

What drives English-speaking skills? An integrative SEM-PLS model of motivation, interest, vocabulary, and independence

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ABSTRACT

Although learning motivation, learning interest, vocabulary mastery, and learning independence are recognized as key contributors to EFL speaking development, they are often examined in isolation. This study investigated the direct and indirect effects of learning motivation, learning interest, and vocabulary mastery on English speaking ability through learning independence and identified the strongest predictor of speaking performance. An explanatory quantitative design was employed with 148 undergraduate EFL students selected through purposive sampling. Data were collected using a structured questionnaire and a speaking performance test assessing fluency, pronunciation, vocabulary, grammar, and comprehension. Partial least squares structural equation modeling (PLS-SEM) was used for data analysis. The results revealed that learning interest ($\beta = 0.278$, $p = 0.002$), learning motivation ($\beta = 0.240$, $p = 0.021$), and vocabulary mastery ($\beta = 0.372$, $p < 0.001$) significantly predicted learning independence. Vocabulary mastery ($\beta = 0.309$, $p = 0.003$) and learning independence ($\beta = 0.373$, $p = 0.001$) significantly predicted English speaking ability, whereas learning interest and learning motivation showed no significant direct effects. Learning interest and vocabulary mastery exerted significant indirect effects on speaking ability through learning independence, while learning motivation did not. The model explained 67.4% of the variance in speaking ability and 63.8% of the variance in learning independence. These findings indicate that learning independence is the strongest direct predictor of English speaking ability and a key mediating mechanism linking vocabulary mastery and learning interest to speaking performance. Integrating vocabulary development, learner-autonomy strategies, and sustained speaking practice may therefore enhance EFL speaking outcomes.

Keywords: English speaking skills; learning independence; learning interest; learning motivation; vocabulary mastery

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INTRODUCTION

For learners of English as a foreign language (EFL), speaking remains one of the most challenging language skills to develop because it requires the simultaneous coordination of linguistic knowledge,

cognitive processing, and real-time interaction. This situation drives EFL learners to struggle with their fluency, accuracy, and confidence in oral communication. Empirical evidence indicates that these difficulties are associated with multiple linguistic and affective factors. [Nguyen \(2025\)](#), for example, found that Vietnamese EFL pre-service teachers experienced speaking anxiety related to limited vocabulary, pronunciation difficulties, reliance on first-language translation, fear of negative evaluation, and low self-confidence. Similarly, longitudinal evidence indicates that affective factors such as self-confidence and joy are associated with differences in speaking skill ([Chang et al., 2024](#)). Quantitative evidence also indicates that emotional and academic factors are related to speaking accuracy and fluency ([Panggua et al., 2025](#)). In addition, recent research has assessed speaking performance through fluency, coherence, lexical resources, grammatical accuracy, and pronunciation, emphasizing the multidimensional nature of oral proficiency ([Zhang, 2024](#)). The studies show that speaking development is influenced significantly through linguistics knowledge and emotional aspects.

Learning motivation and learning interest are among the psychological factors that may influence learners' engagement in speaking activities. Motivation influences learners' effort, persistence, and commitment to second-language learning, making motivated learners more likely to devote time and effort to language practice ([Almayez et al., 2025](#)). Learning interest, in contrast, is associated with learners' attention, curiosity, and willingness to participate in particular learning activities. Interest, therefore, encourages learners to engage more actively in speaking tasks and sustain their attention during communicative practice. Evidence from the Indonesian EFL context supports the relevance of these factors. [Ni'mah et al. \(2025\)](#), for example, examined Indonesian students and reported that learning interest and vocabulary mastery were significantly related to English speaking skills. This result gives recommendations for learners to participate in speaking activities and develop oral proficiency. Other research in Indonesia has also examined motivational factors in relation to English speaking development, demonstrating the importance of learners' motivation in sustaining engagement with language-learning activities. However, motivation and interest may not independently determine speaking performance because learners also require sufficient linguistic resources and the capacity to regulate their learning.

Vocabulary mastery represents an essential linguistic resource for speaking because learners need sufficient lexical knowledge to formulate and communicate meaning effectively. [Jin et al. \(2026\)](#) highlighted the central role of vocabulary knowledge in enabling learners to encode and communicate meaning, while [Zhou and Goh \(2025\)](#) emphasized vocabulary as a fundamental resource for oral communication. Evidence from Indonesian EFL settings similarly demonstrates the importance of vocabulary mastery, as explained by [Pramadanti \(2023\)](#) and [Shi \(2025\)](#), that mastering in vocabulary has a positive relation to the learners' speaking skills. These show that vocabulary knowledge provides an important linguistic foundation for oral production because learners with greater lexical resources may have greater capacity to express ideas, maintain interaction, and communicate meaning. Nevertheless, vocabulary knowledge alone may not fully explain differences in speaking performance. Learners must also be willing to participate in communication and capable of managing their own learning processes. Therefore, examining vocabulary mastery together with psychological and self-regulatory factors may provide a more comprehensive explanation of EFL students' speaking ability.

