing input on the writings of their groupmates. However, there were still some students who provided corrections hesitantly, thinking that they were not yet competent, which caused their friends' writing errors to be left without correction notes or revisions (Shulgina et al., 2024).

This finding is in line with a study (Aben et al., 2022) which revealed that peer feedback can make it easier for students to criticize their peers' language errors, even though in the early stages students are hesitant to provide corrections. This phenomenon reflects the concept of proximal or potential ability which is the acquisition of new understanding in collaborative learning activities from more proficient learning peers (Ruegg et al., 2017). According to (Irgin & Bilki, 2024) in their latest study, collaborative peer feedback can increase students' cognitive participation and social interaction in the process of learning a second language (L2).

Cycle II: Increasing Students' Linguistic Awareness and Competence

Learning activities in Cycle II focused on improving the quality, explicitness, and consistency of feedback provided to students. Lecturers modelled how to use the guide table consisting of اسم-جمع-عدد-معدود-جملة, and students practiced identifying inaccuracies in their peers' writing based on Arabic grammatical rules. Compared with Cycle I, feedback in Cycle II was more systematic because students were not only shown *what* the error was, but also *why* it occurred. After these improvements were implemented, students' writing performance increased significantly, with the completion rate reaching 88.89%; thirty-two of thirty-six students achieved mastery and the average score rose to 84.

Cycle II data show that only four students were still unable to consistently apply the adad-ma'dūd structure, whereas the majority produced grammatically acceptable

sentences such as *في غرفتي أربعة أبواب؛ في البيت ثلاث غرف؛ عندي ستة مكاتب*. Remaining errors were generally minor, including spelling mistakes and incorrect harakat placement. This indicates that students had already mastered the underlying conceptual structure, while the remaining problems were at the level of accuracy refinement rather than misunderstanding of rules.

Peer editing activities in Cycle II were also carried out more effectively than in Cycle I. Students corrected their peers' writing with greater confidence and were more willing to discuss suggested revisions. Lecturer error correction further clarified the locations and patterns of errors that occurred most frequently. As a result, students were not only recipients of corrections but became active contributors in collaborative learning, which supports the development of writing skills (Irgin & Bilki, 2024). Thus, the PEEC technique strengthened linguistic accuracy while simultaneously improving cooperative learning dynamics.

Discussion

The improvement in students' writing accuracy indicates that corrective feedback integrated into classroom practice plays an important role in preventing the persistence of grammatical errors, especially among beginner learners. In the context of this study, corrective feedback enabled students to immediately recognize mismatches in adad–ma‘dūd usage and revise them before such errors became fossilized. This observation is in line with Zaki (2021), who found that error correction is particularly effective in intensive Arabic language programs because errors can be addressed at an early stage. The increased grammatical accuracy in this study also supports Moukrim et al. (2021), who demonstrated that systematic error correction can significantly enhance the writing accuracy of non-native Arabic learners.

The findings also correspond with the Output Hypothesis, which states that the act of producing language and then revising it motivates learners to notice their errors and make appropriate corrections through interaction (Albaqami, 2024). Furthermore, research by Harthy et al., (2024) shows that the combination of peer editing and written corrective feedback can significantly improve writing accuracy. These theoretical and empirical supports align well with the improvements observed in Cycle II of this study.

When compared across phases, the improvement from pre-cycle to Cycle I and then to Cycle II demonstrates that peer editing activities motivated students to check, correct, and discuss their peers' writing. This process fostered sensitivity to inappropriate linguistic forms and sharpened students' understanding of Arabic grammatical rules because they were directly involved in identifying and revising errors (Zhang & McEneaney, 2020). This reinforces previous findings showing that peer editing is effective for improving academic writing because it builds a collaborative learning environment (Chen et al., 2024; Campbell & Brandon, 2024).

In addition, findings from this study show that students' writing ability improved not only in terms of scores but also in understanding sentence structure using *adad-ma'dūd*. Students who had mastered the structure helped peers who were still experiencing difficulties, illustrating the principle of learning by doing (Silawati et al., 2020). The interaction between writing practice and peer correction was proven to build students' metalinguistic awareness, which ultimately strengthened their accuracy and independence when constructing grammatically correct sentences (Wu & Schunn, 2021).

