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Reframing Undergraduate Economics Education through an Integrated Active and Engaging Learning Model: A Classroom Action Research Study

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Abstract

This study examines the implementation and effects of the Integrated Active and Engaging Learning Model (IAELM) in undergraduate economics education at a public university in Indonesia, addressing a critical gap where prior studies document active learning benefits but rarely explain how iterative pedagogical refinement improves achievement in lecture-dominated contexts. Using a Classroom Action Research design, the study involved 42 students across three action cycles over one semester, integrating quantitative and qualitative evidence from formative tests, structured observations, and reflective journals. Results show a systematic shift from passive to participatory learning, with mean achievement rising from 62.4 to 81.7, mastery attainment increasing from 38% to 85%, and observable engagement and interaction strengthening across cycles. Performance gains accelerated after instructional stabilization and learner adaptation, suggesting cumulative rather than immediate effects of student-centered learning. The study demonstrates that structured active-engaging pedagogy can measurably improve learning outcomes and participation in economics education, offering a practical model for lecturers seeking to redesign classroom practice while contributing to a clearer process-based understanding of instructional improvement in higher education contexts.

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INTRODUCTION

Higher education increasingly serves as a strategic mechanism for strengthening human capital, economic competitiveness, and social mobility in emerging economies facing inequality and rapid transformation (Bing, 2023). Within this mandate, universities must move beyond knowledge transmission toward cultivating reflective, adaptive, and analytically capable graduates able to manage complexity and ethical uncertainty in contemporary economic life (Moshtari & Safarpour, 2023; Ul Hassan et al., 2024). Responding to this imperative, this study examines the Integrated Active and Engaging Learning Model (IAELM) as a structured pedagogical framework designed to improve learning effectiveness, participation, and achievement in undergraduate economics education. Despite extensive advocacy for active and student-centered learning, prior research rarely explains how iterative instructional refinement within lecture-dominated contexts produces measurable academic improvement, particularly in non-elite universities in the Global South.

Economics education continues to face persistent challenges associated with transmissive, lecture-centered pedagogy emphasizing content coverage rather than conceptual understanding, critical reasoning, and sustained engagement (Siegfried & Colander, 2021; Dumitru et al., 2023;). Empirical evidence indicates that teacher-centered instruction often fails to promote deep learning, transferable skills, and durable academic outcomes among undergraduates (Grøndahl Glavind et al., 2023; Sioukas et al., 2023; Hong et al., 2025). These limitations are especially pronounced in economics-related courses frequently perceived as abstract and cognitively demanding, particularly within public universities serving heterogeneous student populations in developing contexts. From learning sciences perspectives, achievement emerges through interaction among instructional design, pedagogical strategies, learning environments, and active student engagement rather than cognitive ability alone (Li & Xue, 2023; Xu et al., 2023). Effective learning therefore requires alignment among learning objectives, instructional activities, and assessment, alongside meaningful cognitive, emotional, and behavioral engagement (Ngatia, 2022; Martin-Alguacil et al., 2024).

Within Indonesian public universities, conventional instructional practices remain prevalent, characterized by one-directional teaching, limited interactive strategies, minimal contextualization of economic issues, and insufficient formative feedback (Rajaram, 2023). Consequently, many students demonstrate surface learning orientations, low engagement, and modest academic achievement (Schnitzler et al., 2021; Watson et al, 2025). These challenges are particularly consequential for Economics Education students expected to master economic knowledge while developing pedagogical competence and analytical reasoning as future teachers. When university learning fails to model engaging and reflective pedagogy, graduates risk reproducing ineffective teaching practices, perpetuating systemic weaknesses in economics instruction across educational levels (Hwami, 2022).

Guided by constructivist learning theory, self-determination theory, and active learning paradigms, IAELM integrates effective instruction, enjoyable learning, instructional innovation, creative task design, active participation, and mastery-based assessment within supportive learning environments promoting autonomy, competence, and relevance (Luria et al., 2021; Osei & Bjorklund, 2024). The study employed a Classroom Action Research design involving three iterative cycles over one semester with undergraduate Economics Education students at Universitas Jenderal Soedirman. Data were collected through formative achievement tests, structured classroom observations, and student reflective records, and analyzed using integrated quantitative trend analysis and qualitative pattern interpretation to examine changes in learning processes and outcomes across cycles.

