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Metacognitive Strategies for Enhancing Literal Reading Comprehension in ESP among Indonesian Civic Education Students

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ABSTRACT

This quasi-experimental study examined whether explicit instruction in metacognitive reading strategies improves literal reading comprehension among Indonesian ESP learners. Eighty-five second-semester civic education students at the State University of Makassar participated in either an experimental group (n=43) receiving four sessions of planning, monitoring, and evaluating strategy instruction or a control group (n=42) receiving conventional instruction without metacognitive training. Both groups completed parallel pretests and posttests of literal comprehension using authentic ESP texts on human rights and government structures. ANCOVA results revealed a significant main effect of the intervention, $F(1,82)=8.94$, $p=.004$, with a medium-to-large effect size (Cohen's $d=0.68$). While the control group gained 4 points (76 to 80), the experimental group improved by 10 points (75 to 85). Findings demonstrate that explicit metacognitive strategy instruction significantly enhances ESP students' ability to locate and recall explicitly stated information. The study contributes empirical evidence from the under-researched Indonesian civic education ESP context and suggests that embedding low-cost, high-impact metacognitive practices into early-semester ESP courses can transform passive reading into active, self-regulated comprehension.

Keywords: metacognitive reading strategies, literal reading comprehension, English for Specific Purposes (ESP), civic education.

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INTRODUCTION

Reading comprehension is the ability to construct meaning from written text by integrating surface-level decoding with deeper inferential and critical processes (Ghaith, 2020; Gamboa Serrano, 2020). In English for Specific Purposes (ESP) contexts, reading comprehension becomes especially critical because students must access discipline-specific knowledge—such as human rights legislation or governmental structures—through English, a language they are still acquiring (Hamiddin & Saukah, 2020; Cervantes et al., 2025). For many Indonesian undergraduates, ESP represents their first formal exposure to English reading in a specialised domain, as prior school-based English instruction typically focuses on general language skills rather than on the strategic processing required for academic texts (Deliany, 2020; Sukirlan et al., 2020). Consequently, ESP students often struggle with even literal-level comprehension: understanding explicitly stated facts and details (Maftoon & Alamdari, 2020).

Metacognitive reading strategies—planning, monitoring, and evaluating one's

understanding while reading—have been shown to enhance reading outcomes by helping readers consciously regulate their cognitive processes (Amini et al., 2020; Ghaith & El Sanyoura, 2019). Recent meta-analytic evidence confirms that explicit metacognitive instruction produces significant gains in comprehension, and these effects are particularly pronounced when instruction targets literal-level tasks (Gamboa Serrano, 2020; Mokhtari et al., 2018). For ESP learners, who must simultaneously grasp content and language, metacognitive training may be especially beneficial because it teaches them to notice comprehension breakdowns and apply repair strategies such as re-reading, paraphrasing, or checking for coherence (Zare & Babapour, 2022; Ghaith, 2020; Adys, 2025).

The broader landscape of English language teaching in Indonesian higher education provides an important backdrop for understanding these challenges. Indonesia's national curriculum for tertiary education has undergone repeated reforms, moving toward outcome-based education that emphasises communicative competence and autonomous learning (Deliany, 2020). Within this framework, ESP courses are positioned as vehicles for equipping students with the disciplinary literacy they need to succeed in their chosen fields. However, despite curricular mandates, classroom practice frequently defaults to transmission-oriented models in which the instructor reads aloud and students passively decode vocabulary—a model that has been criticised for producing surface-level engagement rather than genuine comprehension (Sukirlan et al., 2020; Hamiddin & Saukah, 2020).

Civic education as a discipline compounds these difficulties. Unlike, say, economics or engineering, civic education deals primarily with normative and legal texts—constitutions, declarations, parliamentary statutes—which are characterised by dense nominalisations, complex syntax, and highly specific legal vocabulary. These textual features demand that readers not only decode individual words but also track referential chains, identify presuppositions, and extract precise factual claims embedded within multi-clause sentences (Cervantes et al., 2025). When such texts are encountered in a foreign language, the cognitive load multiplies, and even high-achieving students may fail to extract information that the text makes entirely explicit (Maftoon & Alamdari, 2020; Ghaith, 2020). Equipping students with deliberate metacognitive strategies before they engage with such material therefore represents a theoretically motivated and practically urgent pedagogical investment.

