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Guided Discovery Learning for Equitable Islamic Cultural History Learning in a Rural Indonesian Islamic Junior Secondary School: A Classroom Action Research

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Abstract

Teacher-centred instruction can constrain students' participation and learning in Islamic Cultural History (Sejarah Kebudayaan Islam; SKI), particularly when the subject is taught as memorization. This classroom action research examined whether guided Discovery Learning could improve participation and achievement in a Grade 8 class at a rural Indonesian Islamic junior secondary school (Madrasah Tsanawiyah; MTs). Twenty-two students participated in two planning-action-observation-reflection cycles. The intervention followed six phases: stimulation, problem identification, data collection, data processing, verification, and generalization. Observation sheets, achievement tests, interviews, and documentation were analysed descriptively using mean scores, classical mastery, and process indicators. Student activity increased from 62.21% in Cycle I to 79.09% in Cycle II, while teacher implementation rose from 68.18% to 90.90%. Mean achievement improved from 58.45 at baseline to 62.42 in Cycle I and 80.90 in Cycle II. Classical mastery increased from 40.90% to 45.45% and then 86.36%, exceeding the 80% criterion. The findings indicate that Discovery Learning becomes productive when it is explicitly scaffolded, collaboratively organised, and refined through reflection. The study contributes evidence on equitable learning opportunities in a rural madrasah context.

Keywords: Classroom Action Research; Discovery Learning; Equitable Learning Opportunities; Islamic Cultural History; Learning Outcomes.

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INTRODUCTION

Equitable learning is not exhausted by enrolment or formal access to a classroom. It also concerns whether every learner receives meaningful opportunities to participate, question, collaborate, and demonstrate understanding. International scholarship on inclusion frames equity as a system-level responsibility that requires schools to remove barriers to participation and learning rather than merely place diverse learners in the same setting [1], [2], [3], [4]. This perspective is germane to rural school settings, where a conventional teacher-centred pattern may narrow the participation of students who need more structured opportunities to process information, discuss evidence, and articulate their ideas.

Islamic Cultural History (Sejarah Kebudayaan Islam; SKI) is a core component of Islamic Religious Education (IRE) in Indonesian madrasah education. It is intended to foster historical understanding of Muslim civilisation, moral reflection, and the capacity to connect past events with present social responsibilities. However, the educational value of SKI can be weakened when its content is reduced to recalling rulers, dates, battles, and dynastic sequences. Contemporary scholarship on Islamic education emphasises that religious learning should support reflective, critical, and dialogic engagement rather than unexamined transmission [5], [6], [7], [8]. For students in an Islamic junior secondary school (Madrasah Tsanawiyah; MTs), this means that learning about the Ayyubid dynasty and Salahuddin al-Ayyubi should involve evidence, causation, values, and historical interpretation, not only factual recall.

Discovery Learning offers a plausible route for transforming this classroom experience, provided that discovery is understood as guided inquiry rather than minimally supported exploration. Research on discovery and inquiry learning shows that learners can construct more durable understanding when they investigate problems, generate explanations, test ideas, and receive timely guidance. At the same time, unguided discovery may overburden novice learners and produce confusion if prior knowledge, task structure, feedback, and scaffolding are inadequate [9], [10], [11], [12], [13], [14], [15], [16], [17]. The instructional question is therefore not whether teachers should withdraw support, but how they can organise support so that students progressively assume cognitive responsibility for their own learning.

The broader active-learning literature reinforces this argument. Compared with instruction dominated by exposition, activities that require learners to explain, interact, retrieve, and apply information can improve performance and participation [18], [19], [20], [21]. The mechanisms are cognitive and social: students become more deeply engaged when they actively construct responses, receive feedback, regulate their work, and coordinate ideas with peers [22], [23], [24], [25], [26], [27], [28]. Such mechanisms are particularly relevant to SKI because historical learning requires students to interpret relationships among evidence, chronology, causation, continuity, change, and ethical meaning.

Historical reasoning research further indicates that students learn history more meaningfully when they analyse evidence and justify interpretations instead of treating the past as a closed body of information [29], [30]. Relevant Indonesian studies similarly report that SKI learning benefits from explicit attention to higher-order analysis, structured Discovery Learning, contextual teaching materials, and student-directed learning [31], [32], [33], [34], [35], [36]. Nevertheless, existing studies rarely make visible the action-research mechanism

through which a teacher diagnoses weak participation, refines scaffolding, and connects instructional fidelity with both participation and mastery in a rural madrasah classroom.

