

Exploring Metacognitive Strategies to Support Young Learners in Developing Their Learner Autonomy

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Abstract

This study investigates the role of metacognitive strategy instruction in fostering learner autonomy among young EFL learners. Employing participatory action research, it involved a primary school English teacher and 18 fourth-grade students in an instructional intervention structured around the 'Plan Do Review' reflective framework. Data were collected primarily through classroom observations. Findings indicate that explicit instruction incorporating goal-setting, multimodal scaffolding, and structured reflection enhanced learners' metacognitive awareness and promoted greater learner autonomy. These positive outcomes were largely attributed to the systematic, scaffolded approach of the intervention, which enabled students to develop metacognitive skills gradually while receiving ongoing support and feedback. Practical implications include recommendations for integrating structured reflection in EFL classrooms and emphasizing differentiated, adaptive teacher training to accommodate learners' varied cognitive readiness and familiarity with reflection.

Keywords: English as a foreign language (EFL) classroom; learner autonomy; metacognitive strategy; metacognitive strategy instruction; young EFL learners

Introduction

Learner autonomy has become central to English language education in the 21st century. As English as a Foreign Language (EFL) instruction continues to adjust to the demands of this era,

supporting learner autonomy is increasingly considered pivotal for developing not only language proficiency but also independent learning skills required in a rapidly changing world (Illes, 2012). The shift toward learner-centered approaches highlights the importance of learners taking responsibility in planning, monitoring, and evaluating their own learning processes (Little, 2004, 2020). Many studies on English language education have been well-documented (as illustrated in Table 1), particularly those focusing on improving EFL learners' language proficiency. However, these studies lack emphasis on enhancing learner autonomy.

Table 1. Previous research on English education

No	Year	Title	Author	Journal
1	2021	Designing English education game application for early childhood	Albion, L., Kaira, M.R., Tawami, T., Fairuz, D.A., & Maulana, H.	ASEAN Journal of Science and Engineering Education
2	2021	Application of learning videos and Quizizz in increasing students' interest in learning English in middle schools	Fadillah, I.N., & Maryanti, R.	Indonesian Journal of Multidisciplinary Research
3	2021	Students' perception of speaking practice in Step Up English club at Ho Chi Minh City University of Technology and Education	Quỳnh, N.T.N.	Indonesian Journal of Educational Research and Technology
4	2022	Determinants of grade 9 students' academic performance in English	Calixtro, R.M.	Indonesian Journal of Educational Research and Technology
5	2022	Effect of multimedia instructional approach on English writing performance of pre-service technical teachers in south-western Nigeria	Olowoyeye, C.A.C., Deji-Afuye, O.O., & Aladesusi, G.A.	ASEAN Journal of Educational Research and Technology
6	2022	Utilization of YouTube videos during online learning to increase literacy in English for middle school students	Sutanto, K.I.H., Muktiarni, M., & Mupita, J.	ASEAN Journal of Educational Research and Technology
7	2022	Polytechnic student's attitude and their achievement in the use of English and communication course for learning	Olowoyeye, C.A.C., & Aladesusi, G.A.	Indonesian Journal of Multidisciplinary Research
8	2022	The measurement of bilingualism of students of english language education study program in a public university	Akbar, A. I., Salsabila, A. ., Ramadhani, A. A. ., Pratiwi, A. E., & Kadir, M. N. I.	Asian Journal of Multilingual and Multicultural Education
9	2022	Language development among efl students of english department in a public university: a narrative approach	Asrianti, A., & Reskyani, R.	Asian Journal of Multilingual and Multicultural Education
10	2023	Teachers' challenges in teaching English to students with special needs: How to cope with them?	Apriliyanti, D.L.	Indonesian Journal of Community and Special Needs Education

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| 11 | 2023 | Effect of multimedia instructional approach on English writing performance of pre-service technical teachers in South-Western Nigeria | Olowoyeye, C.A.C., Deji-Afuye, O.O., & Aladesusi, G.A. | Indonesian Journal of Multidisciplinary Research |
| 12 | 2023 | Failing to learn English | Karmaker, R. | Indonesian Journal of Multidisciplinary Research |
| 13 | 2023 | Influence of parental involvement and school environment on pupils' academic performance in the English language | Saadu, U.T. | Indonesian Journal of Multidisciplinary Research |
| 14 | 2023 | Students' learning styles in blended English learning in an Indonesian private school | Husnia, H., Nur, S., & Abduh, A. | Journal of Language Learning and Assessment |
| 15 | 2023 | English teachers' strategies in creating formative test questions in a public high school | Ibrahim, I. A., Abduh, A., & Korompot, C. A. | Journal of Language Learning and Assessment |
| 16 | 2023 | Area assessment of English in the application of edupreneurship in convention and event business management in a public tourism polytechnic | Suparto, W. P. ., Lao, Y. A. D. ., & Salim, M. A. M. | Journal of Language Learning and Assessment |
| 17 | 2024 | How do English teachers prepare diagnostic assessment for students? insight from teachers' experiences in an Indonesian remote island | Masbara, A., Abduh, A. ., & Iskandar, I. | Journal of Language Learning and Assessment |
| 18 | 2024 | Storytelling in higher education: comparing expectancy- value in task-exposed and non-exposed English learners | Wang, R. | Journal of Language Learning and Assessment |
| 19 | 2024 | The importance of English language in tourism sector: a study in Socotra Island | AL-Ragdhi, A. ., AL-Rakbi, A. ., AL-Ragdhi, K. ., & Bin-Hady, W. | Journal of Language Learning and Assessment |
| 20 | 2024 | The effect of the ProWritingAid writing tool on the writing skills of English as a foreign language (EFL) students: A systematic literature review | Damayanti, K.D., & Santosa, M.H. | Indonesian Journal of Multidisciplinary Research |
| 21 | 2024 | Bibliometric analysis using VOSViewer with Publish or Perish of metacognition in teaching English writing to high school learners | Damkam, T., & Chano, J. | ASEAN Journal of Educational Research and Technology |
| 22 | 2024 | Bibliometric analysis using VOSViewer with Publish or Perish of identifying local legends through project-based learning for critical thinking skills in English | Lestari, I.S. | ASEAN Journal of Community Service and Education |