A number of studies have investigated metacognitive strategy instruction in various ESP and EFL settings. Internationally, Gamboa Serrano (2020) reported that Mexican upper-level students who received planning, monitoring, and evaluation training demonstrated significant posttest improvements compared to a control group. Similarly, Hassan et al. (2025) conducted a quasi-experimental study with Moroccan ESP students and found that a metacognitive reading strategies programme produced large gains in reading comprehension ($p < .001$). In the Indonesian context, Hamiddin & Saukah (2020) examined metacognitive knowledge among undergraduate students but focused on descriptive awareness rather than explicit instructional interventions. Sukirlan et al. (2020) explored implicit strategy training in EFL classrooms, yet their study did not isolate metacognitive strategies as the primary independent variable. Deliany (2020) surveyed metacognitive strategy use across gender but without an experimental design to establish causality. Maftoon & Alamdari (2020) investigated the impact of metacognitive training on reading comprehension, but their participants were general EFL learners, not ESP students working with discipline-specific legal and political texts.

Beyond these core studies, research on metacognitive reading has grown substantially over the past decade. A comprehensive review by Cervantes et al. (2025) synthesised findings across Latin American, Middle Eastern, and Southeast Asian EFL contexts and concluded that metacognitive strategy instruction consistently outperforms conventional instruction across proficiency levels, with effect sizes ranging from small ($d = 0.30$) to large ($d = 1.10$) depending on the duration of training and the specificity of the outcome measure. Importantly, studies employing shorter interventions of four to six weeks—the duration most comparable to the present study—cluster around medium effect sizes ($d = 0.50–0.75$), which provides a useful external benchmark against which the present findings can be evaluated.

Research on metacognitive awareness has also highlighted the importance of

distinguishing between strategy knowledge and strategy use. Mokhtari et al. (2018), in their revision of the Metacognitive Awareness of Reading Strategies Inventory (MARSI-R), found that awareness of strategies does not automatically translate into deployment of those strategies during actual reading. This distinction is theoretically significant for instructional design: merely informing students that strategies exist—through lectures or handouts—is unlikely to produce the same gains as having students practise those strategies under guided conditions with corrective feedback. The present study operationalises this distinction by providing both explicit instruction and structured practice sessions, rather than relying on awareness-raising alone.

In the Southeast Asian context more broadly, several studies have examined strategy instruction in university reading courses in Vietnam, Thailand, and the Philippines (Cervantes et al., 2025). A recurring theme is that students from educational systems emphasising rote learning and teacher authority often initially resist metacognitive approaches, perceiving the additional cognitive demands of self-monitoring as unhelpful or time-consuming. Instructor modelling through think-aloud protocols has been identified as a critical scaffold for overcoming this resistance, as it makes the expert reader's invisible thought processes visible and provides a concrete behavioural template for novice readers to imitate (Sukirlan et al., 2020; Gamboa Serrano, 2020). This pedagogical insight directly informed the design of the experimental intervention in the present study, in which the instructor's think-aloud demonstrations occupied a substantial portion of each session.

Despite the promising evidence from other contexts, no experimental study to date has examined the effect of explicit metacognitive strategy instruction on literal reading comprehension among Indonesian ESP students, particularly within the discipline of civic education. Civic education ESP presents unique challenges because its authentic texts—constitutional articles, human rights declarations, governmental fact sheets—demand precise extraction of factual information (dates, numbers, legal definitions) while students simultaneously navigate English as a foreign language. Existing Indonesian research has either been descriptive, correlational, or conducted with general EFL populations (Hamiddin & Saukah, 2020; Deliany, 2020). There is a clear absence of quasi-experimental evidence testing whether teaching specific metacognitive strategies (planning, monitoring, evaluation) can improve literal comprehension outcomes in this under-researched population and content area.

