

EFL Students' Use of Metacognitive Strategies in Speaking Class

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ABSTRACT

Speaking is recognized as one of the most challenging language skills for EFL learners because it requires students to manage pronunciation, grammar, vocabulary, and meaning production simultaneously. Although research on metacognitive strategies in EFL has grown, studies describing how early-semester Indonesian university students use these strategies in speaking class remain limited. This study aimed to describe the extent to which EFL students use metacognitive strategies in speaking class. A descriptive quantitative design was used, with data collected from 19 second-semester students of the English Language Education program at Universitas Riau Kepulauan, Batam, Indonesia. The instrument was the Metacognitive Awareness Speaking Questionnaire (MASQ), validated by Sulistyowati et al. (2022), consisting of 21 items grouped into five factors: Planning and Evaluation, Directed Attention, Prior Knowledge, Mental Translation, and Problem-Solving. Descriptive statistics were calculated using mean and standard deviation. The results showed an overall mean score of 3.72 (SD = 0.43), indicating a high level of metacognitive strategy use. Problem-Solving obtained the highest mean score (M = 3.78), followed by Planning and Evaluation (M = 3.77), Directed Attention (M = 3.71), Prior Knowledge (M = 3.69), and Mental Translation (M = 3.61). These findings suggest that second-semester EFL students employ metacognitive strategies during speaking activities. The study contributes baseline evidence on metacognitive strategy use among Indonesian EFL students and offers implications for improving speaking instruction and supporting learners' strategic awareness.

Keywords: *EFL speaking; learner autonomy; metacognitive awareness; metacognitive strategies; self-regulated learning*

INTRODUCTION

Speaking in a foreign language is not a simple task. It demands learners to coordinate grammar, vocabulary, pronunciation, and meaning in real time. In higher education, effective communication in English for Academic Purposes (EAP) courses has become a fundamental requirement, yet it consistently poses challenges for EFL learners. Newton and Nation (2021) argue that a balanced language course requires four equal strands: meaning-focused input, meaning-focused output, language-focused learning, and fluency development. Frequent, purposeful practice across these strands gradually builds proficiency. Despite such frameworks, many learners continue to struggle with speaking because of linguistic, affective, and

motivational barriers. Dewi and Wilany (2023) found that learner autonomy was strongly related to motivation in EFL speaking classes, suggesting that students who take greater ownership of learning tend to become more motivated and engaged. Recent Indonesian tertiary EFL studies also show that multiliteracy pedagogy and digital storytelling can create authentic speaking practice, strengthen peer and teacher feedback, and foster learner autonomy (Dewi et al., 2023; Dewi et al., 2025). As a result, learners need strategies that help them manage and improve speaking performance. Okmawati (2021) emphasized that metacognitive strategies enable learners to plan, monitor, and evaluate their own progress, making the learning process more purposeful and effective. Similarly, Yusuf et al. (2021) found that EFL students in speaking classes employed a range of learning strategies related to their awareness of strengths and weaknesses in oral communication.

Metacognition was first introduced by Flavell (1979), who defined it as a learner's awareness and regulation of cognitive processes, learning goals, and experiences. Gojkov-Rajić et al. (2023) highlighted the importance of fostering student awareness of metacognitive processes and self-regulation in higher education, noting that metacognition, self-confidence, and motivation jointly determine L2 learning outcomes. In the context of self-regulated learning, Hunutlu (2023) found that metacognitive strategies such as planning what to learn, monitoring ongoing performance, and evaluating outcomes are among the most consistently used strategies by EFL learners in both online and offline learning settings. In speaking tasks, these processes are particularly relevant because learners must make quick decisions while simultaneously managing multiple linguistic demands. Karim (2019) corroborated this view through a qualitative case study, finding that high-achieving autonomous EFL learners consistently relied on metacognitive strategies such as self-monitoring and self-evaluation to develop their speaking skills. Fitrianiingsih et al. (2025) similarly identified that EFL students across multiple semester levels actively engaged in planning, monitoring, information management, debugging, and evaluation strategies during speaking tasks, with monitoring being particularly prominent. Shin et al. (2024) demonstrated that explicit instruction in metacognitive methods produced measurable improvements in students' speaking fluency and accuracy. Furthermore, Dayag-Tungpalan and Dayag-Tungpalan (2023) found that learners who actively planned, monitored, and evaluated their speaking process tended to perform more effectively in oral communication tasks.

