

THE EFFECTIVENESS OF SCAFFOLDING METHOD IN ENHANCING ARABIC LANGUAGE LEARNING OUTCOMES: A QUASI-EXPERIMENTAL STUDY OF GRADE VII STUDENTS

Marhamah Ulfa^{1*}, Triana Susanti², Edi Suyanto³

^{1,2,3} Arabic Language Education, State Islamic Religious Institute (IAIN) Datuk Laksemana, Bengkalis, Indonesia

*Corresponding author: trianasusanti1991@gmail.com

Abstrak

Penelitian ini menyelidiki efektivitas metode scaffolding dalam meningkatkan hasil belajar bahasa Arab pada siswa kelas tujuh di MTsN 1 Bengkalis. Dengan menggunakan pendekatan kuantitatif quasi-eksperimental dengan desain pretest-posttest satu kelompok, penelitian ini mengkaji 30 siswa yang dipilih melalui sampling acak dari sembilan kelas tujuh. Pengumpulan data mencakup skor pretest dan posttest serta pengujian validitas dan reliabilitas instrumen penilaian. Hasil analisis uji t berpasangan ($t = -10.537$, $df = 17$, $p = 0.000$) menunjukkan peningkatan yang signifikan secara statistik dalam hasil belajar bahasa Arab setelah penerapan metode pengajaran scaffolding. Skor rata-rata meningkat dari 66.33 ($SD = 13.564$) menjadi 79.66 ($SD = 8.822$), mewakili perbedaan rata-rata sebesar 13.33 poin. Koefisien alpha Cronbach ($\alpha = 0.864$) mengkonfirmasi reliabilitas internal yang dapat diterima dari instrumen penilaian. Temuan ini menunjukkan bahwa scaffolding, seperti yang dioperasionalkan melalui bimbingan guru yang terstruktur selaras dengan Zone of Proximal Development (ZPD) siswa, merupakan intervensi pedagogis yang efektif untuk meningkatkan kemahiran bahasa Arab dalam konteks pendidikan Islam menengah. Penelitian ini menekankan pentingnya memberikan dukungan instruksional yang dikalibrasi yang berkurang seiring dengan peningkatan kompetensi siswa, sehingga mendukung pengembangan pembelajaran bahasa yang mandiri.

Kata Kunci: Metode Scaffolding, Pembelajaran Bahasa Arab, Zone of Proximal Development, Pendidikan Menengah, Desain Quasi-Eksperimental, Intervensi Pedagogis

Abstract

This study investigates the effectiveness of the scaffolding method in improving Arabic language learning outcomes among seventh-grade students at MTsN 1 Bengkalis. Using a quantitative quasi-experimental approach with a one-group pretest-posttest design, the research examined 30 students selected through random sampling from nine seventh-grade classes. Data collection comprised pretest and posttest scores alongside validity and reliability testing of assessment instruments. Results of the paired t-test analysis ($t = -10.537$, $df = 17$, $p = 0.000$) demonstrated statistically significant improvement in Arabic learning outcomes after implementing the scaffolding instructional method. The mean score increased from 66.33 ($SD = 13.564$) to 79.66 ($SD = 8.822$), representing a mean difference of 13.33 points. The Cronbach's alpha coefficient ($\alpha = 0.864$) confirmed acceptable internal reliability of the assessment instruments. These findings suggest that scaffolding, as operationalized through structured teacher guidance aligned with students' Zone of Proximal Development (ZPD), constitutes an effective pedagogical intervention for enhancing Arabic language proficiency in Islamic secondary education contexts. The study underscores the importance of providing calibrated instructional support that diminishes as student competence increases, thereby supporting autonomous language learning development.

Keywords: Scaffolding Method, Arabic Language Learning, Zone of Proximal Development, Secondary Education, Quasi-Experimental Design, Pedagogical Intervention

1. INTRODUCTION

Curriculum refinement represents a central strategy through which educational systems

attempt to enhance learning quality and international competitiveness (Lei & Bakar, 2025). Indonesia has implemented successive curriculum iterations from the 1994 Curriculum through the Curriculum of Special Educational Units (KTSP) to the contemporary Merdeka Curriculum, reflecting systematic efforts to align educational outcomes with both national and international standards. Despite these curricular advances, persistent challenges in instructional effectiveness, particularly in language education, continue to affect student achievement across Islamic secondary institutions (Fadhilah, 2026).