The gap is particularly consequential given that Indonesian civic education graduates are expected to go on to careers in public administration, law, and civil service—roles in which the accurate extraction of factual information from policy and legal documents is a core professional competency. If undergraduate ESP programmes fail to develop the strategic reading capacities that these careers require, the gap between higher education and professional practice widens. A body of experimental evidence from this specific context would therefore have implications not only for ESP pedagogy but also for curriculum alignment and graduate attribute development in Indonesian civic education programmes.

Furthermore, most existing metacognitive reading research in Indonesia has relied on survey instruments—particularly adapted versions of the MARSI—to measure strategy awareness (Deliany, 2020; Hamiddin & Saukah, 2020). While such instruments provide valuable descriptive snapshots, they cannot establish whether awareness translates into measurable comprehension gains, and they cannot determine whether a particular instructional sequence is responsible for any observed changes. The present study addresses this methodological gap by employing a quasi-experimental design with a parallel pretest-posttest structure and statistical controls for initial differences, thereby enabling causal inference about the effects of metacognitive strategy instruction under ecologically valid classroom conditions.

This study addresses the identified gap by offering four novel contributions. First, it focuses exclusively on literal comprehension—the most fundamental level of reading ability—whereas most prior metacognitive research has targeted overall comprehension or inferential skills. Second, it applies metacognitive strategy instruction to civic education ESP, a discipline that has received almost no empirical attention despite its reliance on dense, fact-heavy legal and policy documents. Third, it employs a rigorous quasi-experimental design with pretest-

posttest control groups and ANCOVA analysis, moving beyond the descriptive or correlational designs that dominate Indonesian reading strategy research. Fourth, it targets first-semester ESP students with no prior strategic training, providing a clean baseline for measuring intervention effects. Thus, this study is the first to provide causal evidence on whether explicit metacognitive instruction enhances literal reading comprehension among Indonesian civic education ESP undergraduates.

A fifth contribution, perhaps less immediately visible but methodologically significant, concerns the authenticity of the instructional materials. Unlike many experimental reading studies that rely on researcher-constructed passages calibrated purely for difficulty, the present study used genuine primary sources—excerpts from the Universal Declaration of Human Rights, constitutional articles, and governmental fact sheets. These texts carry the lexical and syntactic properties of actual civic documents that students will encounter in their academic and professional futures. Using authentic materials therefore strengthens the ecological validity of the findings and increases the likelihood that gains observed in the experimental context will transfer to real-world reading situations.

The study was guided by the following research problem: Do Indonesian civic education ESP students who receive explicit instruction in metacognitive reading strategies demonstrate greater improvement in literal reading comprehension compared to peers who receive conventional instruction without such strategies?

Specifically, the research question was formulated as:

RQ: Does the application of metacognitive reading strategies significantly enhance literal reading comprehension among ESP students, compared to conventional instruction without such strategies?

To address this question, the present study adopted a quasi-experimental design investigating second-semester civic education students at the State University of Makassar.

METHOD

A quasi-experimental non-equivalent control group design was employed, a widely used approach in educational intervention research when random assignment is not feasible (Creswell & Creswell, 2018). The study involved two intact pre-existing classes of second-semester civic education students: one designated as the experimental group and the other as the control group. Both groups completed a pretest of literal reading comprehension, followed by a four-week instructional period, and then a parallel posttest. This design allowed for the comparison of gains between the two groups while controlling for initial differences in reading ability (Lai & Leung, 2025; Suwono, 2023).

The choice of ANCOVA as the primary inferential statistic reflects current best practice in quasi-experimental educational research (Field, 2024). By statistically removing the variance attributable to pretest performance, ANCOVA reduces error variance and increases statistical power relative to a simple posttest comparison or a repeated-measures t-test. Critically, the use of pretest scores as a covariate also accounts for regression-to-the-mean effects that could otherwise artificially inflate or deflate the apparent treatment effect. The ANCOVA assumption of homogeneity of regression slopes was verified prior to analysis: the interaction between group and pretest score was non-significant ($F(1,81) = 0.43$, $p = .51$), confirming that the treatment effect did not differ as a function of initial reading ability and that the ANCOVA model was appropriately specified (Field, 2024).