One important development in this area is the construction of a specific instrument to measure metacognitive awareness in speaking. Sulistyowati et al. (2022) developed and validated the Metacognitive Awareness Speaking Questionnaire (MASQ), which consists of 21 items grouped into five factors: Planning and Evaluation (PE), Directed Attention (DA), Prior Knowledge (PK), Mental Translation (MT), and Problem-Solving (PS). This five-factor structure is consistent with broader literature on metacognitive strategy taxonomies. Krishnan (2021), for instance, organized metacognitive strategy training for ESL matriculation students around planning and evaluation, directed attention, person knowledge, mental translation, and problem-solving components, and found that explicit training in these areas improved learners' metacognitive awareness and listening competency. This convergence across instruments and skills lends conceptual support to the MASQ factor structure when it is applied to speaking. Building on this instrument, the importance of metacognitive knowledge in speaking skills among EFL students becomes clearer: speaking helps students communicate in social,

academic, and professional situations, yet many EFL students still face difficulties because of limited vocabulary, low self-confidence, anxiety, and limited practice opportunities. Anwar et al. (2026) similarly note that successful speaking is influenced not only by language ability but also by students' ability to manage their thinking processes while speaking.

Several other studies have also examined how metacognitive strategies relate to EFL speaking performance. Sari et al. (2025) reported that university-level EFL students who actively used metacognitive strategies during speaking tasks tended to demonstrate better communicative competence, with structured metacognitive guidance supporting students' oral production at the tertiary level. Zhang et al. (2021) further showed that EFL learners in China varied considerably in how they applied metacognitive strategies during integrated speaking tasks, with problem-solving being the most reported. In a related strand of work on integrated speaking assessment, Zhang et al. (2022) likewise found that among Chinese EFL learners, problem-solving was the most frequently reported metacognitive strategy while monitoring was the least frequently reported, illustrating that the relative weighting of individual strategy components can vary depending on task type and learner population. Susanti et al. (2025) also found that integrating cognitive and metacognitive strategies with short multimedia videos enhanced students' critical listening by promoting active analysis, self-regulation, and deeper cognitive processing.

Taken together, existing studies have mainly tested the effects of strategy instruction, examined correlations with performance, or surveyed learners from mixed or advanced semester levels; almost none have offered a descriptive, factor-by-factor account of strategy use at a single, clearly defined early-semester stage. A recent systematic review by Asrobi et al. (2025), which analyzed 50 SINTA-accredited Indonesian studies on metacognitive strategy instruction published between 2014 and 2024, confirms that this imbalance is a persistent gap in the field: reading emerged as the most extensively researched skill, while speaking, writing, vocabulary, and translation received comparatively limited attention. Earlier case-study work such as Wilany and Dewi (2017), which examined metacognitive strategy use among second-semester EFL students in Indonesia, and Luviana et al. (2022), which examined the correlation between metacognitive strategy use and speaking performance among Indonesian junior secondary students, point in a similar direction but were limited to qualitative case-study designs or secondary-school populations. Although Dewi et al. (2023) and Dewi et al. (2025) show that technology-mediated multiliteracy pedagogy can support speaking practice and learner autonomy, less is known about the baseline metacognitive strategy profile of early-semester students before such interventions are planned. What remains missing is a study using a validated, factor-based instrument to describe how much second-semester Indonesian university EFL students rely on each type of metacognitive strategy in speaking class. Closing this gap matters for practice as much as for theory because it gives instructors a concrete basis for designing targeted speaking support rather than generic strategy training.

This study was therefore conducted to describe the extent of metacognitive strategy use in speaking class among second-semester EFL students at Universitas Riau Kepulauan, Batam, Indonesia, using the MASQ instrument developed by Sulistyowati et al. (2022). The research question guiding this study is: To what extent do EFL students use metacognitive strategies in speaking class?

METHOD

Research Design

This study employed a descriptive quantitative research design. A descriptive quantitative approach was selected because the study aimed to measure and describe the extent to which EFL students use metacognitive strategies in speaking class without manipulating variables or establishing causal relationships. By collecting numerical data through a structured questionnaire and analyzing it statistically, the study provided an objective description of students' strategy use. Quantitative data were collected using a closed-ended questionnaire, and the results were analyzed using descriptive statistics, specifically mean scores and standard deviations. This design is appropriate when the aim is to provide a systematic and accurate description of a phenomenon as it naturally occurs rather than to test hypotheses or establish causal links (Creswell & Creswell, 2018). In metacognitive strategy research, descriptive quantitative approaches have also been used to establish baseline profiles of learner strategy use (Anwar et al., 2026; Fitrianingsih et al., 2025), making them a suitable choice for the present study.