Preliminary observation in Grade VIII/C at Miftahul Ulum Singkut 4 Islamic Junior Secondary School, Sarolangun, identified this gap in practice. Students were reluctant to ask questions, depended on teacher explanation, and found it difficult to formulate evidence-based conclusions. At baseline, only nine of 22 students (40.90%) met the Minimum Learning Achievement Criterion (Kriteria Ketercapaian Tujuan Pembelajaran; KKTP) of 70, with a class mean of 58.45. This study therefore investigated how a guided Discovery Learning intervention could improve classroom participation and SKI learning outcomes across two action-research cycles. Its novelty lies in demonstrating that equitable learning opportunities in a rural madrasah are strengthened not simply by introducing a learner-centred model, but by progressively improving teacher scaffolding, group coordination, verification, and reflective generalisation.

METHODS

Research Design

This study used classroom action research (CAR) with two iterative cycles of planning, action, observation, and reflection. CAR was selected because the study aimed to improve an identified instructional problem in an intact class, not to make population-level causal claims. Each cycle generated evidence that was used to diagnose the adequacy of the intervention and refine the next cycle. This practitioner-oriented and reflective logic is central to action research [37], [38]. The study focused on SKI instruction concerning the Ayyubid dynasty, including the role of Salahuddin al-Ayyubi in the development of Islamic civilisation.

Participants and Sampling

Participants were 22 Grade VIII/C students enrolled in the regular SKI class at Miftahul Ulum Singkut 4 Islamic Junior Secondary School (Madrasah Tsanawiyah; MTs) in Sarolangun Regency, Jambi, Indonesia. The class was selected purposively because the pre-cycle diagnostic data and classroom observation showed low participation and low achievement against the established KKTP. All students in the class participated because the intervention was embedded in normal teaching and learning. The classroom teacher collaborated with the researcher to ensure that the teaching sequence, content coverage, and assessment timing were consistent with the school schedule.

Operational Definitions of Variables

The intervention and outcomes were operationalised at the classroom level. Guided Discovery Learning was defined as a teacher-scaffolded inquiry sequence in which students received a stimulus, identified a problem, collected and processed information, verified claims, and generalised conclusions. Student activity was defined as observable engagement during those phases. Learning outcomes were defined as scores on the SKI achievement test and the proportion of students meeting the KKTP. Table 1 specifies the measurement logic used to maintain consistency across cycles.

Table 1. Operational Definitions, Indicators, and Evidence Sources

| Construct | Operational Definition | Indicators | Evidence Source |
|---------------------------|--|---|--|
| Guided Discovery Learning | A structured six-phase inquiry intervention with teacher guidance. | Stimulation; problem identification; data collection; data processing; verification; generalisation. | Teacher implementation observation and lesson documentation. |
| Student activity | Students' observable participation in knowledge construction during SKI lessons. | Attending to stimuli; asking or responding; information seeking; collaborating; presenting; concluding. | Student activity observation sheet and field notes. |
| Learning outcomes | Achievement in SKI measured against the classroom criterion. | Test score (0-100); mean score; number and percentage reaching KKTP ≥ 70 . | Pre-cycle, Cycle I, and Cycle II achievement tests. |
| Action success | Improvement sufficient to justify completion of the intervention. | At least 80% of students reach the KKTP in the final cycle. | Classical mastery calculation. |

Hypotheses Development

In action research, hypotheses are formulated as improvement-oriented propositions that guide the intervention rather than as claims of universal causality. Guided discovery is expected to support participation because students receive repeated opportunities to identify questions, examine materials, discuss explanations, and verify conclusions. When those opportunities are made explicit and are supported by clear teacher guidance, learning outcomes should increase because students process and articulate the historical content rather than only receive it. Accordingly, the action hypothesis was formulated as follows: H1: Guided Discovery Learning, implemented through iterative scaffolding and reflection, improves student activity and enables at least 80% of Grade VIII/C students to reach the SKI KKTP by Cycle II.

Data Collection Procedure

Data were collected over a pre-cycle and two classroom-action cycles. The pre-cycle documented the baseline learning problem. Cycle I implemented the six Discovery Learning phases and was followed by reflection on implementation barriers. Cycle II retained the model while strengthening the problem-identification stage, teacher monitoring, group coordination, presentation guidance, and time management. Observation sheets were used to record student activity and teacher implementation. Achievement tests were administered at the baseline and at the end of each cycle. Short teacher-student reflections and classroom documentation were used to explain quantitative patterns and to preserve a traceable account of instructional change.