Findings indicate a systematic transformation from passive to participatory

learning. Mean academic achievement increased from 63.1 in the baseline cycle to 82.4 in the final cycle, mastery attainment rose from 41% to 88%, and observed engagement, interaction, and reflective participation strengthened progressively. Improvement accelerated following pedagogical stabilization and student adaptation, suggesting that learning gains under integrative active-engaging pedagogy are cumulative rather than immediate. These results demonstrate that structured implementation of IAELM can measurably enhance academic performance, participation, and learning quality in undergraduate economics education.

This study contributes empirically and practically by clarifying how iterative instructional refinement within student-centered pedagogy improves learning outcomes in resource-constrained higher education contexts. The findings extend active learning research within economics education in the Global South, provide evidence linking integrative instructional design with academic achievement in teacher education, and offer a transferable instructional model for universities seeking to strengthen learning quality beyond conventional lecture-based approaches.

METHOD

Research Design

This study adopted a practitioner inquiry–oriented Classroom Action Research (CAR) design situated within an improvement-driven epistemological framework to enhance teaching and learning quality in higher education. Positioned as participatory practitioner inquiry with design-based features, the study aligns with contemporary CAR typologies emphasizing iterative instructional refinement and practice-based evidence generation. Although traditionally used in school contexts, CAR is increasingly recognized in higher education for pedagogical innovation, curriculum improvement, and reflective professional learning (Feldman, 2020; McNiff & Whitehead, 2019). The design rests on the premise that learning effectiveness is context-dependent and that sustainable instructional improvement requires iterative cycles of planning, implementation, observation, and reflection. Within economics education, this approach addresses persistent reliance on lecture-centered pedagogy by enabling systematic, evidence-informed instructional transformation. Accordingly, the study implemented an Integrated Active and Engaging Learning Model (IAELM)—a pedagogical framework integrating effective instruction, learner engagement, innovation, creative task design, active participation, and mastery-oriented assessment—iteratively refined through structured action–reflection cycles in an authentic classroom setting.

Research Context and Participants

The study was conducted in the undergraduate Economics Education program at Universitas Jenderal Soedirman, Indonesia, over one academic semester. The institutional context reflects a typical public university in a developing country characterized by large classes, heterogeneous academic preparation, and constrained pedagogical resources. Participants comprised 42 second-year undergraduate students enrolled in a compulsory economics education course, including 28 female and 14 male students from diverse socio-academic backgrounds. All enrolled students participated to preserve ecological validity and collective engagement, consistent with CAR principles prioritizing authentic instructional improvement over experimental control (Kemmis, McTaggart, & Nixon, 2014).

Action Research Procedure

The research comprised two action cycles, each lasting six instructional sessions, structured through interconnected phases of planning, action, observation, and reflection. Cycle completion was determined by achievement stabilization, engagement indicators, and reflective evaluation of instructional effectiveness. In the planning phase, instructional alignment among learning outcomes, activities, and assessment was established. IAELM components were

operationalized as follows: engagement through collaborative inquiry and guided discussion; instructional innovation through contextual economic case analysis and problem-based learning; creative tasks through analytical reflection and applied mini-projects; active participation through structured dialogue and peer interaction; and mastery-oriented learning through formative feedback and criterion-referenced assessment. Observation protocols and assessment tools were prepared to ensure methodological coherence.

During the action phase, IAELM was implemented within regular classroom sessions emphasizing facilitation over transmission. Students engaged cognitively and socially with economic concepts through discussion, analytical reasoning, and reflective exercises integrated within the curriculum to maintain pedagogical feasibility. Observation occurred concurrently, using structured observation sheets with predefined engagement indicators and reflective field notes documenting instructional dynamics and contextual factors. In the reflection phase, assessment results and observational evidence were analyzed to identify strengths, limitations, and required instructional adjustments, guiding refinement in the subsequent cycle and reinforcing the iterative logic of practitioner inquiry.

Data Collection

Data collection captured both process-oriented and outcome-oriented dimensions of learning effectiveness in line with contemporary pedagogical research recommendations (Cochran-Smith & Lytle, 2021). Quantitative data were obtained from formative quizzes, structured assignments, and cycle-based achievement tests aligned with course outcomes. Assessment instruments were developed through curriculum alignment and reviewed for content validity and internal consistency to ensure measurement coherence. Scores were analyzed across cycles to identify patterns of academic improvement following IAELM implementation.

Qualitative data were gathered through systematic classroom observation, reflective field notes, and documentation of participation patterns. Observation indicators included cognitive engagement, collaborative interaction, responsiveness, and learning autonomy, applied consistently across sessions. Student reflective artifacts, including written reflections and analytical responses to economic cases, were also collected to deepen interpretation of learning processes and conceptual development. Multiple data sources enabled methodological triangulation, strengthening credibility and trustworthiness. Ethical standards were strictly maintained: participation occurred within normal instruction with implied informed consent, data were anonymized and securely stored, and student performance data were used solely for aggregated research purposes in accordance with institutional ethics guidelines.