23	2024	Evaluation of assessment projects in English language education: A bibliometric review	Oya, A.	ASEAN Journal of Educational Research and Technology
24	2025	Bibliometric analysis using VOSViewer with Publish or Perish of CEFR-based comparison of English language teaching models for communication	Nadtayay, N., & Wongsaphan, M.	ASEAN Journal of Community Service and Education
25	2025	Bibliometric analysis using VOSViewer with Publish or Perish of pre-service English teachers' research	Nithideechaiwarachok, B., & Chano, J.	Indonesian Journal of Educational Research and Technology
26	2025	Influence of school climate on senior secondary school students' academic performance in the English language	Olutola, A.T., & Gift, I.D.	Indonesian Journal of Multidisciplinary Research
27	2023	Students' learning styles in blended English learning in an Indonesian private school	Husnia, H., Nur, S., & Abduh, A.	Journal of Language Learning and Assessment

Autonomy in language learning refers to learners' ability to make informed decisions about goals, materials, and strategies, as well as to monitor their progress and reflect on outcomes (Fedj & Bouhass Benaissi, 2018; Benson, 2006; Huang & Benson, 2013; Salsya & Amalia, 2022; Smith, 2007; Vandergrift, 2005). These abilities are closely tied to the use of metacognitive strategies—planning, monitoring, and evaluating—which help learners regulate their thinking and actions throughout the learning process (Moshman, 2018; Oxford et al., 2014; Reinders & White, 2016; Veenman et al., 2006). Metacognitive strategy use fosters awareness of learning processes, supports strategic adjustment, and enhances learners' ability to transfer learning across contexts (Victori & Lockhart, 1995).

Metacognition, first introduced by Flavell (Gascoine et al., 2017), refers to one's knowledge and regulation of cognitive processes. In educational contexts, metacognitive instruction emphasizes helping learners become more aware of how they learn, while equipping them with strategies to manage and enhance their learning outcomes (Lee & Mak, 2018; Perry et al., 2019; Raoofi et al., 2014). This form of instruction plays a central role in developing learner autonomy (Benson, 2011, as cited in Chinpakdee, 2022a; Magaldi, 2010). Teachers are pivotal in facilitating this process. Their roles include modelling reflective thinking, providing scaffolding, and providing a classroom culture that encourages learners to set goals, monitor their progress, and evaluate their achievements (Septiningrum et al., 2018). Since the ability to reflect critically on learning does not emerge naturally for all learners, teachers must prompt and support these practices (Chinpakdee, 2022b).

Building on the teacher's role as facilitator, a variety of instructional techniques have been identified as effective in promoting metacognitive development. These include teacher modelling, think-alouds, reflective journals, question prompts, peer discussions, self-evaluation, and self-assessment (Chinpakdee & Gu, 2021; Dao, 2020; Efklides, 2011; Irgin & Erten, 2020; Panggabean & Triassanti, 2020; Schraw & Dennison, 1994; Thongwichit & Buripakdi, 2021). These techniques are most effective when embedded into daily instruction and tailored to learners' developmental levels. When learners receive explicit instruction in how to learn, they are more likely to develop autonomy, resulting in better learning outcomes (Lengkanawati, 2017). For

young learners, however, such instruction must be developmentally appropriate, clearly structured, child-centered, and consistently embedded within daily classroom practice (Marulis & Nelson, 2020; van Loon et al., 2021).

While the significance of metacognitive strategy instruction is well documented, most empirical studies in the EFL context have largely focused on secondary or tertiary learners and the development of specific language skills (e.g., reading or listening). Numerous studies have demonstrated the effectiveness of metacognitive strategy instruction in improving discrete language skills among older learners (e.g., Cabrera-Solano et al., 2019; Farzam, 2018; Mohseni et al., 2020; Mulyadi, 2018; Tavakoli, 2018). In contrast, relatively few studies have investigated how metacognitive strategies can be integrated systematically into the language learning experiences of young learners. Research involving younger learners has predominantly focused on vocabulary (Diaz, 2015; Lockl & Schneider, 2006), listening (Goh & Taib, 2006; Goh & Kaur, 2013), speaking (Jaramillo, 2021; Sato & Lam, 2021), and reading (Acmed-Ismael, 2021; Fathi & Afzali, 2020; McTavish, 2008; Kung & Aziz, 2020; Ruiz de Zarobe & Zenotz, 2018; Temur, et al., 2010; Teng, 2019; Tandean, 2020; van Aswegen et al., 2019), often using experimental designs to test the effect of specific strategies. However, these interventions are frequently short-term and skill-specific, with limited exploration of how metacognitive strategies can be holistically embedded into everyday classroom instruction.

In terms of research design, most previous research on metacognitive strategy instruction has adopted a quasi-experimental framework, often employing the Cognitive Academic Language Learning Approach (CALLA), a five-stage model (preparation, presentation, practice, evaluation, and expansion) for strategy instruction (e.g., Acmed-Ismael, 2021; Fathi & Afzali, 2020; Jaramillo, 2021). CALLA-based studies typically incorporate metacognitive instruction during the presentation and evaluation stages through teacher modelling, think-alouds, and reflection logs. While CALLA offers a structured model for teaching learning strategies, it is primarily skills-based, focusing on discrete language elements through sequential instructional stages. This approach, however, may not sufficiently accommodate the holistic and integrated learning processes required in young learner classrooms, nor does it emphasize daily classroom reflection as an embedded routine.