Table 2. Classroom Action Research Sequence and Intervention Focus

| Phase | Learning Focus | Core Action | Analytic Purpose |
|--------------|---|--|--|
| Pre-cycle | Diagnostic SKI lesson and baseline test. | Document passive participation and determine initial achievement. | Establish the classroom problem and benchmark. |
| Cycle I | Ayyubid dynasty and Islamic civilisation. | Apply six-phase guided Discovery Learning through guided questions, group discussion, source use, presentation, and a post-test. | Identify initial effects and implementation constraints. |
| Reflection I | Process review. | Examine unclear instructions, uneven group participation, limited discussion, and presentation hesitation. | Design targeted scaffolds for Cycle II. |
| Cycle II | Major Ayyubid figures and Salahuddin al-Ayyubi. | Strengthen prompts, role allocation, teacher monitoring, verification dialogue, and concluding statements; administer post-test. | Evaluate whether success criterion is achieved. |

Data Analysis

Quantitative data were analysed descriptively because the class was the complete action-research unit and the available records were aggregated at phase level. For each phase, the analysis calculated the mean score, the number of students reaching the KKTP, and classical mastery. Classical mastery was calculated as the number of students with a score of at least 70 divided by 22 and multiplied by 100. Change scores were calculated by subtracting the earlier phase mean or percentage from the later phase. Observation and reflection notes were analysed through focused comparison across cycles: what impeded participation in Cycle I, which corrective actions were introduced in Cycle II, and how the process and outcome indicators changed.

Validity and Reliability Results

The original classroom records provide evidence of procedural data quality rather than psychometric coefficients. Specifically, the same learning criterion was applied at all phases, the same classroom cohort was retained, and the same categories of observation were used to compare Cycle I with Cycle II. The interpretation of progress was triangulated across achievement tests, student-activity observations, teacher-implementation observations, reflective notes, and documentation. Such integration is consistent with recommendations that mixed evidence be connected deliberately and that claims of quality distinguish construct validity from statistical reliability [39], [40], [41], [42]. Because the available dataset contains aggregate phase-level outcomes rather than item-level responses or independently coded ratings, Cronbach's alpha and inter-rater reliability are not estimable and are not reported. This boundary is acknowledged explicitly rather than replaced with unsupported coefficients.

Table 3. Data-quality Procedures and Evidence Available in the Original Classroom Records

| Quality Dimension | Procedure | Evidence Available | Interpretive Decision |
|----------------------|---|--|--|
| Content alignment | SKI test and lesson tasks focused on the selected Ayyubid content and stated learning objectives. | Lesson plan, test scores, and cycle documentation. | Appropriate for measuring topic-specific classroom progress. |
| Comparability | Same class size and KKTP (≥ 70) used at pre-cycle, Cycle I, and Cycle II. | N = 22 retained in all outcome summaries. | Means and mastery percentages can be compared across phases. |
| Process credibility | Student activity and teacher implementation observed during both intervention cycles. | Parallel cycle percentages and reflection notes. | Supports explanation of how improvement occurred. |
| Triangulation | Achievement, observation, interview/reflection, and documentation interpreted together. | Convergent quantitative and process evidence. | Strengthens descriptive validity. |
| Reliability boundary | No item-level or paired-rater dataset was retained. | No alpha or inter-rater coefficient is available. | Psychometric reliability is not claimed. |

RESULTS AND DISCUSSION

Results

Baseline Conditions and Pre-cycle Achievement

The pre-cycle confirmed the classroom problem. SKI instruction was dominated by teacher explanation, while students showed limited initiative in questioning, seeking evidence, responding to peers, and presenting conclusions. The baseline mean score was 58.45, below the KKTP of 70. Nine of the 22 students reached the criterion, resulting in classical mastery of 40.90%; 13 students, or 59.09%, remained below the criterion. The result indicates that the challenge involved both achievement and access to participatory learning processes. Students were not yet being positioned consistently as interpreters of historical material.