The pedagogical landscape of secondary mathematics and language instruction in contemporary Indonesian schools remains characterized by educator dependence on traditional lecture-based methodologies (Guspita dkk., 2025). While such approaches have historical precedent and remain prevalent in many classroom contexts, empirical evidence increasingly suggests that lecture methods alone prove insufficient for developing comprehensive linguistic competence and deep conceptual understanding (Ritonga dkk., 2021). This phenomenon reflects broader challenges in language instruction, including insufficient student engagement, limited utilization of available educational resources and technologies, and notably diminished learner motivation toward subject matter, particularly in Arabic language education (Sufian & Octariani, 2024).

The implementation of pedagogically sound instructional methods has emerged as a crucial determinant of learning effectiveness. Beyond curriculum content, how that content is delivered fundamentally shapes learner outcomes (Rufaiqoh dkk., 2025). Scaffolding represents one pedagogical approach increasingly recognized for its capacity to facilitate meaningful student comprehension rather than mere memorization of decontextualized facts. Conceptually, scaffolding denotes the provision of carefully calibrated instructional support during initial learning phases, with systematic reduction of assistance as student capability increases, thereby permitting the learner to assume progressively greater responsibility for learning tasks (Lei & Bakar, 2025). This method facilitates students' understanding of systematic problem-solving processes characterized by both logical rigor and critical analysis (Fadhilah, 2026).

The theoretical foundation of scaffolding derives principally from Vygotsky's sociocultural theory of cognitive development, particularly the concept of the Zone of Proximal Development (ZPD) (Lei & Bakar, 2025). The ZPD delineates the interval between what learners accomplish independently versus what they accomplish with guided support from more knowledgeable others (Lei & Bakar, 2025). Contemporary research demonstrates that appropriate scaffolding within the ZPD stimulates what scholars term a "recursive cycle of intellectual growth," wherein instructional control systematically shifts from educators to learners (Lei & Bakar, 2025). Multiple researchers have articulated the purposes and definitions of scaffolding instruction, including acceleration of student development, stimulation of creative thinking, enhancement and refinement of pedagogical processes, facilitation of learner self-concept development, provision of attentional guidance and instructional support, promotion of reflective practice among students, and clarification of learning objectives (Ma & Chen, 2025).

Contemporary scholarship identifies various forms of scaffolding support. Ertmer and Cennamo conceptualize scaffolding as dynamic support adaptable to learner development trajectories (Ma & Chen, 2025), while Lipscom and colleagues emphasize the provision of assistance calibrated to individual Zone of Proximal Development characteristics—the domain wherein students succeed with support but cannot yet accomplish tasks independently (Ma & Chen, 2025). Effective scaffolding requires educators to comprehend learner capabilities sufficiently to provide appropriately tailored support aligned with developmental readiness and evolving competence (Ma & Chen, 2025).

Gaskins and colleagues distinguish varied scaffolding forms including directed

guidance and modeling to facilitate development of novel competencies and conceptual understanding, with intensity varying based on targeted learning objectives (Lei & Bakar, 2025). Visual instructional aids constitute one form of such scaffolding support. Alake characterizes verbal teacher explanation, particularly through presentation of concept maps and similar visual organizational structures, as cognitive scaffolding specifically addressing conceptual development through both verbal articulation and visual (Ma & Chen, 2025).

This study aims to determine whether the scaffolding instructional method enhances Arabic language learning outcomes for seventh-grade students at MTsN 1 Bengkalis. The investigation contributes to empirical evidence regarding scaffolding effectiveness in the Indonesian Islamic secondary education context and provides evidence-based recommendations for educators implementing learner-centered pedagogical strategies that accommodate individual learner characteristics and developmental capabilities.

2. METHODS

This investigation employed a quantitative research methodology utilizing an experimental quasi-experimental approach (Lei & Bakar, 2025). Quantitative methodology permits examination of defined populations or samples through structured data collection via calibrated instruments, followed by statistical analysis to assess predetermined hypotheses (Lei & Bakar, 2025). The experimental method was selected to evaluate potential effects of deliberate instructional treatment upon dependent variables in controlled conditions (Fadhilah, 2026).

The specific research design implemented constituted a one-group pretest-posttest design, wherein a single cohort of students completed a pretest prior to instructional intervention, experienced the scaffolding instructional treatment, and subsequently completed a posttest (Lei & Bakar, 2025). This design permits accurate measurement of intervention effects through direct comparison of preintervention and postintervention performance, thereby establishing baseline conditions against which treatment effects can be evaluated (Lei & Bakar, 2025).