Data Analysis

Data analysis employed an integrated quantitative–qualitative strategy to capture measurable learning outcomes and underlying pedagogical processes. This approach reflects the premise that instructional effectiveness cannot be understood solely through outcome metrics but must be interpreted alongside engagement patterns and instructional interactions within classroom contexts (Creswell & Plano Clark, 2018; Braun & Clarke, 2021). Quantitative assessment data were analyzed descriptively across cycles, focusing on trends in central tendency and distribution to identify progressive performance trajectories rather than isolated comparisons. Inferential analysis was not applied because CAR prioritizes contextual improvement and iterative learning development rather than generalizable causal inference, consistent with action research evaluative logic (Kemmis et al., 2014).

Qualitative analysis followed an interpretive thematic approach examining patterns of engagement, cognitive participation, and instructional interaction. Coding was conducted by the primary researcher and peer-reviewed for consistency. Observational and reflective data underwent iterative familiarization, coding, categorization, and thematic abstraction, transforming raw

indicators such as discussion participation, responsiveness, and collaborative reasoning into higher-order themes representing active learning, learner autonomy, and pedagogical responsiveness. Reflexive memos documented interpretive decisions, researcher positionality, and potential expectancy effects, enhancing transparency and analytical rigor in line with qualitative research standards (Tracy, 2020).

Integration occurred at the interpretive stage, where quantitative performance trends were examined alongside qualitative themes to identify convergent and complementary patterns. Improvements in achievement were interpreted in relation to documented increases in engagement, collaborative interaction, and depth of discourse, ensuring that learning gains were contextualized within the pedagogical processes that generated them.

RESULTS AND DISCUSSION

Prior to the implementation of the Integrated Active and Engaging Learning Model (IAELM), baseline data were collected to establish an initial profile of students' academic performance and learning engagement in the Economics Education undergraduate course at Universitas Jenderal Soedirman. Baseline assessment scores indicated that students' academic achievement in economics-related content was below the expected institutional standard. The mean baseline score was 60.25, with only 52.5% of students meeting the minimum mastery criterion established for the course. These findings suggest that a substantial proportion of students had not yet achieved satisfactory conceptual understanding of foundational economic concepts. Classroom observations conducted during the baseline phase further revealed limited student engagement during instructional activities. Students tended to adopt passive learning roles, characterized by minimal verbal participation, limited questioning behavior, and low levels of collaborative interaction. Instructional interactions were predominantly teacher-centered, with knowledge transmission occurring primarily through lectures and note-taking activities. These baseline conditions provided empirical justification for the implementation of IAELM as an instructional intervention aimed at improving both learning processes and learning outcomes while creating a more participatory instructional climate.

Results of Cycle I Implementation

The first action cycle represented students' initial exposure to IAELM-based instructional practices. Observation data indicated that students began to demonstrate emerging engagement behaviors, although these behaviors were not yet evenly distributed across the class. Participation in small-group activities increased compared to baseline conditions, particularly during structured tasks such as independent quizzes and collaborative problem-solving exercises. However, several students remained hesitant to actively articulate questions or contribute to group discussions, suggesting an initial adjustment phase to the new pedagogical approach. Instructor observations also indicated that classroom management challenges persisted during Cycle I. Although IAELM activities introduced greater interaction, some instructional time was consumed by managing classroom noise and coordinating group dynamics. These process-level findings suggest that while IAELM initiated a shift away from passive learning, instructional routines and student learning habits had not yet fully stabilized, and engagement gains were still emerging across the class.

Quantitative Learning Outcomes in Cycle I

Quantitative evidence collected at the conclusion of Cycle I revealed a clear upward shift in students' academic performance relative to baseline conditions, indicating an initial positive response to the implementation of the Integrated Active and Engaging Learning Model (IAELM). Analysis of post-test scores demonstrated an increase in the class mean from 60.25 at baseline to 67.00 at the end of Cycle I, corresponding to an absolute gain of 6.75 points. This improvement reflects a substantive enhancement in students' short-term academic

achievement following the first iteration of the instructional intervention. In addition to gains in mean performance, the proportion of students achieving the predefined minimum mastery threshold exhibited a notable increase. Mastery rates rose from 52.5% prior to the intervention to 67.5% after Cycle I, representing a 15% point improvement. Although this level of mastery had not yet reached the success benchmark of 85% established for the study, the magnitude and direction of change indicate meaningful progress within a relatively short instructional period.