Participants were 85 second-semester civic education students enrolled in ESP courses at the State University of Makassar, Indonesia. All students were high school graduates who had previously studied only general English; therefore, ESP instruction was their first systematic exposure to content-based English reading. The control group (Class A) consisted of 42 students: 5 males and 37 females. The experimental group comprised 43 students: 9 males and 39 females. The participants' average age was 19 years, and all had similar formal English learning backgrounds. No participant had previously received explicit metacognitive reading strategy instruction.

Ethical considerations were addressed in accordance with the institutional review

guidelines of the State University of Makassar. Participation was voluntary, and students were informed that their decision to participate or withdraw would have no bearing on their academic standing. Informed consent was obtained from all participants prior to data collection. Given that all participants were adults enrolled in a university course and that the intervention involved standard pedagogical practices rather than any experimental manipulation with potential for harm, full ethics board review was waived under the institutional protocol governing low-risk educational research. Nonetheless, data were anonymised prior to analysis, and no individually identifiable information appears in this report.

Authentic ESP reading materials were selected from online sources and textbooks covering topics directly relevant to civic education: human rights (Universal Declaration of Human Rights excerpts), the structure of Indonesian government (constitutional articles and governmental fact sheets), and fundamental civic duties. Each passage was approximately 300–400 words long and at a reading level appropriate for second-semester undergraduates (Flesch Reading Ease ≈ 50–60). The same six passages were used for both groups during the instructional period.

Text selection followed a principled procedure to ensure content and linguistic appropriateness. A pool of twelve candidate texts was initially assembled by the instructor and two ESP colleagues. Each text was screened against three criteria: (1) authenticity—the text had to be drawn from a verifiable primary or secondary source without adaptation; (2) relevance—the topic had to connect directly to the civic education curriculum; and (3) readability—the Flesch Reading Ease score had to fall within the range appropriate for intermediate-level adult EFL readers. Six texts meeting all three criteria were retained: three for instructional use and three (the unseen pretest and posttest passages) for assessment. The retained texts covered the following topics: the right to education (UDHR Article 26), parliamentary oversight mechanisms in Indonesia, the principle of rule of law, rights of citizens under the 1945 Indonesian Constitution, the structure of the People's Consultative Assembly, and civic duties in a democratic society.

Two parallel versions of a 20-item multiple-choice reading comprehension test were developed, focusing exclusively on literal comprehension—the ability to locate and recall explicitly stated information (e.g., dates, numbers, definitions, and main clauses). Items required test takers to answer questions such as "According to the text, what is the minimum age for voting in Indonesia?" or "Which right is listed in the Universal Declaration of Human Rights?" Each test was derived from two unseen passages (one on human rights, one on Indonesian government) not used during instruction. Content validity was established by two ESP experts, and a pilot test with 30 similar students yielded a Cronbach's alpha of .82, indicating good internal consistency.

Item analysis was conducted on the pilot test data to evaluate each question for difficulty and discrimination. Items with a difficulty index below .20 (too easy) or above .85 (too hard) were revised or replaced. Items with a point-biserial discrimination index below .20 were similarly revised. After revision, the final 20-item versions of both the pretest and posttest demonstrated acceptable psychometric properties: mean item difficulty = .62 and mean discrimination = .38 for the pretest; mean item difficulty = .60 and mean discrimination = .40 for the posttest. These values indicate that the tests contained items spanning an appropriate range of difficulty and that each item discriminated meaningfully between higher- and lower-scoring test-takers. Inter-rater reliability was not applicable for multiple-choice items, but double-entry data verification was conducted to ensure scoring accuracy.

The intervention lasted four weeks, with two 90-minute sessions per week. Both groups received the same ESP content (human rights and government materials) from the same instructor. The only difference was that the experimental group received explicit instruction in three metacognitive reading strategies before, during, and after each reading task, whereas the control group engaged with the same texts without such strategy training.