In Indonesia, instructional approaches that explicitly foster learner autonomy remain underutilized (Lengkanawati, 2017; Mustofa & Wirza, 2023). Although recently there has been a growing emphasis on integrating reflection activity into EFL classrooms, as suggested by the Indonesian government, research examining how metacognitive strategies support learning in a primary education setting is still scarce. For instance, while Tandean (2020) demonstrated improved reading outcomes among third-grade students through a four-week metacognitive strategy intervention, the study's primary focus was on language gains rather than on fostering metacognitive awareness. As a result, the question of how metacognitive strategy instruction can be developmentally adapted and implemented in primary EFL classrooms remains largely unanswered.

This highlights a significant gap in both research and practice, particularly concerning age-appropriate instructional frameworks. Therefore, there is a clear need for studies that explore how metacognitive strategies can be embedded within regular classroom instruction, not just to improve skills, but to promote learner autonomy. Developing metacognitive skills at an early age provides learners with essential tools for lifelong language learning and fosters independence and adaptability across varied linguistic contexts.

Responding to this need, the present qualitative study aimed to implement metacognitive strategy instruction in a primary Indonesian EFL classroom, a context that has received limited attention, to support young learners' autonomy. A key contribution of this research lies in its adoption of a participatory action research (PAR) framework. By adopting a PAR approach, this study actively engaged both the teacher and learners in the pedagogical intervention process, fostering a more dynamic and context-sensitive exploration of metacognitive strategy instruction. Furthermore, while many existing studies adopt general or skill-specific metacognitive frameworks, this research introduces a distinctive approach—the 'Plan Do Review' learning cycle—an age-appropriate reflective framework that supports ongoing metacognitive development, aligns more closely with the nature of primary language learning environments. By embedding strategies into everyday lessons, this study offers a process-oriented perspective on how reflective instruction can be effectively adapted and implemented to foster learner autonomy among young EFL learners.

Research method

Design of the study

As part of a larger research project, this study investigates how a primary English teacher explicitly instructed young learners in metacognitive strategies to support their autonomy. It employed a qualitative design within a PAR framework (McTaggart, 1991; Cornish et al., 2023) to explore the experiences of both the teacher and the learners during the intervention. The PAR process comprised four phases: (1) contextual analysis, (2) professional dialogue and familiarization with metacognitive strategies, (3) metacognitive instructional intervention, and (4) post-intervention reflection. The present study draws primarily on data from the third phase, during which metacognitive strategies were implemented through classroom instruction guided by the 'Plan Do Review' reflective framework (Hohmann et al., 2008, as cited in Ellis, 2016:32; see Figure 1).

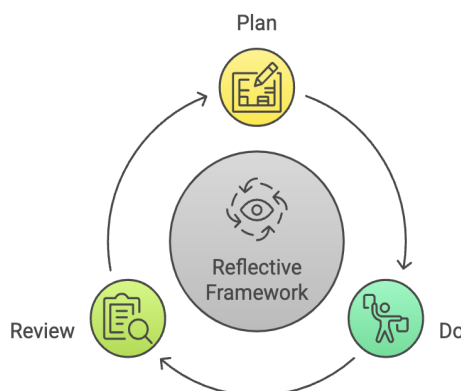


Figure 1. The 'Plan Do Review' reflective framework.

Participants

This study was conducted at a university-affiliated primary school in Indonesia. Using purposeful sampling (Suri, 2011), a school and participants were selected for their potential to provide in-depth insights into the metacognitive strategy instruction in a primary EFL classroom. An English for Young Learners (EYL) teacher collaborated with the researcher as a co-designer of the intervention, integrating metacognitive strategies into her regular English class lessons. The

participants included eighteen fourth-grade students (aged 10–11) with varying levels of English proficiency, who were selected from a bilingual program based on parental consent and their willingness to participate. The students were enrolled in a Habituation class, which provided three additional hours of English instruction per week. This class followed a curriculum developed by the university's language center, independent of the national curriculum. While instruction was primarily delivered face-to-face, occasional sessions were conducted via Zoom to accommodate scheduling or external constraints. Prior to data collection, all participants were informed of their right to voluntary participation through in-class briefings and written information sheets. Informed consent was obtained from all participants and their guardians. The study adhered to institutional ethical guidelines, including provisions for informed consent and safeguards for working with young learners.

Procedures

Prior to the intervention, the researcher and the teacher engaged in collaborative professional learning to co-design lesson plans and teaching materials that integrated metacognitive strategies appropriate for young learners. They maintained ongoing dialogue to refine language use and sequencing within the lesson, thereby ensuring a coherent and effective instructional approach. *During the intervention*, the teacher implemented the 'Plan Do Review' learning cycle, a reflective framework that structures lessons into three stages: planning for the activity, carrying out language tasks, and reviewing learning outcomes. This cycle served as the foundation for integrating metacognitive strategies into regular English instruction. The framework was also applied within the core lesson (the Do stage) to structure smaller, task-based activity cycles. While the teacher retained flexibility in selecting and adapting classroom activities, the researcher collaboratively determined the metacognitive strategies introduced during the Plan and Review stages to maintain consistency with the instructional goal and reflective framework. *After the intervention*, the teacher and the researcher conducted joint reflections to evaluate the process. These reflections informed iterative improvements, such as refining reflection prompts for clarity and adjusting the duration of review activities to better fit the lesson time constraints.