Based on the iterative refinements implemented across the two action cycles, this study operationalizes the PEEC collaborative learning technique as a structured five-stage model. The stages consist of (1) drafting, in which students compose a short text on a given theme; (2) peer review, where students exchange their drafts and evaluate them using a guided correction tool; (3) error correction, during which lecturers compile common errors identified in peer feedback and provide explicit explanations; (4) revision, in which students revise their texts based on both peer and lecturer feedback; and (5) reflection, conducted through group discussion to analyze recurring writing errors and appropriate strategies for avoiding them. This five-stage PEEC model represents a synthesis of the instructional actions and improvements observed throughout the two cycles, rather than a separate or newly introduced procedure.

The PEEC technique is a model that combines collaborative learning and explicit feedback activities used to boost learning autonomy and linguistic awareness. The findings in this study are in line with the findings (Leng et al., 2021) that collaborative writing skills learning can produce meaningful and more in-depth revisions than conventional learning. This study supports Vygotsky's sociocultural theory, namely the

interaction between peers in the peer editing process that allows students to learn in the ZPD (Zone of Proximal Development).

From three perspectives: pedagogical, practical, and theoretical; the PEEC technique shows strong potential. Pedagogically, it can be applied to improve Arabic writing skills at basic and intermediate levels, particularly in complex structures such as adad–ma‘dūd. Practically, lecturers can use structured feedback sheets and integrate digital platforms for collaborative editing. Theoretically, this study reinforces interlanguage and sociocultural theory perspectives that view errors as a natural part of learning which should be addressed through reflective dialogue.

This study confirms the findings of Al Khateeb & Hassan, (2022), who showed that peer editing activities can optimize students' Arabic writing skills because they are carried out through cooperative systems. The results are also consistent with Zaki (2020), who emphasized that error correction activities help students identify grammatical errors in their writing, thereby increasing linguistic awareness.

Similar evidence from Mandarin and English writing contexts indicates that peer feedback and editing encourage critical thinking about language errors and reduce writing anxiety (Zhang & McEneaney, 2020; Weng et al., 2024). Finally, the combined use of Peer Editing and Error Correction techniques has been shown to produce more optimal outcomes than either technique alone, because students benefit from both collaborative participation and clear lecturer guidance (Demir, 2021).

CONCLUSION

This study, which demonstrated a rise in learning completion rates from 33.33% in the pre-cycle to 88.89% by the end of Cycle II, along with an increase in average writing scores from 61 to 84, confirms that the application of the PEEC (Peer Editing Error Correction) technique is an effective strategy for improving Arabic writing skills among beginner-level students. Beyond these quantitative gains, the findings also reveal qualitative improvements, particularly in students' collaborative engagement, linguistic awareness, and active participation during peer editing and error correction activities. Theoretically, these results support the view that learner errors in foreign language writing function as a developmental resource, which, when addressed through structured

collaboration and explicit feedback, can facilitate more accurate and meaningful language production.

Overall, the pedagogical findings indicate that the PEEC technique effectively helps beginner students overcome structural difficulties in Arabic writing, particularly in mastering *adad*–*ma'dūd* constructions, through targeted peer correction supported by lecturer-guided instruction. Theoretically, this study contributes to Sociocultural Theory by demonstrating how peer editing activities within the PEEC framework operationalize the Zone of Proximal Development (ZPD), allowing learners to scaffold each other's understanding under guided mediation. At the same time, the findings support Interlanguage Theory by showing that structured and explicit error correction facilitates learners' progression through developmental stages of grammatical accuracy. Practically, this study highlights the importance of providing structured instruments, such as the category table *اسم، جمع، عدد، معدود، جملة*, to ensure that collaborative writing activities are conducted systematically and productively.

Thus, it can be concluded that the PEEC technique is recommended as an alternative strategy for learning Arabic writing at the beginner level because it not only improves grammatical accuracy but also enriches students' learning experiences through the process of reflection, identification, and correction of errors, both independently and collaboratively.

Based on the findings and limitations of this study, future research is encouraged to examine more specifically the optimal balance between peer feedback and lecturer-led correction within the PEEC framework, as well as to investigate the long-term retention effects of this technique on grammatical accuracy in Arabic writing. In addition, further studies may explore how the PEEC model can be integrated with digital platforms to enhance feedback quality, monitoring, and student accountability in collaborative writing activities. Therefore, the PEEC technique offers a viable, evidence-based pedagogical model for transforming beginner-level Arabic writing instruction from a predominantly teacher-centered practice into an active, collaborative, and reflective learning process.

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