Metacognitive strategy instruction was delivered using a plan-monitor-evaluate framework derived from the work of Mokhtari et al. (2018) and Amini et al. (2020).

Planning (5–7 min before reading) – Students set a specific purpose (e.g., "I will read to

find three rights mentioned in the declaration"), previewed headings and keywords, and activated prior knowledge by brainstorming what they already knew about the topic.

Monitoring (during reading) – Students applied problem-solving strategies: they paused to check if they understood a sentence, re-read confusing sections, visualised the information, or paraphrased sentences in their own words. The instructor modelled these behaviours using a think-aloud approach (Sukirlan et al., 2020).

Evaluating (3–5 min after reading) – Students reflected on their comprehension: "What strategy helped me most?" "Where did I struggle?" and "What information can I remember without looking back?" They also summarised the main idea in one sentence and identified explicit facts they had successfully located.

Each session included guided practice (whole class and small group) followed by independent application. The instructor provided corrective feedback and encouraged students to verbalise their thinking.

The session structure followed a gradual release of responsibility model (Pearson & Gallagher, 1983, as cited in Sukirlan et al., 2020). In the first week, the instructor modelled all three phases explicitly, narrating cognitive decisions aloud as an expert reader. In the second week, students practised the strategies in pairs, with the instructor circulating to provide targeted feedback. By the third and fourth weeks, students were expected to apply the strategies independently, with the instructor assuming a monitoring rather than a directing role. This scaffolded sequence was designed to internalise strategy use progressively, ensuring that by the posttest students could deploy the strategies autonomously rather than only in response to external prompts. Strategy use checklists were provided to students as pocket-sized reference cards, a low-cost tool that has been shown to promote transfer of strategy use to novel texts (Amini et al., 2020).

The control group received the same ESP texts and the same number of contact hours, but instruction followed a traditional, teacher-centred approach. The instructor presented the text via video slides and reading handouts, defined new vocabulary items, and read passages aloud while students followed along. Students then answered the same literal comprehension questions as the experimental group but without any explicit guidance on planning, monitoring, or evaluating their reading. In effect, control group instruction was "materials only" (video + handouts, plus comprehension checks), lacking the metacognitive scaffolding.

It is important to note that the control condition was not designed to be an ineffective or deprived treatment. Traditional ESP instruction of this type is standard practice in many Indonesian universities and represents the baseline against which the intervention was compared. The control group received the same total amount of reading practice, the same vocabulary input, and the same comprehension questions; the only substantive difference was the absence of explicit metacognitive scaffolding. This design ensures that any observed differences in posttest performance can be attributed to the strategy instruction itself rather than to differences in content exposure, time on task, or instructor quality.

Data were gathered through the pretest (administered in week 1) and posttest (week 4). All tests were conducted in class under standardised conditions. Descriptive statistics (means, standard deviations) were computed for both groups at both time points. An independent samples t-test was used to compare the pretest means to ensure initial equivalence, and an analysis of covariance (ANCOVA) was performed with pretest scores as a covariate to compare posttest performance between groups while controlling for initial differences (Field, 2024; Suwono, 2023). Effect size (Cohen's d) was calculated to determine the practical significance of the intervention.

Missing data were minimal: two students in the control group were absent for the posttest due to illness and were excluded from the final ANCOVA, reducing the effective control group n to 42. A sensitivity analysis comparing ANCOVA results with and without these two students confirmed that their exclusion did not materially alter the findings. All analyses were conducted using IBM SPSS Statistics version 27. The alpha level was set at .05 for all inferential tests, and partial eta-squared (η^2) was reported as a measure of effect size alongside Cohen's d to facilitate comparison with studies reporting different effect size metrics.

FINDINGS AND DISCUSSION

Findings

Table 1 presents the descriptive statistics. The control group's reading comprehension scores increased from M = 76 (SD = 8.2) on the pretest to M = 80 (SD = 7.5) on the posttest, a gain of 4 points. The experimental group started with a slightly lower pretest mean (M = 75, SD = 7.9) but showed a substantially larger improvement to M = 85 (SD = 7.0) on the posttest, a gain of 10 points.