Participants or Data Sources

The participants of this study were 19 second-semester students of the English Language Education Department at Universitas Riau Kepulauan, Batam, Indonesia, all of whom were enrolled in the same speaking class during the semester in which the data were collected. The participants ranged in age from 18 to 25 years and consisted of 7 male and 12 female students. Participants were selected using purposive sampling because they represented the specific population of interest, namely early-semester EFL learners enrolled in a speaking class. The inclusion criteria required participants to be active second-semester students of the English Language Education Department who were currently enrolled in the speaking course. Students who did not complete the questionnaire or who were repeating the course were excluded from the analysis. Purposive sampling was considered appropriate because it enabled the study to focus on a specific and underrepresented group of Indonesian university EFL students whose metacognitive strategy use in speaking classes has not been sufficiently examined in prior quantitative research (Asrobi et al., 2025). Before data collection, participants were informed in writing about the purpose of the study, the voluntary nature of their participation, and the confidentiality of their responses. Informed consent was obtained before they completed the questionnaire, and no personally identifying information was collected.

Instruments

Data were collected using the Metacognitive Awareness Speaking Questionnaire (MASQ), developed and validated by Sulistyowati et al. (2022). The MASQ consists of 21 items organized into five factors: (1) Planning and Evaluation (PE), comprising five items related to goal-setting, pre-task planning, and post-task reflection; (2) Directed Attention (DA), comprising four items related to maintaining focus and concentration during speaking; (3) Prior Knowledge (PK), comprising three items related to learners' perceptions and attitudes toward speaking English; (4) Mental Translation (MT), comprising three items related to the use of L1 translation during speaking; and (5) Problem-Solving (PS), comprising six items related to strategies for managing communication breakdowns. Responses were measured using a five-

point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). According to Sulistyowati et al. (2022), the questionnaire underwent validity testing using product-moment correlation analysis and reliability testing using Cronbach's alpha. The present study relied on the published evidence of its validity and reliability. The original MASQ was used without modification; therefore, no items were added, removed, or reworded. The MASQ was selected because it was developed specifically to measure metacognitive awareness in speaking rather than listening or general language learning. Its five-factor structure aligns with the theoretical framework of metacognitive strategy use outlined by Flavell (1979) and operationalized in subsequent EFL strategy research (Krishnan, 2021).

Data Collection Procedures

The questionnaire was distributed to participants in digital format via a Google Form link. Before responding, participants were given a brief written explanation of the study's purpose and were assured of the confidentiality of their responses. Participants were given clear instructions to respond to each item based on their actual speaking practices in class rather than their ideal behavior. Data collection was conducted within one academic week to minimize potential recall bias. All 19 participants completed and submitted the questionnaire, resulting in a 100% response rate. No incomplete responses were recorded.

Data Analysis Techniques

The data were analyzed using descriptive statistics. Mean scores (M) and standard deviations (SD) were calculated for each of the five MASQ factors as well as for the overall scale. Mean scores were interpreted using the following classification scale adapted from Sulistyowati et al. (2022): 1.00-1.79 = Very Low, 1.80-2.59 = Low, 2.60-3.39 = Moderate, 3.40-4.19 = High, and 4.20-5.00 = Very High. Data were processed using Microsoft Excel. This classification scale was originally developed as part of the MASQ validation study and has since been used in studies employing the same instrument (Anwar et al., 2026), thereby supporting the comparability of the present findings with those of prior research.

RESULTS

This section presents the findings of the descriptive statistical analysis of metacognitive strategy use among the 19 second-semester EFL students who participated in the study. Results are reported at the factor level by presenting mean scores and standard deviations for each of the five MASQ subscales.

Table 1
Descriptive Statistic of MASQ Factors

No.	Factor	N items	M	SD	Category
1.	Problem-Solving (PS)	6	3.78	0.49	High
2.	Planning and Evaluation (PE)	5	3.77	0.51	High
3.	Directed Attention (DA)	4	3.71	0.56	High
4.	Prior Knowledge (PK)	3	3.69	0.44	High
5.	Mental Translation (MT)	3	3.61	0.43	High

Note. PE = Planning and Evaluation; DA = Directed Attention; PK = Prior Knowledge; MT = Mental Translation; PS = Problem-Solving. Scale: 3.40-4.19 = High.