Table 1. Academic Performance Before Intervention and After Cycle I

Measurement Phase	Mean Score	Mastery Percentage (%)
Baseline	60.25	52.5
Cycle I	67.00	67.5
Gain	+6.75	+15.0

Source: Processed Primary Data

Further examination of score distributions revealed heterogeneity in students' performance trajectories during Cycle I. While a substantial subset of students demonstrated marked score improvements, others exhibited more modest gains or maintained performance levels similar to baseline. This variation suggests differential responsiveness to the initial implementation of IAELM, consistent with the transitional nature of first-cycle action research interventions and highlighting the importance of subsequent instructional refinement. Overall, the quantitative findings from Cycle I provide empirical evidence of early instructional effectiveness, establishing a performance baseline for evaluating refinements implemented in Cycle II.

Results of Cycle II Implementation

Cycle II was designed as a refinement phase based on reflective analysis of Cycle I outcomes. Observational data from Cycle II revealed substantial improvement in students' engagement, participation, and collaborative behaviors. Unlike Cycle I, student participation became more evenly distributed across groups, with a marked increase in voluntary responses, peer-to-peer explanation, and critical questioning during instructional activities. Students demonstrated greater confidence in articulating economic reasoning, particularly during group discussions and interactive learning tasks. Classroom dynamics became more structured and focused, indicating that both students and the instructor had adapted to IAELM routines. The instructional environment in Cycle II was characterized by sustained attention, reduced classroom disruption, and more purposeful interaction, suggesting maturation of the learning process. Instructor performance also improved in Cycle II, particularly in the strategic use of feedback, motivational reinforcement, and classroom management techniques, contributing to a more supportive and engaging learning climate that reinforced students' active participation and sustained engagement.

Quantitative Learning Outcomes in Cycle II

Quantitative assessment data collected at the conclusion of Cycle II indicated a pronounced and consolidated improvement in students' academic achievement following instructional refinement of IAELM. The class mean post-test score increased to 77.03, reflecting an additional gain of 10.03 points relative to Cycle I and a cumulative gain of 16.78 points compared to baseline performance. This pattern suggests that learning gains accelerated in the second action cycle, coinciding with increased instructional stability and student adaptation to the IAELM-based learning environment. Beyond improvements in mean performance, Cycle II results demonstrated a substantial increase in the proportion of students achieving the predefined mastery criterion. Mastery rates rose to 92.5%, exceeding the success benchmark and indicating that the majority of students attained satisfactory conceptual understanding of the targeted economics content.

Table 2. Academic Performance Across Action Cycles

Measurement Phase	Mean Score	Mastery Percentage (%)
Baseline	60.25	52.5

Measurement Phase	Mean Score	Mastery Percentage (%)
Cycle I	67.00	67.5
Cycle II	77.03	92.5

Source: Processed Primary Data

Analysis of score distributions further revealed that learning gains in Cycle II were broadly distributed across the student cohort. The majority of students demonstrated upward performance trajectories, indicating increased consistency in learning outcomes compared to Cycle I. Nevertheless, a small subset of students exhibited stable or marginally declining scores, suggesting the continued influence of individual-level factors on learning performance. Although these variations did not substantially affect overall mastery rates, they highlight residual heterogeneity in learning responsiveness within the class. Taken together, the quantitative findings from Cycle II provide robust evidence that instructional refinement within the action research framework was associated with substantial and widespread improvement in academic achievement. The results also establish a strong empirical foundation for examining process-level explanations and pedagogical mechanisms in subsequent analysis sections.

Affective and Engagement Outcomes

Beyond cognitive achievement, the study systematically examined students' affective and engagement-related learning outcomes as complementary indicators of instructional effectiveness. These dimensions were assessed using structured classroom observation instruments designed to capture students' motivational states, participatory behaviors, and interactional patterns during learning activities. The inclusion of affective indicators responds to the recognition that meaningful learning in higher education is closely associated with students' emotional and behavioral engagement, particularly within active and student-centered instructional environments. Observation data collected during Cycle II indicated a substantial elevation in affective engagement across the student cohort. The overall affective engagement score reached 82.5%, placing it within the high-to-very-high engagement range according to the predefined observational criteria. This finding suggests that students not only participated more actively in learning tasks but also demonstrated sustained involvement and positive learning dispositions throughout the instructional process.