Data collection and analysis

The data for this study were collected over seven weeks, spanning 18 classroom sessions. The researcher assumed the role of a participant-as-observer (Takyi, 2015), actively engaging with the classroom context while refraining from direct instructional involvement. Classroom dynamics and learner engagement were documented through structured observations, focusing specifically on the implementation of metacognitive strategies during instruction. Data collection involved the use of multiple recording devices, including a camcorder, a handycam, and an iPad, while addressing minor technical constraints. By positioning herself unobtrusively at the back of the classroom, the researcher aimed to minimize disruption. To enrich the dataset, video recordings were supplemented with detailed field notes. Field notes included both descriptive observations of the metacognitive strategies enacted within the 'Plan Do Review' learning cycle and reflective notes capturing the researcher's analytic impressions and emerging interpretations. The video data were then transcribed using an intelligent verbatim approach, which preserves the core meaning and sentence structure while omitting non-essential features such as fillers, repetitions, and interruptions. This method, as recommended by Bailey (2008), helps reduce textual clutter and enhances analytical clarity.

The data were analyzed thematically using a six-phase framework to ensure systematic identification of patterns across the dataset (Braun & Clarke, 2006, as cited in Christou, 2023: 6-

12). To enhance the reliability of the findings, data triangulation was conducted by cross-referencing classroom observations with supplementary materials, including the teachers' notes, instructional slides, and students' worksheets. This comprehensive analysis of both observational data and documents offered rich insights into how the 'Plan Do Review' framework was enacted in the classroom, as well as how learners engaged with metacognitive strategies and classroom interaction.

Results and discussion

This section presents the findings on how the teacher under study helped the learners in her English class plan their learning, monitor their progress, and evaluate their performance to support their autonomy. The analysis of the classroom observation data revealed that the teacher employed structured metacognitive strategy instruction, multimodal scaffolding, and reflective learning practices to guide students toward greater autonomy. The findings are organized into three themes: (1) Explicit Strategy Instruction, (2) Scaffolding through Multimodal Engagement, and (3) Encouraging Learner Autonomy through Reflection.

Table 2 provides an example of a typical English lesson incorporating the 'Plan Do Review' learning cycle used by the teacher during the metacognitive instructional intervention.

Table 2. A sample of a regular English lesson using the 'Plan Do Review' learning cycle

Stage	Classroom activities
Plan	Identifying the main lesson aims. Reviewing the previous lesson.
Do	Miming the actions. Reading the correct phrases based on the actions. Arrange the sentences into paragraphs from the modeled text. Matching the pictures with the definitions. Reviewing the sentences from the modeled text. Answering the reflection questions.
Review	Doing a self-assessment activity.

The session described above was the second meeting of the intervention. The lesson's objective was to have learners arrange sentences into paragraphs based on a modeled text about the zoo, which they had learned in the first session. The teacher delivered the learning materials using a PowerPoint presentation with a slide projector and screen to display the content. To begin the lesson, the teacher displayed an image related to the lesson topic on the slide and then informed the learners of the main lesson aim, preceding the questions about what they had learned in the previous lesson. The details of metacognitive strategies implemented within the 'Plan Do Review' learning cycle are outlined below.

Explicit strategy instruction

The teacher explicitly incorporated metacognitive strategies into lesson delivery, ensuring that learners engaged in goal-setting and prior knowledge activation.

Stating learning goals and success criteria

At the Plan stage, the teacher typically began each lesson with routine activities, such as greeting the learners, followed by a review of the previous lesson and the introduction of the day's lesson aims. This sequence was based on her pre-intervention instructional practice. However, during the intervention, she adjusted the order by presenting the lesson aims before reviewing the previous lesson. This adjustment likely reflected the teacher's instructional preference for a clearer, more structured sequence, as she consistently introduced the objectives immediately after greeting the class. Figure 2 illustrates how the teacher incorporated the review of the previous content within the stated lesson aims. This revised sequencing suggests a deliberate pedagogical decision to embed review within the goal-setting process, thereby making the structure and purpose of the lesson more explicit for young learners.

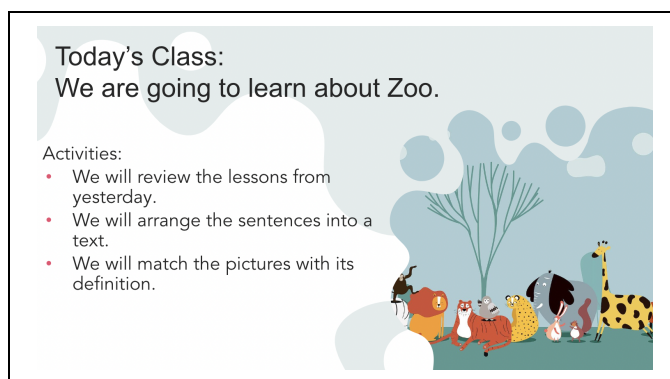


Figure 2. Example of main lesson aims

To reinforce learning goals, the teacher clearly articulated the lesson aims (We are going to learn about Zoo) and success criteria at the start of each lesson. These were displayed on slides, and learners were encouraged to read them aloud. In the classroom, as the slide (see Figure 2) began to load, the teacher pointed at it and invited learners to pay attention to the main lesson aims. Excerpt 1 demonstrates how the teacher guided the learners to focus on the lesson's aim by making it explicit. She achieved this by displaying the objective at the top of the slide and prompting learners to complete her sentence.