Implementation Fidelity and Student Participation Across Cycles

Cycle I introduced guided Discovery Learning but did not immediately produce a fully stable classroom process. Students responded to the initial stimulus and participated in group discussion, yet many remained hesitant to formulate problems, distribute group roles, respond to peers, or present an evidence-based conclusion. Teacher implementation reached 68.18%, indicating that several components of the six-phase sequence were present but not consistently enacted. Student activity reached 62.21%, suggesting emerging participation but insufficient engagement to make group inquiry fully productive.

Cycle II was designed directly from this reflection. The teacher used more explicit problem prompts, clarified expected outputs, monitored group progress, reinforced the verification stage, and guided students in formulating conclusions. Teacher implementation increased to 90.90%, a gain of 22.72 percentage points. Student activity increased to 79.09%, a gain of 16.88 percentage points. The parallel movement of these indicators is important: greater student activity followed a clearer and more consistently enacted support structure, rather than a reduction of teacher involvement.

Table 4. Process Indicators Across Intervention Cycles

| Indicator | Cycle I | Cycle II | Change |
|------------------------|---------|----------|--------------------------|
| Student activity | 62.21% | 79.09% | +16.88 percentage points |
| Teacher implementation | 68.18% | 90.90% | +22.72 percentage points |

Learning Outcome Improvement and Classical Mastery

Achievement data show a modest initial increase in Cycle I and a substantial improvement after the Cycle II refinements. The mean score increased by 3.97 points from the pre-cycle to Cycle I, then by 18.48 points from Cycle I to Cycle II. The total gain from baseline to Cycle II was 22.45 points. Classical mastery increased only 4.55 percentage points in Cycle I, from 40.90% to 45.45%, which was below the 80% action-success threshold. In Cycle II, classical mastery rose to 86.36%, an increase of 40.91 percentage points from Cycle I and 45.46 percentage points from the baseline. Nineteen students reached the KKTP; only three remained below it. Consequently, H1 was supported at the classroom level.

Table 5. Student Learning Outcomes Across Classroom Action Research Phases

| Phase | Mean score | Change from baseline | Students reaching KKTP | Classical mastery | Students below KKTP | Decision |
|-----------|------------|----------------------|------------------------|-------------------|---------------------|------------------------|
| Pre-cycle | 58.45 | - | 9 | 40.90% | 13 | Baseline: not achieved |
| Cycle I | 62.42 | +3.97 | 10 | 45.45% | 12 | Not achieved |
| Cycle II | 80.90 | +22.45 | 19 | 86.36% | 3 | Achieved |

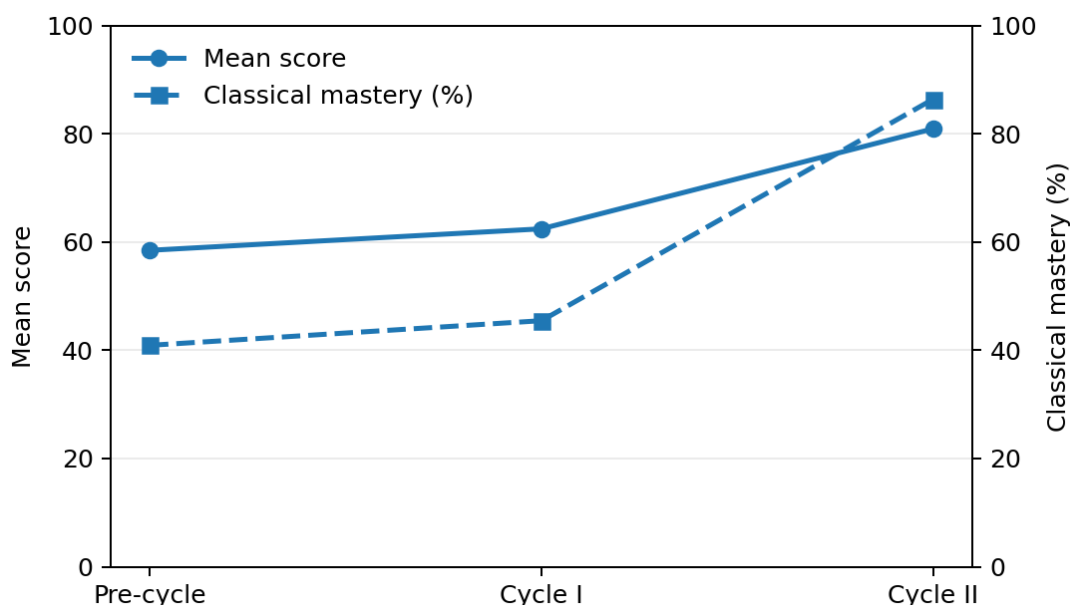


Figure 1. Mean Scores and Classical Mastery Across Classroom Action Research Phases Reflective Refinement of the Intervention