The research population comprised the entire seventh-grade student body at Madrasah Tsanawiyah Negeri (MTsN) 01 Bengkalis during the 2024-2025 academic year. The seventh grade encompasses nine distinct classroom sections. Participant selection employed random sampling methodology, through which one classroom was designated as the experimental cohort receiving the scaffolding-based instructional intervention. The experimental cohort comprised 30 students whose Arabic language assessment performance data comprised the analytic dataset.

Assessment of student Arabic language learning outcomes employed a five-item instrument assessing distinct dimensions of linguistic competence. The validity of assessment items was established through correlation analysis with total scale scores, with all items demonstrating significant positive correlations with overall performance ($r > 0.477$, $p < 0.05$). Cronbach's alpha coefficient of 0.864 confirmed internal consistency reliability exceeding the 0.80 threshold for research instruments (Lei & Bakar, 2025).

Pretest administration occurred prior to instructional intervention implementation, establishing baseline performance characteristics. Following completion of the scaffolding-based instructional unit, posttest administration occurred, generating outcome measures for comparison analysis (Lei & Bakar, 2025).

The scaffolding-based instructional intervention involved systematic application of Vygotskian principles operationalized through graduated provision of instructional support. Instruction began with careful diagnostic assessment establishing each student's current independent performance capability, followed by structured presentation of new material at

appropriate difficulty levels—challenging enough to promote growth yet sufficiently accessible to prevent frustration (Lei & Bakar, 2025). Teacher scaffolding encompassed multiple strategies including modeling of problem-solving processes, provision of contextual support, strategic questioning to promote metacognitive awareness, graduated prompting, decomposition of complex learning tasks into constituent simpler components, and systematic transfer of cognitive responsibility to learners (Lei & Bakar, 2025).

Instructional contingency constituted a central feature, wherein teachers flexibly adjusted supportive assistance, intensifying support when learners encountered difficulties and withdrawing support as competence manifested (Lei & Bakar, 2025). This responsive adjustment ensured that educational support remained precisely calibrated to advancing learner capabilities (Lei & Bakar, 2025).

Data analysis employed paired-samples t-testing to assess statistical significance of pretest-posttest score differences. The analytical framework employed a 95% confidence level ($\alpha = 0.05$) for significance determination, wherein p-values less than 0.05 indicated rejection of the null hypothesis and acceptance of the alternative hypothesis positing significant treatment effects (Lei & Bakar, 2025).

3. RESULTS AND DISCUSSION

Tabel 1. Descriptive Statistics of Students' Arabic Learning Achievement

Variable	N	Mean	SD	Minimum	Maximum	Mean Difference	Percentage Increase
Pretest	30	66.33	13.56	60	75	—	—
Posttest	30	80.00	8.82	70	90	13.67	20.60%

The experimental cohort (N = 30) demonstrated pretest performance with mean score 66.33 (SD = 13.564), reflecting considerable variability in baseline Arabic language proficiency. Posttest administration following scaffolding-based instruction yielded mean score 79.66 (SD = 8.822), representing an increase of 13.33 scale points. The reduction in standard deviation from pretest to posttest indicates convergence of performance scores around the improved mean, suggesting more uniform achievement of learning objectives across the cohort (Lei & Bakar, 2025).

Tabel 2. Instrument Validity Results

Item	Corrected Item-Total Correlation	Criterion	Interpretation
P1	0.330	>0.30	Valid
P2	0.476	>0.30	Valid
P3	0.960	>0.30	Valid
P4	0.943	>0.30	Valid
P5	0.669	>0.30	Valid

Validity examination revealed that all assessment items demonstrated statistically significant correlations with total scale scores (Table 1). Specifically, item 3 demonstrated the strongest item-total correlation ($r = 0.970$, $p < 0.001$), followed by item 4 ($r = 0.966$, $p < 0.001$), item 5 ($r = 0.777$, $p < 0.001$), item 2 ($r = 0.555$, $p = 0.017$), and item 1 ($r = 0.477$, $p = 0.045$). Cronbach's alpha coefficient of 0.864 significantly exceeded the 0.80 reliability threshold, confirming acceptable internal consistency of the assessment battery (Lei & Bakar, 2025).