Excerpt 1

T: *So, today we're going to continue our lesson about....*

Ss: *Zoo!*

T: *about the....* [rising intonation, inviting learners to provide response]

Ss: *Zoo! About the zoo!*

T: *About the zoo.*

By employing strategic pauses and rising intonation, as exemplified in Excerpt 1, the teacher encouraged learners to actively recall and articulate the lesson's aim. Providing appropriate pauses after questions allows learners time to process information, engage more thoughtfully, and respond more effectively. This technique is crucial as it prompts learners to reflect on their understanding and adjust their learning strategies accordingly (Paterson, 2022). By prompting learners to read and recall the lesson aim, the teacher reinforced goal-setting as a metacognitive strategy, encouraging and helping learners monitor their progress. This aligns with Chen (2024), who suggests that verbalizing lesson aims to strengthen learners' ability to set and monitor

personal learning goals, a key aspect of metacognitive awareness. Additionally, the teacher integrated visual support with verbal prompting to clarify the lesson focus and enhance learner engagement. This approach encouraged active participation, helping learners stay focused and involved in the learning. Ozturk (2022) highlights that combining visual and verbal cues enhances student engagement, making learners more active participants in their learning process.

In addition to the lesson aims, the success criteria were informed to the learners and were made explicit by displaying them on the slide. Learners were actively engaged in reading them aloud, as depicted in Excerpt 2.

Excerpt 2

T: *Yeah.* [showing and pointing at the lesson aims on the slide] *We're going to....*

Now, today's activities... We will have three activities. The first one, 'We will review the lessons from yesterday.'

And then, what else? [nominating one student's name to read one of the success criteria] *Can you please read?*

S17: [Reads aloud one success criterion.] *'We will arrange the sentences into a text.'*

T: *Okay. We're going to arrange* [emphasizing pronunciation]. *The last one?*

S3: *'We will match the pictures with its definition.'*

T: *Okay. We will match the pictures with their definitions* [T stresses the last word].

In the above excerpt, the teacher first introduced the day's activities and encouraged student participation by inviting learners to read the success criterion aloud (e.g., We will arrange the sentences into a text). She then provided further emphasis through repetition and pronunciation modeling, ensuring clarity. Additionally, by correcting and reinforcing proper usage, such as adjusting *"its definition"* to *"their definitions,"* she subtly integrated language accuracy into the lesson. This approach not only clarified learning goals but also encouraged learners to take an active role in planning their learning and developing self-regulation skills. By engaging in this process, learners became more aware of their learning goals and could better monitor their progress throughout the lesson. Goal-setting plays a crucial role in helping learners plan, monitor, and evaluate their learning, ultimately enhancing self-regulation and autonomy. Research highlights that goal-setting had a strong positive effect on autonomous learning (Papamitsiou & Economides, 2019). It also fosters learner engagement and self-regulation, leading to improved language learning outcomes (Bursalı & Öz, 2018).

Activating prior knowledge and encouraging self-explanation

To foster self-monitoring and self-evaluation, the teacher regularly prompted learners to recall previous lessons and construct their understanding of new material. Excerpt 3 provides insight into how specific prior knowledge was activated. Questions such as *"What can you see in the zoo?"* and *"What kind of animals?"* were designed to activate prior knowledge by prompting learners to retrieve relevant vocabulary and concepts. Although this prior knowledge activation was not explicitly outlined in the framework for the Plan stage of the intervention, it occurred naturally as part of the lesson flow. By using open-ended questions and follow-up prompts, she encouraged learners to articulate their thoughts, reinforcing self-explanation as a metacognitive strategy. This approach helped learners become more aware of their thought processes and supported their ability to regulate their learning.

Excerpt 3

- T: *What can you see in the zoo?*
 S1: *Animals.*
 T: *Yeah. Of course, animals. What kind of animals?*
 S2: *Chimpanzees. Elephants.*
 S18: *Humans.*
 S1: *Living animals.*
 T: *Humans, living animals. Okay.*
 S7: *Crocodiles.*
 T: *Ya.*

Through guided recall, as shown in Excerpt 3, the teacher helped learners activate prior knowledge, making connections that facilitated comprehension. This approach was particularly effective at the beginning of the lesson, as less-skilled learners rely on prior knowledge (Shamsi & Bozorgian, 2024) to bridge gaps in understanding and integrate new concepts (Belouiza, 2024). By prompting them to verbalize their responses, she encouraged deeper cognitive engagement and reinforced their ability to explain and justify their thinking, a crucial skill in developing metacognitive awareness. This process allowed learners to monitor their progress and take a more active role in their learning. Research suggests that activating prior knowledge improves learners' problem-solving skills by enhancing their ability to monitor and regulate their understanding (Mihalca & Mengelkamp, 2020).

Scaffolding through multimodal engagement

The teacher used gestures, movement, and collaborative activities to reinforce metacognitive awareness. These diverse instructional methods provided students with multiple ways to process and regulate their learning.

Using gestures, visuals, and movement for reinforcement

A key feature of the lesson was the integration of gestures and physical movement to support vocabulary comprehension and internalization of learning. The learners were encouraged to use their bodies to represent meanings, which provided embodied cognition opportunities and supported memory retention.

In the Do stage, the teacher combined cognitive and metacognitive strategies through scaffolding. She guided learners to mime key phrases by using a Total Physical Response (TPR) game, *Spin, and Act: Run, Stop, and Say!*, incorporating an online wheel spinner tool (<https://wheelofnames.com/>) to randomly select phrases or sentences for students to act out, creating an element of surprise and engagement. This game-based approach enhanced active participation and helped learners process language forms dynamically. In this game, she modeled actions, had learners imitate her, and encouraged them to physically demonstrate phrases they had learned (e.g., *"Animals roam around"*) along with new language forms (e.g., *"Animals can roam around"*). By integrating movement and interactive engagement, as evidenced in Excerpt 4, the teacher helped learners reinforce meaning, recall key expressions, and practice language structures effectively. Research shows that gestures significantly enhance vocabulary retention when they align with the words being taught, leading to better learning outcomes compared to instruction without gestures (García-Gómez & Macizo, 2023).