The transition from Cycle I to Cycle II was not a repetition of the same lesson. It was an evidence-informed refinement of instructional support. Cycle I showed that the presence of discovery syntax alone did not secure high participation or mastery. The Cycle II changes targeted the observed barriers: students needed more explicit prompts to identify problems, an accountable structure for group work, real-time teacher monitoring during information processing, and a clearer pathway for presenting and verifying conclusions. Table 6 shows the relationship between the Cycle I diagnosis and the Cycle II corrective action.

Table 6. Cycle I Reflection and Cycle II Corrective Actions

| Cycle I Diagnosis | Cycle II Corrective Action | Observed Process Implication |
|--|---|--|
| Students were hesitant to formulate questions and identify the central historical problem. | Use focused guiding questions and explicitly state the expected inquiry output. | Problem identification became more directed and purposeful. |
| Group work was uneven; some students depended on more vocal peers. | Clarify task roles, monitor group progress, and prompt each group to prepare a shared response. | Participation became more distributed during data collection and processing. |
| Presentations and peer responses were limited. | Provide presentation cues, verification questions, and feedback during class discussion. | Students had clearer routes to articulate and defend findings. |
| Time management and attention fluctuated during collaborative work. | Set phase-specific time limits and use frequent teacher check-ins. | The six discovery phases were implemented more consistently. |

Discussion

The findings show that guided Discovery Learning improved SKI learning outcomes only after the model was enacted as a well-scaffolded process. The rise in classical mastery from 40.90% at baseline to 86.36% in Cycle II, together with the increase in the mean score from 58.45 to 80.90, indicates a substantive shift in the classroom rather than a marginal score variation. Yet the small change from the pre-cycle to Cycle I is analytically just as important as the final gain. It demonstrates that the adoption of learner-centred syntax alone does not automatically produce successful inquiry. Students who are accustomed to teacher-led instruction require explicit cognitive and social supports for asking questions, sorting evidence, communicating interpretations, and reaching a generalisation. This pattern is consistent with the argument that minimally guided discovery can overload novice learners and with meta-analytic evidence that inquiry becomes more effective when adequate guidance is available [10], [11], [12], [13], [14], [15], [16], [17].

The paired improvement in teacher implementation and student activity offers a practical explanation for the Cycle II outcome. Teacher implementation rose by 22.72 percentage points, while student activity rose by 16.88 percentage points. This alignment suggests that the instructional mechanism was not teacher withdrawal, but teacher re-positioning: the teacher became a designer of prompts, a monitor of collaboration, and a facilitator of verification. Such an arrangement is compatible with active-learning research showing that performance is enhanced when students actively process ideas and receive feedback, rather than passively receive explanation [18], [19], [20], [21]. It is also coherent with the ICAP framework, which distinguishes active and constructive engagement from merely behavioural activity [22]. In the present study, the critical shift occurred when students were required to formulate, discuss, verify, and conclude, while the teacher supplied the structure necessary for those actions to be productive.

The result also aligns with social and motivational explanations of learning. The more stable Cycle II sequence created repeated opportunities for students to exercise autonomy within a bounded task, coordinate with peers, and receive competence-supportive feedback. These conditions are theoretically consistent with self-determination and self-regulated learning perspectives [24], [25], [26]. The group work element should not be interpreted simply as students sitting together; its function was to create social interdependence around a common historical inquiry task. The clearer division of responsibilities and shared presentation expectations in Cycle II likely reduced the possibility that only a few students would carry the cognitive work, a conclusion that accords with cooperative-learning research [28].

For SKI specifically, the intervention changed the learning orientation from memorising a sequence of historical facts to making an interpretation from information. The Ayyubid topic provided a meaningful context in which students could examine leadership, unity, conflict, strategy, and the contribution of Salahuddin al-Ayyubi to Islamic civilisation. This is educationally significant because historical understanding is strengthened when learners assess evidence, connect causation and consequence, and defend interpretations [29], [30]. The result is also consonant with Indonesian research that identifies analysis of Islamic values, Discovery Learning, and richer SKI teaching materials as important ways to overcome the passivity and factual overload often associated with the subject [31], [32], [33], [34], [35], [36].