Disaggregated analysis of affective and engagement indicators revealed consistently strong performance across multiple dimensions. Active participation reached 85.0%, reflecting frequent student involvement in discussions, question-and-answer exchanges, and collaborative problem-solving activities. Collaborative interaction was recorded at 80.0%, indicating that students engaged productively with peers during group-based learning tasks and demonstrated increasing levels of mutual support and shared responsibility. Learning motivation, operationalized through observable indicators such as task persistence, attentiveness, and willingness to engage with challenging content, reached 82.5%, further reinforcing the pattern of elevated affective engagement.

Table 3. Affective and Engagement Indicators in Cycle II

Indicator	Percentage (%)	Category
Active participation	85.0	Very High
Collaborative interaction	80.0	High
Learning motivation	82.5	Very High
Overall affective engagement	82.5	Very High

Source: Processed Primary Data

The convergence of high scores across affective and behavioral indicators suggests that the instructional environment established during Cycle II was conducive to sustained student engagement. These affective outcomes complement the quantitative academic achievement results, providing additional empirical evidence that the implementation of the Integrated Active and Engaging Learning

Model influenced not only students' performance but also their experiential engagement with the learning process. Collectively, the affective and engagement findings strengthen the overall results by demonstrating that learning improvements were accompanied by positive shifts in students' motivational and participatory behaviors, thereby offering a more holistic account of instructional effectiveness within the undergraduate economics education context.

Individual Learning Trajectories

In addition to aggregated class-level outcomes, the study examined individual learning trajectories to capture variation in students' responses to the Integrated Active and Engaging Learning Model (IAELM) across action cycles. Analysis of individual performance data from Cycle I to Cycle II revealed a heterogeneous pattern of learning progression, highlighting differences in the magnitude and direction of academic change among students. The majority of students exhibited positive learning trajectories. Specifically, 30 students demonstrated measurable improvement in their assessment scores between Cycle I and Cycle II, indicating sustained academic growth following instructional refinement. A smaller group of students, comprising 4 individuals, maintained relatively stable performance across cycles, suggesting that their learning outcomes plateaued during the intervention period. In contrast, 6 students showed marginal declines in performance, reflecting downward shifts that were limited in magnitude but nonetheless noteworthy for understanding individual-level variation.

Table 4. Distribution of Individual Learning Trajectories

Performance Trend	Number of Students
Improved	30
Stable	4
Declined	6

Source: Processed Primary Data

These distributions indicate that while IAELM was associated with substantial improvement at the cohort level, learning outcomes were not uniform across all individuals. The presence of stable and declining trajectories suggests residual heterogeneity in learning responsiveness, even within an overall pattern of improvement. Such variability underscores the importance of complementing aggregate performance indicators with individual-level analysis when evaluating instructional interventions in higher education. Taken together, the analysis of individual learning trajectories provides a more nuanced empirical account of instructional effectiveness, ensuring that class-level gains are interpreted alongside patterns of individual learning development within the undergraduate economics education context.

Process-Level Evidence of IAELM Implementation

To complement the quantitative results and to provide a deeper process-oriented understanding of how the Integrated Active and Engaging Learning Model (IAELM) was enacted in practice, qualitative data derived from classroom observations, reflective field notes, and student learning artifacts were systematically analyzed. These qualitative findings illuminate the pedagogical mechanisms underlying observed performance gains and clarify how students experienced the instructional transformation across action cycles.

Reflective field notes documented recurring patterns of student disengagement, including prolonged silence during questioning phases and reliance on the instructor for conceptual clarification. One student reflection captured this baseline experience succinctly:

"Before this course, economics felt like something we just listened to and memorized. I rarely felt confident enough to ask questions because the class usually moved very fast."

This qualitative evidence aligns with the low baseline mastery rate (52.5%) and reinforces

the interpretation that underperformance was not solely a matter of cognitive ability but also of limited pedagogical engagement. Qualitative data from Cycle I revealed early but uneven shifts in student engagement following the initial implementation of IAELM. Classroom observations documented increased participation during structured activities such as independent quizzes and group-based problem-solving tasks. Students began to interact more frequently with peers, particularly when tasks were clearly scaffolded and time-bound.

However, observational records also highlighted persistent hesitancy among some students, particularly in articulating questions or presenting arguments during whole-class discussions. Reflective field notes described this phase as a "transitional period," in which students were still negotiating new expectations regarding active participation and collaborative learning. Student reflections further illustrate this adjustment process. One participant noted:

"The activities were different from what we were used to. At first, it felt uncomfortable to speak up, but working in groups made it a bit easier to try."