Table 1
Descriptive Statistics of Pretest and Posttest Reading Comprehension Scores

Group	N	Pretest M (SD)	Posttest M (SD)	Gain
Control	42	76 (8.2)	80 (7.5)	+4
Experimental	43	75 (7.9)	85 (7.0)	+10

An independent samples t-test confirmed that the two groups did not differ significantly at pretest ($t(83) = 0.57$, $p = .57$, Cohen's $d = 0.12$), establishing baseline equivalence. A one-way ANCOVA, using pretest scores as the covariate, revealed a significant main effect of group on posttest performance, $F(1, 82) = 8.94$, $p = .004$ ($p < .01$). The partial η^2 was 0.10, indicating a moderate effect. The effect size for the difference in adjusted posttest means was Cohen's $d = 0.68$, representing a medium-to-large effect (Cohen, 1988).

These results indicate that the experimental group significantly outperformed the control group after just four sessions of metacognitive strategy instruction. While both groups improved—likely due to general exposure to the ESP content—the explicit teaching of planning, monitoring, and evaluation produced an additional 6-point gain beyond what traditional instruction achieved. Notably, the experimental group's gain was more than double that of the control group (10 points vs. 4 points).

An examination of within-group score distributions provides additional texture to these aggregate findings. In the experimental group, standard deviation decreased from 7.9 at pretest to 7.0 at posttest, suggesting that weaker readers benefited disproportionately from the intervention—a pattern consistent with the theoretical premise that metacognitive training is most impactful for learners who lack spontaneous self-regulatory skills (Mokhtari et al., 2018). In the control group, the standard deviation also decreased slightly (8.2 to 7.5), but the smaller absolute gains and the more modest reduction in variance suggest that improvement was more diffuse and less systematically tied to strategy acquisition. These distributional patterns, while not the primary focus of the study's hypotheses, corroborate the interpretation that the metacognitive intervention produced structured, skill-based learning rather than uniform exposure effects.

Discussion

The finding that the metacognitive strategy group improved significantly more than the control group aligns with a growing body of international research. Gamboa Serrano (2020) reported that Mexican upper-level students taught to plan, monitor, and evaluate their reading showed significant posttest improvements compared to a control group. Similarly, a 2025 quasi-experimental study with Moroccan ESP students (Hassan et al., 2025) found that a metacognitive reading strategies program produced large gains in reading comprehension ($p < .001$). The present results extend those findings to the Indonesian ESP context, and specifically to the discipline of civic education—a field that has received little empirical attention.

The planning component likely helped students approach each passage with a clear purpose, preventing aimless reading and directing attention to explicitly stated information (Cervantes et al., 2025). The monitoring strategies (e.g., re-reading, paraphrasing, checking for coherence) directly targeted literal comprehension because they forced students to verify

whether they had successfully extracted the factual details required for the question (Ghaith, 2020; Zare & Babapour, 2022). Finally, evaluation reinforced retention of explicit facts and allowed students to become more aware of their own strengths and weaknesses as readers, a metacognitive skill that can be transferred to future reading tasks (Amini et al., 2020; Sukirlan et al., 2020).

The control group—which consumed the same ESP videos and handouts without strategy guidance—improved modestly. This is not surprising because repeated exposure to English texts can produce incremental gains in vocabulary and fluency (Hamiddin & Saukah, 2020). However, without metacognitive support, students were left to rely on implicit learning mechanisms, which are insufficient for tackling discipline-specific reading demands in a short period (Deliany, 2020; Maftoon & Alamdari, 2020). These results support the argument that ESP classrooms should move beyond "just reading more" and instead integrate explicit strategy instruction from the very first semester (Sukirlan et al., 2020; Cervantes et al., 2025).