The study contributes a context-specific novelty to this literature. First, it treats equitable learning opportunity as an observable classroom condition, represented by students' access to problem formulation, evidence collection, group interaction, presentation, and conclusion-making. Equity is therefore approached not as a general aspiration but as a design feature of the lesson. Second, it makes implementation fidelity visible: the sharp improvement did not follow discovery activity in the abstract, but discovery activity strengthened through a cycle of diagnosis and corrective scaffolding. Third, it connects a rural Islamic junior secondary school setting to a broader education-and-social-welfare concern: the quality of pedagogical interaction is itself a form of student support. A classroom that systematically distributes opportunities to speak, reason, and demonstrate understanding can reduce the exclusionary effects of habitual passivity, especially for students who do not thrive in lecture-dominated instruction [1], [2], [3], [4].

The implications are practical. SKI teachers should not implement Discovery Learning as an unguided demand that students “find” content by themselves. Lesson planning should identify the historical problem, prepare sources or information prompts, specify group roles, and allocate time for verification and generalisation. Teacher professional development can use the Cycle I-to-Cycle II contrast as a diagnostic lens: when participation is low, the remedy may lie in clearer prompts, more accountable collaboration, or stronger formative feedback rather than in abandoning inquiry. For school leaders and curriculum coordinators, the findings support an education-systems approach in which pedagogical quality, teacher capacity, and students' psychosocial opportunity to participate are mutually reinforcing. Such an approach is aligned with the journal's concern for evidence-informed educational services and equitable learning opportunities across diverse socio-cultural contexts.

The conclusion should nevertheless be proportional to the evidence. The present data demonstrate improvement in one intact class over two cycles; they do not establish that Discovery Learning will produce the same effect in all schools, all grades, or all SKI topics. The design does, however, provide a credible classroom-level explanation of how an intervention was refined, why the first cycle was insufficient, and how a more structured second cycle was associated with higher participation and mastery. That explanatory pathway is valuable for teachers working with similar classroom conditions.

CONCLUSION

Guided Discovery Learning improved participation and achievement in Grade VIII/C SKI learning at Miftahul Ulum Singkut 4 Islamic Junior Secondary School. Across two action-research cycles, student activity increased from 62.21% to 79.09%, teacher implementation increased from 68.18% to 90.90%, the mean score increased from 58.45 to 80.90, and classical mastery increased from 40.90% to 86.36%. The classroom action hypothesis was therefore supported. The central conclusion is not that discovery works without teacher direction, but that discovery becomes educationally productive when teachers provide deliberate scaffolding for questioning, evidence processing, collaboration, verification, and historical generalisation. The study advances an equitable-learning interpretation of SKI pedagogy by showing that students' opportunities to participate in meaning-making are inseparable from their opportunities to demonstrate achievement. For practice, the findings recommend structured

inquiry routines and reflective teacher adaptation as feasible strategies for strengthening learning opportunities in rural madrasah settings.

LIMITATIONS

This study was conducted in one class of 22 students and concentrated on a specific SKI topic. Its findings should therefore be interpreted as evidence of classroom improvement rather than generalisable causal proof. The study did not include a comparison group, a delayed retention test, item-level test data, gender-disaggregated outcomes, or paired observer ratings; consequently, inferential effect estimates, psychometric reliability coefficients, and subgroup comparisons are not reported. The observed improvement may also reflect the cumulative effects of familiarity with classroom routines, teacher attention, and the short-term action-research cycle. Future research should examine guided Discovery Learning across multiple madrasahs, use validated participation measures, test retention, include comparison conditions where feasible, and explore whether participation and achievement effects differ across gender, prior attainment, and socio-economic background.

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AUTHOR CONTRIBUTION

S.P. and N.S. jointly conceptualized the study, developed the classroom action research design, coordinated the intervention with the classroom teacher, collected and analysed the data, interpreted the findings, and prepared the manuscript. Both authors reviewed and approved the final version of the manuscript and accept responsibility for all aspects of the work.

CONFLICT OF INTEREST

"The authors declare no conflict of interest."

DECLARATION OF USE OF AI IN SCIENTIFIC WRITING

The author used ChatGPT to support language refinement, manuscript organisation, and editorial consistency. The author reviewed and edited the resulting text and accepts full responsibility for the accuracy, integrity, and final content of the manuscript.

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