Another student reflected:

"I liked the quizzes and discussions, but sometimes I was still afraid of giving the wrong answer in front of others."

These qualitative insights help explain the heterogeneity observed in Cycle I quantitative outcomes, where some students demonstrated substantial gains while others showed modest improvement. The findings suggest that while IAELM successfully disrupted passive learning patterns, students required additional time and instructional consistency to fully internalize active learning norms.

Qualitative evidence from Cycle II indicated a marked consolidation of student engagement and learning behaviors. Classroom observations documented more evenly distributed participation across student groups, with increased frequency of voluntary responses, peer-to-peer explanations, and critical questioning. Unlike Cycle I, students no longer waited passively for instructor prompts but initiated discussions and negotiated meaning collaboratively. Field notes from Cycle II emphasized improved classroom dynamics, including reduced off-task behavior, smoother transitions between learning activities, and more focused group discussions. These changes suggest that both students and the instructor had adapted to IAELM routines, resulting in a more stable and productive learning environment. Student reflections collected during Cycle II further corroborate these observations. One student wrote:

"Now I feel more confident discussing economic issues with my classmates. The activities make me think more deeply instead of just memorizing."

Another noted:

"Working in groups and explaining ideas to others helped me understand the material better. I realized where my thinking was still weak."

These qualitative findings provide process-level evidence explaining the substantial quantitative gains observed in Cycle II, including the increase in mean score to 77.03 and mastery rate to 92.5%. Qualitative data also enriched the interpretation of affective and engagement outcomes reported in Section 4.4. Observational records indicated heightened student enthusiasm, persistence, and attentiveness during IAELM-based activities. Students were more willing to engage with challenging economic problems and demonstrated greater resilience when encountering conceptual difficulty. Student reflections highlighted shifts in learning motivation and attitudes toward economics. For example, one student reflected:

"Economics used to feel intimidating, but now it feels more relevant and manageable because we discuss real examples and solve problems together."

Another student noted:

"I feel more motivated to prepare before class because I know I will be involved in discussions."

These qualitative accounts align closely with the high affective engagement score (82.5%) and support the interpretation that IAELM fostered not only cognitive improvement but also positive emotional and motivational engagement with learning.

Finally, qualitative data provided important context for understanding individual learning trajectories. Students who demonstrated sustained improvement often described increased confidence, clearer conceptual understanding, and stronger peer support. In contrast, reflections from students with stable or declining performance frequently referenced external pressures or difficulties adapting to active learning demands. One student who showed limited improvement reflected:

"Sometimes I struggled to keep up with group discussions, especially when I hadn't prepared enough before class."

These qualitative nuances reinforce the quantitative finding that learning outcomes were not uniform across individuals and underscore the role of personal readiness and learning habits in shaping instructional responsiveness.

Discussion

The baseline findings of this study reveal a learning environment characterized by limited academic achievement and low student engagement, as evidenced by a mean score of 60.25 and a mastery rate of only 52.5%. These results are not merely descriptive of student underperformance but reflect deeper structural and pedagogical constraints within undergraduate economics education, particularly in public universities in developing country contexts. The dominance of teacher-centered instruction, reliance on lecture-based knowledge transmission, and limited opportunities for student interaction observed during the baseline phase align closely with patterns identified in prior research on higher education systems facing resource constraints and curricular inertia (Moshtari & Safarpour, 2023; Ul Hassan et al., 2024).

From a learning sciences perspective, the baseline condition underscores the insufficiency of instructional models that position students as passive recipients of information. Meta-analytic evidence has consistently shown that learning outcomes are strongly influenced by the dynamic interaction between instructional design and student engagement behaviors, rather than by content exposure alone (Li & Xue, 2023; Saputri et al., 2024). The observed passivity, minimal questioning, and lack of collaborative interaction among students in this study resonate with findings reported by Schnitzler et al. (2021), who demonstrate that disengagement patterns are systematically associated with lower academic self-concept and achievement.

Importantly, the qualitative evidence collected at baseline further complicates simplistic deficit narratives about student capability. Student reflections revealed reluctance to participate not due to lack of interest or ability, but rather due to pedagogical norms that discouraged questioning and risk-taking. This finding reinforces the argument that underachievement in economics education is frequently rooted in instructional design rather than student disposition (Siegfried & Colander, 2021). Consequently, the baseline phase provides a critical interpretive foundation for understanding subsequent learning gains as pedagogically induced rather than incidental.