Excerpt 4

T: [Showing a wheel of name/spinner on the slide] * *Throw a thing?*

(how do we act it out?)

S18: [Using hand gesture to mime 'throw a thing']

T: *cannot throw a thing*. [using hand gesture] *We cannot throw a thing. We cannot yell?*

S14: [Makes a gesture to indicate 'cannot yell.']

S17: [Makes a gesture to indicate 'cannot yell.'] *We cannot yell.*

T: *We cannot yell. * always have to be with our parents?* (how do we act it out?)

S1, S3, & S17: [Make a gesture to indicate 'being together']

T: **Roam around?*

Ss: [Moving around] (more students can mime and imitate their peers)

T: ** You guys now.....we're going to spin and...*

S17: [Asks how to do the action in the classroom] *How do we roam around?*

T: *roam around... You may...run* [using a gesture to indicate moving around the classroom] *when roam (ing) around.*

Excerpt 4 highlights the reinforced key phrases such as "*throw a thing*," "*yell*," and "*roam around*," through miming and then asking the learners to imitate her gestures. Instead of simply instructing them on which gestures to use, she employed guiding questions such as "*Tadi gimana kalau throw a thing?*" (*How did we throw a thing?*) and "*Kalau, we cannot yell kaya gimana?*" (*How do we show we cannot yell?*), providing scaffolding to support learners' understanding. When a student (S17) expressed uncertainty ("*How do we roam around?*"), the teacher did not provide an immediate answer. Instead, she scaffolded understanding by demonstrating the action while saying, "*Roam around; you may... run*," and using gestures to indicate movement around the classroom. This aligns with research suggesting that teachers who integrate gestures alongside verbal instructions create a dialogic scaffolding environment, which aids students' ability to visualize concepts and actively demonstrate their understanding (Guo, 2020; Patel, 2024).

This approach encouraged learners to reflect and self-adjust fostering independence from teacher-led guidance. By pairing verbal input with movement, the teacher facilitated meaning-making and enhanced conceptual understanding through embodied cognition—the process of learning through physical interaction. This multimodal approach encouraged learners to actively engage with the language, reinforcing both comprehension and retention in a dynamic and interactive way. Research by Tontuş & Gönen (2025) demonstrates that gestures serve as multimodal elicitation strategies that promote student participation in both online and traditional classrooms.

Encouraging collaborative learning

The dialogue in Excerpt 4 above illustrates how the teacher fostered collaborative learning by engaging learners in group-based tasks that emphasized peer interaction, problem-solving, and imitation. By integrating movement, modeling, and scaffolded support, she created a classroom environment that encouraged learners to build shared understanding and apply language concepts together. For example, when the teacher asked learners how to act out, "*throw a thing*," "*cannot yell*," and "*always have to be with our parents*," she encouraged peer imitation and group reflection. This enabled learners to observe their peers, refine their understanding, and adjust their actions collaboratively.

A similar dynamic occurred when the teacher asked learners to demonstrate "*roam around*." Rather than responding immediately, learners first observed one another's gestures and then adjusted their own, engaging in a shared process of meaning-making and self-regulation. This interactive process supported the development of metacognitive awareness by encouraging learners to monitor their understanding through peer input. Research highlights that young learners

benefit from collective scaffolding, where they leverage shared linguistic resources to construct meaning and solve language-related problems (Kos, 2023; Kos, 2024), ultimately enhancing both comprehension and retention.

Through scaffolded modeling, guided imitation, interactive learning, and peer collaboration, the teacher effectively integrated cognitive and metacognitive strategies into classroom instruction. Such practices not only facilitated comprehension but also cultivated learner autonomy. Within this classroom environment, learners actively supported one another in regulating and adjusting their learning, key characteristics of a collaborative and metacognitively enriched setting.

Encouraging learner autonomy through reflection

The teacher integrated structured reflection opportunities to help learners evaluate their own learning progress.

Promoting self-monitoring and self-correction

Throughout the lesson, the teacher provided scaffolded feedback, prompting the learners to re-evaluate their work and make adjustments. The interaction captured in Excerpts 5 and 6 below reflects how the teacher encouraged learners to self-monitor their learning progress and engage in self-correction by providing scaffolded feedback and prompting reflection. Rather than offering direct answers, the teacher guided learners through questioning, clarification, and peer discussion, reinforcing metacognitive strategies that support learner autonomy.

Excerpt 5

T: [Moving to S12's group and giving feedback] *What is a zoo?* * This is wrong. "A zoo is a place"... explain place, *zoos are...* [T and Ss further discuss the work.] *Incorrect.* * Not yet. Why is it upside down?

S12: * Because the answer is the opposite if this comes first, right, Ms?

T: [Explains to the group that the picture is not just decorations; it is for understanding the text.]

As shown in Excerpt 5, the teacher did not simply correct the mistake but instead prompted S12 to identify and reflect on the error independently. Rather than immediately correcting the sentence order, the teacher asked, "*Why is it upside down??*" ("*Why is it reversed?*"), encouraging the learner to assess their reasoning and self-correct. S12 engaged in self-monitoring by analyzing the sentence structure and recognizing the issue ("*the answer is backwards*")—demonstrating an understanding of sequencing. The discussion that followed allowed for deeper conceptual processing, helping the learner develop strategies for checking and revising her own work rather than relying on direct teacher correction. Self-monitoring is a key predictor of language achievement, playing a crucial role in developing learners' reading and writing abilities. As part of a broader self-regulation strategy (Bagheri & Ghanizadeh, 2015), it enhances overall language proficiency by enabling learners to actively track their comprehension and adjust their strategies accordingly. Moreover, self-monitoring also engages learners in self-correction, which requires them to continuously assess their understanding of the text. This process is driven by both internal and external feedback mechanisms that guide learners in identifying comprehension gaps (Shiu & Chen, 2013).