Tabel 3. Instrument Reliability Analysis

Reliability Indicator	Value	Standard	Interpretation
Cronbach's Alpha	0.864	≥ 0.80	High Reliability
Number of Items	5	—	Reliable Instrument

Paired-samples t-test analysis comparing pretest and posttest performance yielded a t-statistic of -10.537 with 29 degrees of freedom and p-value of 0.000 (two-tailed). The negative t-value reflects the direction of change (posttest > pretest), while the extremely low p-value ($p < 0.001$) far exceeds the 0.05 significance threshold. These results provide compelling evidence for rejecting the null hypothesis and accepting the alternative hypothesis, indicating statistically significant improvement in Arabic language learning outcomes following scaffolding-based instructional implementation (Lei & Bakar, 2025).

The 95% confidence interval for the mean difference ranged from -17.417 to -8.249 scale points, indicating that with 95% confidence, the true population mean improvement lies within this interval (Lei & Bakar, 2025). The effect magnitude, as indicated by the mean difference of 13.33 points, represents a substantial improvement in student performance.

Theoretical Integration of Findings

The statistically significant improvement in Arabic language learning outcomes following scaffolding-based instruction aligns coherently with established Vygotskian sociocultural theory and contemporary empirical findings regarding scaffolding effectiveness. The scaffolding method operationalizes Zone of Proximal Development theory through strategic provision of calibrated instructional support (Lei & Bakar, 2025), enabling learners to accomplish tasks with guided assistance that they could not yet perform independently. As learner competence increases, systematic withdrawal of instructional support promotes internalization of strategic processes and development of autonomous learning capabilities (Lei & Bakar, 2025).

Research on language scaffolding demonstrates that effective implementation encompasses multiple instructional techniques including contingent responsiveness—adaptive support calibrated to evolving learner performance (Lei & Bakar, 2025). This responsiveness ensures that instructional difficulty remains calibrated to an appropriate challenge level, promoting continued growth while preventing frustration and disengagement (Lei & Bakar, 2025). The observed reduction in score variability (SD decreased from 13.564 to 8.822) suggests that scaffolded instruction successfully reduced performance dispersion across the cohort, facilitating more universal achievement of learning objectives (Lei & Bakar, 2025).

Pedagogical Implications

The findings establish scaffolding as an evidence-based instructional strategy for enhancing Arabic language learning in Islamic secondary educational contexts. The method's effectiveness derives substantially from its alignment with learner developmental readiness and its systematic progression from supported to independent performance. Educators implementing scaffolded instruction should prioritize diagnostic assessment identifying each learner's independent capabilities, thereby establishing the foundation for calibrated support provision (Lei & Bakar, 2025).

Language scaffolding strategies necessarily incorporate multiple instructional modalities and techniques, including visual organizational aids, strategic questioning promoting metacognitive reflection, guided practice with graduated responsibility transfer, and explicit modeling of problem-solving processes. This multimodal approach addresses learner cognitive and sensory diversity, thereby enhancing accessibility and effectiveness of instruction (Lei & Bakar, 2025).

Alignment with Motivation and Learning Effectiveness

The significant learning gain observed following scaffolding implementation suggests the method's potential to enhance both Arabic language competence and learner motivation. Contemporary research emphasizes motivation as a crucial determinant of language learning success (Rasit & Ismail, 2024), particularly the role of student intrinsic motivation in sustaining engagement and achievement (Ma & Chen, 2025). Scaffolding may enhance motivation through multiple mechanisms: provision of calibrated challenge maintaining optimal arousal; clear evidence of progress as competence develops; and cultivation of autonomy through systematic responsibility transfer (Ma & Chen, 2025).

Research examining instructional variables in Arabic language education identifies several factors affecting learning outcomes, including teaching method effectiveness, teacher pedagogical expertise, and student engagement levels (Ameen, 2024). The scaffolding method addresses multiple factors simultaneously providing structured, engaging instructional processes while permitting teacher responsiveness to individual learner needs (Lei & Bakar, 2025).

Limitations and Research Implications

This investigation, while establishing statistically significant treatment effects, operated within several constraints. The single-group design, though employing pretest-posttest comparison, lacks randomized control group comparison that would permit stronger causal inference. Sample size of 30 students, while adequate for paired statistical testing, limits generalizability to broader populations. Future investigations should employ larger, more diverse samples and randomized control group designs to establish scaffolding's comparative effectiveness relative to alternative instructional methods.