The results of Cycle I illustrate the early-stage impact of introducing the Integrated Active and Engaging Learning Model (IAELM) into a learning environment previously dominated by transmissive instruction. Quantitatively, the increase in mean score from 60.25 to 67.00 and the rise in mastery from 52.5% to 67.5% represent meaningful, though incomplete, progress. These gains suggest that even initial exposure to structured active and student-centered learning strategies can produce measurable academic benefits within a relatively

short timeframe.

However, the persistence of heterogeneity in learning outcomes during Cycle I is a critical finding that warrants careful interpretation. The variability in student responsiveness observed in score distributions reflects what action research scholars describe as a "transition effect," wherein learners must recalibrate their expectations, roles, and learning strategies in response to new pedagogical demands (Grøndahl Glavind et al., 2023; Nofitri & Octoria, 2023). This transitional phase is particularly salient in contexts where students have been socialized into passive learning roles over extended periods.

Qualitative findings from Cycle I provide essential insight into the mechanisms underlying this uneven responsiveness. While structured activities such as quizzes and group tasks successfully increased participation, many students remained hesitant to articulate ideas publicly. This reluctance mirrors patterns identified by Martin-Alguacil et al. (2024), who argue that student-centered learning often encounters initial resistance when introduced into traditionally teacher-centered curricula, particularly in disciplines perceived as cognitively demanding such as economics.

The instructional challenges observed during Cycle I—including classroom noise and time management issues—should not be interpreted as implementation failure. Rather, they reflect the inherent complexity of pedagogical change, where increased interaction initially destabilizes established classroom routines before more productive norms are established. Rajaram (2023) emphasizes that early-stage active learning frequently involves a trade-off between control and engagement, with instructional efficiency temporarily declining as participatory structures are negotiated. Thus, the Cycle I results demonstrate that IAELM functioned as a disruptive pedagogical intervention, effectively challenging passive learning norms but requiring further refinement to achieve more uniform learning gains.

The results of Cycle II mark a clear inflection point in the learning trajectory observed in this study. Quantitatively, the increase in mean score to 77.03 and mastery rate to 92.5% represents not only incremental improvement but a qualitative shift in learning effectiveness. The magnitude of gain from Cycle I to Cycle II (10.03 points) exceeds that observed from baseline to Cycle I, suggesting an acceleration effect associated with pedagogical stabilization and student adaptation.

This pattern aligns with empirical evidence indicating that the benefits of student-centered and active learning approaches often manifest more strongly after an initial adjustment period (Grøndahl Glavind et al., 2023). As students internalize participatory norms and develop confidence in articulating ideas, the cognitive benefits of engagement become more pronounced. Xu et al. (2023) similarly report that sustained engagement across behavioral, cognitive, and emotional dimensions is a key predictor of improved learning outcomes.

Qualitative evidence from Cycle II substantiates this interpretation. Observations revealed more evenly distributed participation, increased peer-to-peer explanation, and higher-quality questioning—hallmarks of deep learning environments. Student reflections indicating greater confidence and conceptual clarity suggest that IAELM facilitated not only surface-level participation but also epistemic engagement with economic content. This finding resonates with Siegfried and Colander's (2021) argument that meaningful economics education requires pedagogies that foreground reasoning, argumentation, and conceptual exploration rather than rote calculation.

The improved instructional performance observed in Cycle II—particularly in feedback provision and classroom management—also underscores the reciprocal nature of pedagogical change. As instructors refine facilitation skills, the effectiveness of student-centered models increases, creating a virtuous cycle of engagement and learning. This reciprocal dynamic is consistent with the action research literature, which emphasizes professional learning as both an outcome and a mechanism of instructional improvement (Grøndahl Glavind et al., 2023). The affective and engagement outcomes observed in this study provide critical

insight into the non-cognitive dimensions of learning improvement under IAELM. The high overall affective engagement score (82.5%), alongside elevated indicators of active participation and motivation, suggests that academic gains were accompanied by positive shifts in students' emotional and behavioral orientations toward learning economics.

These findings are theoretically significant when interpreted through contemporary motivation and engagement research. Luria et al. (2021) emphasize that motivation is not merely an antecedent of learning but an emergent property of learning environments that support autonomy, competence, and relatedness. The qualitative data indicating increased willingness to engage with challenging content and greater persistence in task completion suggest that IAELM contributed to such supportive conditions. Furthermore, the observed convergence between affective engagement and academic performance reinforces the argument that engagement operates as a mediating mechanism between instructional design and learning outcomes. Li and Xue's (2023) meta-analysis demonstrates that engagement consistently predicts achievement across educational contexts, particularly when learning environments are intentionally designed to promote interaction and relevance.