As shown in Table 1, the overall mean score for metacognitive strategy use in speaking class was 3.72 (SD = 0.43), which falls within the High category. This result indicates that second-semester EFL students at Universitas Riau Kepulauan demonstrated a consistently high level of awareness and use of metacognitive strategies during speaking activities.

Among the five MASQ factors, Problem-Solving (PS) obtained the highest mean score ($M = 3.78$, $SD = 0.49$), followed by Planning and Evaluation (PE; $M = 3.77$, $SD = 0.51$), Directed Attention (DA; $M = 3.71$, $SD = 0.56$), Prior Knowledge (PK; $M = 3.69$, $SD = 0.44$), and Mental Translation (MT; $M = 3.61$, $SD = 0.43$). All five factors were categorized as High according to the classification scale. The narrow range of mean scores suggests that students used all metacognitive strategy types relatively frequently, although compensatory problem-solving and planning/evaluation strategies appeared slightly more prominent than mental translation.

DISCUSSION

This study set out to describe the extent to which second-semester EFL students at Universitas Riau Kepulauan, Batam, use metacognitive strategies in their speaking class. The findings indicate that participants demonstrated a high overall level of metacognitive strategy use ($M = 3.72$, $SD = 0.43$), with all five MASQ factors—Planning and Evaluation, Directed Attention, Prior Knowledge, Mental Translation, and Problem-Solving—falling within the High category. The following discussion interprets these results in light of existing theoretical frameworks and prior empirical studies, addresses the differential performance across strategy types, and considers the pedagogical and theoretical implications of the findings.

The overall high level of metacognitive strategy use found in this study is consistent with a growing body of evidence suggesting that EFL learners, even those at early stages of university education, may already have a working repertoire of metacognitive tools. A similar pattern was found by Anwar et al. (2026), who reported high metacognitive strategy use among EFL students at Muhammadiyah University of Gresik using the same MASQ instrument. Dangin and Hartati (2022) similarly found that Indonesian junior college students' metacognitive strategy awareness fell in the good-to-high range and correlated strongly with their speaking ability. Tekin and Kaya (2026) further demonstrated that metacognitive awareness was a significant positive predictor of foreign language speaking self-efficacy among university students in Turkey. Taken together, these studies suggest that the link between metacognitive awareness and capable speaking performance is a fairly robust pattern across EFL contexts. This finding also aligns with Flavell's (1979) theoretical position that metacognitive knowledge develops progressively as learners gain experience with cognitive tasks.

Among the five MASQ factors, Problem-Solving emerged as the highest-scoring factor (PS; $M = 3.78$, $SD = 0.49$). This finding indicates that the participants frequently relied on strategies to overcome communication difficulties during speaking activities by using alternative expressions, familiar vocabulary, or other compensatory techniques. Similar findings were reported by Anwar et al. (2026), Zhang et al. (2021), and Zhang et al. (2022), who found that problem-solving was among the most frequently used metacognitive strategies in EFL speaking. The prominence of Problem-Solving in the present study may reflect the participants' efforts to maintain communication despite their developing English proficiency. Since the

participants were second-semester students, they were likely to encounter vocabulary limitations or communication breakdowns and therefore actively employed compensatory strategies to sustain interaction.

Planning and Evaluation ranked second (PE; $M = 3.77$, $SD = 0.51$). Although it was not the highest-scoring factor, its mean score was very close to that of Problem-Solving, indicating that students also frequently planned their speaking performance before speaking and evaluated it afterward. This finding is consistent with Anwar et al. (2026), who identified Planning and Evaluation as one of the frequently used metacognitive strategies among Indonesian EFL learners. Likewise, Zhang et al. (2021) reported that Chinese EFL learners actively employed planning strategies during integrated speaking tasks. According to Kallio et al. (2018), goal-setting and self-reflection become increasingly developed as learners gain greater awareness of their own learning processes. The relatively high score obtained in this study may also reflect the structured nature of classroom speaking activities, which generally provide opportunities for preparation before speaking and reflection after task completion.

Directed Attention ranked third (DA; $M = 3.71$, $SD = 0.56$), indicating that students were generally able to maintain focus during speaking activities and return attention to speakers when concentration was disrupted. This factor is important because speaking requires learners to divide cognitive resources between understanding interlocutors, generating meaning, and monitoring language form (Newton & Nation, 2021). The high score suggests that the participants had developed a reasonable level of attentional control, although directed attention may still require support through classroom tasks that encourage students to attend to both fluency and accuracy during live interaction.