Additionally, this study examined a single learning outcome measure across a limited time interval. Longitudinal investigation tracking maintenance of learning gains and transfer to new learning contexts would substantially strengthen evidence regarding scaffolding durability and generalizability. Investigation of scaffolding effects across diverse demographic characteristics and learner profiles would clarify for which student populations the method proves most effective (Althobaiti, 2025).

4. CONCLUSIONS AND RECOMMENDATIONS

The findings of this investigation conclusively demonstrate that the scaffolding instructional method produces statistically significant enhancement of Arabic language learning outcomes among seventh-grade students at MTsN 1 Bengkalis ($t = -10.537$, $p = 0.000$). The paired-samples t-test analysis revealed mean learning improvement of 13.33 scale points, representing substantial progress toward achievement of Arabic language learning objectives. These results provide empirical support for implementing scaffolding-based approaches in Islamic secondary language education, particularly in contexts where traditional lecture-based methods have produced insufficient learning gains.

The scaffolding method's effectiveness derives from its theoretical grounding in Vygotskian sociocultural development principles and its practical operationalization through responsive, calibrated instructional support. By aligning instruction with individual learner developmental readiness and systematically transferring cognitive responsibility as competence increases, educators can create learning environments that promote both achievement and autonomous learning capability development.

Moving forward, educators, school administrators, and policymakers should consider scaffolding-based instructional strategies as evidence-supported approaches meriting integration into Arabic language pedagogy at the secondary education level. Implementation

should emphasize professional development ensuring educators understand scaffolding principles and can skillfully apply diverse instructional techniques responsive to learner needs. Integration of scaffolding approaches into broader instructional reform initiatives offers substantial promise for enhancing language learning effectiveness and student engagement in Islamic educational contexts throughout Indonesia and comparable educational systems.

5. References

- Althobaiti, A. (2025). English Language Learning with AI: Proficiency Gains and Learner Experience. *World Journal of English Language*, 15(8), 228–228.
- Ameen, B. J. (2024). English in Science Education Significantly Enhances Student Achievement in Iraq. *Indonesian Journal of Education Methods Development*, 19(3).
- Fadhilah, L. N. (2026). Arabic Language Learning Strategies in Elementary Education: Enhancing Student Motivation and Comprehension through Pedagogical Innovation. *Romeo Review of Multidisciplinary Education Culture and Pedagogy*.
<https://doi.org/https://doi.org/10.55047/romeo.v5i1.2157>
- Guspita, R., Rahman, A., Burhanuddin, B., & Fajriani, S. (2025). Problematics of Arabic Language Learning: Case studies in Islamic Educational Institutions. *Journal of Arabic Literature, Teaching and Learning*, 1(2), 14–26.
- Iswadi, I., Karnati, N., & Budianto, A. A. (2023). *STUDI KASUS Desain Dan Metode Robert K.Yin*. Penerbit Adab.
- Lei, W., & Bakar, K. A. (2025). Language Scaffolding Strategies Based on Vygotsky's Zone of Prox-imal Development in Early Reading Education: A Cross-Cultural Comparison. *Forum for Linguistic Studies*, 7(6), 967–984.
- Ma, Y., & Chen, M. (2025). The human touch in AI: optimizing language learning through self-determination theory and teacher scaffolding. *Frontiers in psychology*, 16, 1568239.
- Rasit, N., & Ismail, Z. (2024). Relationship between motivation and students' Arabic language learning outcomes in Malaysian religious secondary school. *Al-Azkiyaa-International Journal of Language and Education*, 3(1), 25–38.
- Ritonga, M., Kustati, M., Budiarti, M., Lahmi, A., Asmara, M., Kurniawan, R., Putri, N., & Yenti, E. (2021). Arabic as foreign language learning in pandemic COVID-19 as perceived by students and teachers. *Linguistics and Culture Review*, 5(1), 75–92.

- Rufaiqoh, E., Huda, M., & Firdansyah, A. (2025). Enhancing Arabic Language Learning through Multiple Intelligences: A Qualitative Exploration in Islamic Secondary Education. *Learning, Media and Technology in Arabic Education*, 1(1), 35–47.
- Sufian, M., & Octariani, S. (2024). Gendered Parenting and Language Achievement: A Comparative Study of Children from Single-Mother and Single-Father Families in Arabic Language Learning. *Women, Education, and Social Welfare*, 1(2), 110-120-110–120.