Excerpt 6

T: [Moving to S17's group and giving feedback] *Are you sure this one?*
You can change it.

S17: [Responds but inaudible]

Ss: [Continue working and discussing with group members to arrange the sentences and the pictures].

Excerpt 6 offers an example of how the teacher used guided questions to prompt self-correction. Instead of confirming or rejecting the answer immediately, she encouraged S17 to re-evaluate her own work. By asking, "*Are you sure?*" to S17, the teacher prompted critical self-examination, encouraging the learner to reflect on her choices before finalizing her response. The phrase "*You can change it*" reinforced the idea that the learner had control over her learning process and should make adjustments based on reasoning rather than just seeking teacher approval. Self-correction enhances metacognitive awareness, which enables learners to analyze their own thought processes and regulate their comprehension strategies. This awareness is essential for self-regulation, as it allows learners to recognize when they do not understand a text and to employ strategies to improve comprehension (Rif'attullah & Putra, 2023). By integrating self-monitoring and self-correction, learners develop greater autonomy and metacognitive awareness, leading to improved reading proficiency.

Facilitating self-reflection and self-assessment

Reflection constituted a core component of this intervention, primarily done through oral reflection questions during the *Do* stage and self-assessment exit tickets in the Review stage. At the end of the lesson, the teacher guided learners in reflecting on their learning experiences, using self-assessment questions and exit tickets to help them evaluate their progress.

During the review cycle, the teacher provided structured opportunities for learners to review their learning, self-assess, and reflect on their language learning. This was primarily accomplished through oral review questions such as "*What did you do?*", "*What did you learn?*", and "*How did you learn it?*". These were designed to enhance learners' awareness of their learning process. These questions were also visually displayed on slides to make the reflection process explicit for learners. By frequently posing these reflective prompts, as illustrated in Excerpts 7 to 10 below, the teacher encouraged learners to assess their understanding and recognize the strategies they used during learning. While learners initially struggled to articulate responses, the teacher's guided questioning helped them gradually engage in self-reflection and evaluation.

Excerpt 7

T: Okay. [T shows a new slide and invites Ss to pay attention to the reflection questions]. *Now, the first one, 'What did you do?'*

Ss: [Mostly silent]

T: What is the activity just now?

Ss: [Responding at the same time]. *Group!*

T: *Work in groups. * Terus, apa lagi?*

Ss: [Responding at the same time]. *Zoo. Build up. Build. Build out.*

T: Bukan *build* [T then makes a gesture to indicate 'arranging'] *Arrange the...?*

S1: *The marker?*

T: *Arrange the pictures.*

Excerpt 7 demonstrates how the teacher guided learners through reflection by prompting them to recall and articulate their activities. Instead of providing direct answers, she used

scaffolded questioning to help learners reconstruct their experiences. When learners struggled to recall specific actions ("*Build. Build up.*"), the teacher used a clarifying gesture (arranging) to reinforce meaning, supporting self-monitoring and clarity of understanding. This occurrence shows that when learners are relatively new to such reflection-based activity, they may initially struggle to reflect on their learning process.

Excerpt 8

T: *What did you learn?*

S17: Zoo.

T: [Nods] *Zoo. What else?*

S18: [Responding at the same time] *We learn about (the) zoo.*

Excerpt 8 underscores how the teacher shifted the focus from recalling activities to recognizing learning outcomes. By asking, "*What did you learn?*" she encouraged learners to reflect on the knowledge gained. When responses were limited ("*Zoo*"), she prompted further with "*What else?*" encouraging learners to recognize the depth of their learning and move beyond one-word responses.

Excerpt 9

T: *Yeah. And then how did you learn (it)?*

S17: [Raises her hand and shows her thumbs up to indicate '*I did well.*']

T: [Makes a gesture to indicate 'arranging'] *Arrange it? Read it? Did you read the sentences?*

S17: *Yes, of course.*

T: *Boys, did you read the sentences?*

S7: *Yes.*

S4: [Shows two thumbs up and nodding]

The dialogue presented in Excerpt 9 illustrates how the teacher prompted learners to articulate the strategies reinforcing self-awareness of the techniques they used. When a learner provided a vague response ("*I did well.*"), the teacher encouraged specific reflection by suggesting possible strategies ("*Arrange it? Read it?*"), guiding learners toward a more explicit understanding of their learning process. The use of gestures supported comprehension, helping learners connect abstract reflection with concrete actions.

In addition to self-reflection, self-assessment using exit tickets was used daily at the end of each lesson. This written self-assessment tool encouraged learners to evaluate their learning progress and document their reflections. Initially, the teacher and students found them challenging, as they had never used them before. However, over time, both became more comfortable with the process. Excerpt 10 illustrates teacher-learner interaction during this self-assessment activity.

Excerpt 10

S8: [Asks a question, inaudible]

T: * Everything. Whatever.

S5: [Asks a question, inaudible]

T: * No. It depends on you guys. Can you do all of that in class today?

S8: [Turns in the exit ticket]

T: [Gives feedback to S17] * Is this true? All of it?

S8: [Nods]

T: *Okay*. [T gives further feedback to Ss in the girl's row.] * During class, were you able to do everything or not? If you can do everything, you can tick it all.