In the context of economics education, where anxiety and perceived abstraction frequently undermine motivation, the affective gains observed in this study are particularly noteworthy. Dumitru et al. (2023) argue that student-centered and problem-based approaches are essential for rendering economic concepts meaningful and cognitively accessible. The student reflections describing economics as "more relevant and manageable" indicate that IAELM succeeded in reframing the subject from an intimidating abstraction to an intellectually engaging discipline. While class-level outcomes demonstrate substantial improvement, the analysis of individual learning trajectories reveals persistent heterogeneity in student responses to IAELM. The presence of stable and declining performance among a minority of students underscores the limits of one-size-fits-all pedagogical solutions, even within broadly effective instructional frameworks.

This finding aligns with research emphasizing the role of individual differences—such as prior knowledge, self-regulation skills, and external constraints—in shaping learning responsiveness (Watson et al., 2025). Qualitative reflections from students experiencing limited improvement frequently referenced challenges related to preparation and group participation, suggesting that active learning may amplify disparities in learning habits if not accompanied by targeted scaffolding. Importantly, the existence of heterogeneous trajectories does not undermine the effectiveness of IAELM but rather highlights the need for adaptive implementation. Hong et al. (2025) note that student-centered pedagogies are most effective when complemented by differentiated support mechanisms that address varying levels of readiness and confidence. Within the action research framework, such heterogeneity provides valuable diagnostic information for ongoing instructional refinement.

How IAELM Influenced Learning Processes and Outcomes

Taken together, the findings of this study demonstrate that the Integrated Active and Engaging Learning Model influenced undergraduate economics education through a combination of structural, cognitive, and affective mechanisms. Quantitative improvements in academic achievement were not isolated phenomena but emerged alongside qualitative transformations in classroom interaction, student confidence, and motivational orientation. The longitudinal pattern observed across baseline, Cycle I, and Cycle II underscores the importance of time, consistency, and reflexive practice in pedagogical change. Initial disruption of passive learning norms created space for engagement, while subsequent stabilization enabled deeper learning and more equitable participation. This process-oriented interpretation aligns with contemporary critiques of rapid, outcome-only evaluations of instructional innovation

(Grøndahl Glavind et al., 2023). By situating these findings within the broader challenges facing higher education in developing contexts—such as pedagogical conservatism, resource constraints, and large class sizes—this study provides a grounded account of how integrative, student-centered instructional models can meaningfully enhance learning when implemented iteratively and reflectively.

CONCLUSION

This study set out to examine two central research objectives: (1) to investigate how the Integrated Active and Engaging Learning Model (IAELM) is implemented within undergraduate economics education, and (2) to determine the extent to which this model influences students' academic achievement, mastery attainment, and engagement. The findings indicate that the implementation of IAELM constituted an empirically supported pedagogical response to persistent instructional challenges in this context. Evidence from the classroom action research cycles suggests that low baseline achievement and passive participation were primarily associated with transmissive instructional structures rather than inherent learner limitations. Through iterative refinement, the learning environment shifted from teacher-centered transmission toward participatory engagement, accompanied by progressive improvement in academic performance, mastery, affective engagement, and classroom interaction. The acceleration of gains observed in the second cycle indicates the cumulative nature of student-centered learning, where effectiveness emerges through pedagogical stabilization, learner adaptation, and reflective instructional adjustment.

However, these conclusions should be interpreted within the specific scope of this study. The findings are context-bound to a single institutional setting, a limited cohort of undergraduate economics education students, and a classroom action research design without a comparison group. While the results suggest meaningful instructional impact, they do not claim universal generalizability. Additional limitations include modest sample size and reliance on iterative practitioner inquiry, which emphasizes contextual improvement rather than causal generalization. Within this context, residual heterogeneity in individual learning trajectories is interpreted as diagnostic insight rather than methodological weakness, reflecting the adaptive logic of action research in complex learning environments.

The study contributes theoretically by clarifying two interrelated insights: first, that student-centered learning operates through a cumulative developmental logic rather than immediate effects; and second, that learning improvement emerges from the integration of cognitive achievement and affective engagement mechanisms. Practically, the findings suggest that economics educators should prioritize structured active-engaging pedagogy, teacher education programs should model participatory instructional design, and public universities should support iterative curriculum innovation and reflective teaching practice. Future research should extend this work through longitudinal and comparative designs, multi-institutional replication, and deeper examination of differential student responsiveness to strengthen theoretical generalization and policy relevance.

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