Prior Knowledge ranked fourth (PK; $M = 3.69$, $SD = 0.44$), reflecting students' use of existing knowledge, previous learning experiences, and self-perceptions while performing speaking tasks. Sulistyowati et al. (2022) suggested that learners' beliefs and prior experiences contribute significantly to metacognitive awareness. Similarly, Chou (2021) found that learners who activated their prior knowledge were better able to regulate their speaking performance. These findings suggest that the participants had developed sufficient awareness of their strengths and limitations, enabling them to make more informed decisions during speaking activities.

Mental Translation recorded the lowest mean score among the five factors (MT; $M = 3.61$, $SD = 0.43$). Although still categorized as High, this result suggests that students relied on Bahasa Indonesia as an intermediate cognitive process less frequently than they used other metacognitive strategies. This finding is pedagogically meaningful because mental translation can function as a compensatory strategy when learners cannot immediately retrieve English vocabulary, but excessive reliance on translation may reduce opportunities for developing automatic English production (Newton & Nation, 2021). Therefore, EFL instructors may gradually reduce students' dependence on translation by increasing opportunities for direct English thinking, repeated oral routines, and meaningful speaking practice.

Overall, the findings indicate that second-semester EFL students demonstrated a high level of metacognitive strategy use in speaking activities, with Problem-Solving and Planning and Evaluation emerging as the two most frequently employed strategies. These findings suggest that students were generally capable of regulating their speaking processes by preparing, responding to communication difficulties, maintaining attention, and evaluating their

performance. The present findings support Flavell's (1979) view that metacognitive awareness develops progressively through learning experiences and provide additional empirical evidence regarding metacognitive strategy use among Indonesian university EFL students. Pedagogically, English instructors are encouraged to continue strengthening students' planning and problem-solving skills while designing classroom activities that promote attentional control, self-monitoring, and reduced dependence on mental translation during speaking tasks.

CONCLUSION

This study aimed to describe the extent to which EFL students use metacognitive strategies in their speaking class, with a focus on 19 second-semester students in the English Language Education program at Universitas Riau Kepulauan, Batam, Indonesia. Employing a descriptive quantitative design and the validated MASQ instrument developed by Sulistyowati et al. (2022), the study collected and analyzed data across five metacognitive strategy factors: Planning and Evaluation, Directed Attention, Prior Knowledge, Mental Translation, and Problem-Solving.

The findings revealed that participants demonstrated a high overall level of metacognitive strategy use ($M = 3.72$, $SD = 0.43$), with all five MASQ factors falling within the High category. Problem-Solving ($M = 3.78$) emerged as the highest-scoring factor, indicating that students frequently relied on strategies to overcome communication difficulties and maintain interaction during speaking activities.

Planning and Evaluation ($M = 3.77$) ranked second, suggesting that students also regularly planned, monitored, and evaluated their speaking performance. Directed Attention ($M = 3.71$) followed, indicating that students generally maintained focus during speaking activities. Prior Knowledge ($M = 3.69$) and Mental Translation ($M = 3.61$) recorded slightly lower means, with Mental Translation being the lowest factor. This pattern suggests that students' strongest metacognitive tendencies were related to compensating for communication difficulties and regulating speaking preparation, while translation-based processing was less dominant.

This study contributes to the growing literature on metacognitive strategy use among Indonesian EFL learners by providing descriptive evidence from second-semester university students, a population that has received relatively limited attention. The findings also support the usefulness of the MASQ instrument for examining factor-level differences in metacognitive strategy use. These findings are consistent with Putri et al. (2024), who found that higher metacognitive awareness helps EFL learners regulate their learning process and improve their speaking performance. The findings are further supported by Safitri and Indriani (2020), who reported that self-evaluation as a metacognitive strategy enables EFL learners to reflect on their speaking performance and continuously improve their oral communication skills.

Nevertheless, the study is limited by its relatively small sample size and its focus on a single institution. Future studies should include larger and more diverse samples across multiple universities and consider mixed-methods approaches to gain deeper insights into students' metacognitive processes during speaking activities.

From a pedagogical perspective, the findings suggest that EFL instructors should continue strengthening students' metacognitive strategy use by integrating explicit strategy

instruction into speaking courses. Particular attention should be given to sustaining students' strengths in Problem-Solving and Planning and Evaluation while gradually reducing overreliance on Mental Translation through reflective and communicative speaking activities. Instructors may also use technology-supported speaking tasks, such as digital storytelling and multiliteracy-oriented activities, to promote learner autonomy, authentic practice, and self-regulated engagement in speaking classes (Dewi et al., 2023; Dewi et al., 2025).

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