Ss: * *Already!* [Checking off tasks they successfully completed, then turning in the exit ticket]

T: [Checking the exit ticket] *Good*.

Excerpt 10 provides insight into how learners initially hesitated while filling out their exit tickets, uncertain about the process. Rather than confirming what they should mark, the teacher reinforced self-assessment ownership, responding, "It depends on you guys." ("It depends on you."). This statement emphasized that learners needed to evaluate their own learning progress rather than relying on the teacher's confirmation.

By asking, "*Can you do all that in class today?*" ("Were you able to do everything in class today?"), the teacher triggered self-reflection, prompting learners to critically assess their performance. She further encouraged self-monitoring by questioning S8's response ("*Ini benar ga? Semuanya?*"—"Is this correct? Everything?"), ensuring the learner double-checked her own assessment rather than simply marking everything.

The teacher also clarified the exit ticket process, reminding learners that they should only mark what they had genuinely completed. The phrase "*Kalau misalkan bisa semuanya, you can tick it all.*" ("If you were able to do everything, you can tick all the boxes.") reinforced the importance of accurate self-evaluation. Finally, the teacher's validation ("Good.") acknowledged learners' efforts, reinforcing their ownership of learning progress while still providing teacher support.

Research indicates that reviewing and self-assessment encourage learners to monitor their progress, maintain motivation, and become more aware of effective learning strategies (Butler & Lee, 2010). Explicit instruction in these practices, such as goal setting, monitoring, and reflection, enhances learners' self-regulation and overall engagement in language learning (Azatova, 2021). Similarly, Cravo (2018) demonstrated that strategic questioning and reflection cards effectively promote reflective thinking, enabling learners to recognize their errors, articulate their strategies, and better understand the purposes behind classroom activities.

Nevertheless, despite these documented benefits, implementing structured review activities posed practical challenges in the current study. Teachers and learners found them time-consuming, requiring an additional ten minutes per lesson. Furthermore, learners initially struggled with oral reflection tasks, frequently providing overly general responses such as "English" or "Habituatation," revealing limited metacognitive awareness and unfamiliarity with self-explanation strategies. This finding corroborates Sanchez (2017), who noted that young learners often lack initial skills for reflecting on their learning process.

These practical challenges suggest that successful integration of metacognitive strategies requires careful consideration of learners' varying abilities and prior experience with reflection. Guo (2022) emphasizes that individual differences in learning styles significantly impact learners' engagement with reflective prompts, highlighting the need for structured scaffolding and gradual exposure to reflective activities.

Ultimately, while structured reflection and self-assessment significantly enhance learner autonomy, teachers remain central in cultivating a reflective learning environment (Goh & Taib, 2006). Teachers play a critical role by dedicating sufficient lesson time and integrating varied reflective activities regularly. Such consistent practice helps learners critically evaluate their progress, sustain motivation, and develop essential self-regulation skills. By embedding metacognitive strategies systematically into classroom routines (Robillos & Bustos, 2022) within a child-centered approach (van Loon et al., 2021), teachers facilitate learner autonomy,

empowering students to become active and reflective participants in their own language development.

This study adds new ideas and suggestions regarding language education, as reported elsewhere (Cardoso et al., 2023; Husnia & Abduh, 2023; Mahmud et al., 2024; Meldawati & Hamid, 2023; Rosmayanti et al., 2024; Suhardi et al., 2023; Yunisah et al., 2023).

Conclusion

This study contributes to the growing body of literature on metacognitive strategy instruction by demonstrating how a structured reflective framework, the 'Plan Do Review' learning cycle, can be systematically integrated into daily classroom practice through PAR. This approach, which remains underexplored in young EFL contexts, offers a process-oriented model for embedding metacognitive instruction in primary English education.

The findings indicate that explicit yet age-appropriate instruction—incorporating goal-setting, multimodal scaffolding, and structured reflection—played a crucial role in supporting the development of learner autonomy among young EFL learners. The intervention demonstrated how metacognitive strategies can be seamlessly embedded within routine classroom activities, allowing learners to engage more consciously with their learning processes.

This study, however, has several limitations that should inform future research. The single-teacher, single-school context limits generalizability, indicating the need for broader studies involving multiple teachers and diverse instructional settings. Comparative research can enhance the applicability of age-appropriate metacognitive scaffolding models. Furthermore, the absence of long-term follow-up restricts our understanding of how sustained metacognitive instruction influences learner autonomy and academic achievement over time. Future studies should also examine learners' perspectives and experiences to gain deeper insight into how young EFL learners internalize and respond to reflective learning practices.

In addition to these limitations, the study encountered practical challenges, particularly in adapting the structured reflective framework and managing limited instructional time. These challenges underscore the need for differentiated instruction and professional support for teachers (Dignath & Veenman, 2020) to address young learners' diverse cognitive readiness and familiarity with reflection activities.

The findings hold important implications, especially for Indonesian EFL contexts where metacognitive instruction is not yet widely implemented. Teachers are encouraged to integrate structured reflection and metacognitive strategies into daily classroom practice to promote learner autonomy and self-regulation (Fiani, 2020; Wijaya & Mbato, 2022). Future efforts may include incorporating metacognitive instruction into teacher education programs, ensuring that teachers are equipped with the tools and pedagogical frameworks to support early engagement with reflective learning. At the curriculum level, course designers might consider integrating child-friendly metacognitive prompts and self-assessment tools into primary-level learning materials, as advocated by Werdiningsih, Al-Rashidi, & Azami (2022). By demonstrating how metacognitive strategies can be embedded in everyday instruction, this study contributes to a pedagogical shift toward fostering independent, reflective learners from an early age in EFL contexts.

Declaration of conflicting interest

The authors declare that there is no conflict of interest in this work.

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