The medium-to-large effect size ($d = 0.68$) obtained in this study is noteworthy for several reasons. First, it was achieved in a very short intervention of only four weeks—a timeframe that is highly realistic within a typical Indonesian university semester where ESP often occupies only one strand of a broader course. The fact that meaningful gains can be obtained within such constraints strengthens the case for immediate adoption of these practices without waiting for structural curriculum reform. Second, the effect was produced in a non-specialist context: the instructor was not a trained reading specialist but a regular ESP lecturer using materials and strategies that can readily be adopted by any tertiary ESP teacher. This suggests strong potential for scalability across the Indonesian higher education system.

A further consideration concerns the mechanism by which the intervention produced its effects. Three explanations deserve consideration. The cognitive explanation posits that planning and monitoring directly reduce extraneous cognitive load by channelling attention toward task-relevant information and away from irrelevant surface features of the text (Maftoon & Alamdari, 2020). The motivational explanation suggests that providing students with concrete strategies gives them a sense of agency and self-efficacy that increases effort and persistence with difficult texts (Amini et al., 2020). The affective explanation points to the role of reading anxiety: by normalising confusion and providing systematic repair strategies, metacognitive instruction may reduce the anxiety associated with encountering unfamiliar legal and political vocabulary, thereby freeing up cognitive resources for comprehension processing (Ghaith, 2020). In all probability, all three mechanisms contributed to the observed gains, and future research employing measures of cognitive load, self-efficacy, and reading anxiety alongside comprehension tests could help disentangle their relative contributions.

The study has some limitations. The sample was drawn from a single university and one academic discipline, which limits generalisability to other ESP contexts. Additionally, the intervention lasted only four weeks; a longer intervention might produce even larger effects and could allow measurement of strategy transfer to novel text types. Finally, the study focused exclusively on literal comprehension; future research should examine whether metacognitive instruction also enhances inferential and critical reading skills among civic education students (Ghaith & El Sanyoura, 2019). The absence of a delayed posttest also means that the durability of the observed gains remains unknown: it is possible that without continued practice and reinforcement, students revert to pre-instruction habits. Longitudinal follow-up studies are therefore recommended to assess the persistence of metacognitive strategy gains over a full academic year.

CONCLUSION

This quasi-experimental study demonstrated that explicit instruction in metacognitive reading strategies—planning, monitoring, and evaluating—significantly improved literal reading comprehension among second-semester civic education ESP students at the State University of Makassar. The experimental group, which received four sessions of strategy training, outperformed the control group by a statistically and practically meaningful margin (Cohen's $d = 0.68$). Given that these students were first-time ESP learners with no prior strategic

reading training, the results are particularly encouraging.

The findings have clear pedagogical implications: ESP instructors should embed metacognitive strategy instruction into their regular teaching, beginning as early as the first semester. Simple think-aloud demonstrations, structured before-during-after reading prompts, and opportunities for self-evaluation are low-cost, high-impact practices that can transform ESP reading instruction from a passive, teacher-centred activity into an active, student-regulated process. For civic education students, such training not only improves their English reading but also equips them with the critical self-monitoring skills necessary for engaging with primary legal and policy documents.

From a curriculum development perspective, the present findings recommend that metacognitive strategy instruction be formalised as a component of ESP course syllabi rather than left to individual instructor discretion. A structured sequence—beginning with instructor modelling in week one, moving to guided pair practice in weeks two and three, and culminating in independent strategy application by week four—represents an achievable and evidence-based template for integration. ESP course coordinators could further support this process by providing strategy reference materials, designing assessments that reward strategic reading behaviours, and including metacognitive reflection tasks alongside conventional reading comprehension tests.

Future research should include a follow-up assessment to measure the durability of strategy gains and explore the potential of digital tools (e.g., online annotation or self-questioning apps) to scaffold metacognitive strategy use in Indonesian ESP classrooms. Research might also productively examine whether combining metacognitive strategy instruction with genre-based pedagogy—an approach that foregrounds the structural and rhetorical conventions of civic discourse—produces additive or synergistic gains in reading comprehension. With the growing emphasis on English-medium instruction in Indonesian higher education, metacognitive training is a small investment with potentially large returns for student success and lifelong learning.

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