Learning independence, often discussed through the concepts of learner autonomy and self-regulated learning, provides another important dimension for understanding EFL speaking development. Autonomous and self-regulated learners stimulate greater responsibility for planning, monitoring, evaluating, and extending their learning beyond formal classroom instruction ([Daidone & Darcy, 2021](#)). Evidence from the Indonesian context supports the relevance of this factor to speaking development. [Ni'mah et al. \(2025\)](#), for example, reported a positive relationship between self-regulated learning and speaking skills among Indonesian university EFL students. Similarly, Indonesian research on self-regulated learning has shown that learners use metacognitive, cognitive, resource-management, and motivational strategies when developing their speaking skills ([Seprisa et al., 2022](#)). These findings suggest that learning independence may facilitate speaking development by encouraging learners to seek additional language exposure, regulate their learning activities, monitor

their progress, and engage in repeated speaking practice. However, existing Indonesian studies have largely examined learning independence or self-regulated learning as an independent factor rather than as a possible mechanism connecting psychological and linguistic factors with speaking performance. This limitation suggests the need to examine learning independence within a broader structural model.

Although previous studies have demonstrated relationships among motivation, interest, vocabulary mastery, learning independence, and speaking performance, these constructs have generally been examined through separate explanatory pathways. Indonesian studies have separately demonstrated the relevance of learning interest and vocabulary mastery to speaking skills (Mulyani et al., 2023), vocabulary mastery to speaking ability (Bangun & Simanjuntak, 2022), and self-regulated learning to speaking development (Ni'mah et al., 2025). These findings provide valuable evidence but do not sufficiently explain how psychological factors, linguistic resources, and learning independence interact within a single explanatory framework. From the perspective of self-determination theory, motivation represents an important psychological mechanism that influences learners' willingness to initiate and sustain learning activities (Ryan & Deci, 2020). Learning interest may further sustain learners' attention and engagement, whereas vocabulary mastery provides the linguistic resources required for oral expression. Learning independence may function as a self-regulatory mechanism through which learners transform motivation and interest into sustained learning behaviors. Thus, the research gap is not the absence of studies on these individual constructs, but the limited integration of these psychological, linguistic, and self-regulatory factors within one structural model of EFL speaking ability.

The present study proposes an integrated structural framework that conceptualizes English speaking ability as the outcome of interconnected psychological, self-regulatory, and cognitive-linguistic processes. Learning motivation and learning interest represent psychological mechanisms that may encourage learners to engage and persist in English learning, while vocabulary mastery represents the linguistic resources necessary for expressing meaning during oral communication. Learning independence represents the self-regulatory capacity through which learners plan, manage, monitor, and extend their learning activities. The novelty of the present study lies in examining these constructs simultaneously rather than treating them as isolated predictors of speaking performance. Specifically, this study investigates the direct effects of learning motivation, learning interest, and vocabulary mastery on learning independence and English speaking ability, as well as the indirect effects of these variables on speaking ability through learning independence. By employing partial least squares structural equation modeling (PLS-SEM), the study also seeks to identify the strongest predictor of English speaking ability and clarify the direct and indirect pathways among the variables. Accordingly, this study aims to contribute empirical evidence from the Indonesian EFL university context and provide a more integrated explanation of how psychological, linguistic, and self-regulatory factors jointly shape students' English speaking performance.

LITERATURE REVIEW

English speaking skills in EFL contexts

Speaking performance requires learners to associate linguistic, cognitive, and affective aspects with one another as a multidimensional learning outcome. Schweder et al. (2025) highlight the importance of fluency, accuracy, pronunciation, and interactional competence in evaluating speaking performance, indicating that successful speaking involves more than grammatical correctness or vocabulary knowledge alone. These dimensions are closely interconnected: fluency reflects the ability to produce speech smoothly, accuracy concerns appropriate grammatical and lexical use, pronunciation contributes to intelligibility, and interactional competence enables learners to manage turns, respond appropriately, and repair communication problems. Thus, speaking performance represents learners' ability to mobilize multiple linguistic and communicative resources simultaneously rather than simply demonstrate knowledge of English forms. Empirical and conceptual evidence further suggests that speaking performance is shaped by psychological and learner-related characteristics in addition to linguistic resources. Li et al. (2024) emphasize that effective speaking involves the coordination of

cognitive, linguistic, and emotional processes, while affective factors such as motivation, anxiety, self-efficacy, and curiosity can influence learners' willingness to engage in oral communication and take communicative risks. These perspectives indicate that English speaking skills should be understood as a complex construct involving the interaction of linguistic competence and learners' psychological engagement.

Learner autonomy and independence are also relevant because students who regulate their own learning may have greater opportunities to engage in speaking practice beyond formal classroom activities. However, these factors do not necessarily operate in isolation. Motivation and interest may encourage learners to participate and persist in speaking practice, learning independence may help them regulate and sustain such engagement, and vocabulary mastery may provide the linguistic resources needed to transform engagement into effective oral production. Therefore, existing evidence supports a multidimensional view of EFL speaking performance in which affective, self-regulatory, and linguistic factors operate as complementary rather than isolated influences. Taken together, this perspective provides a theoretical basis for positioning English speaking skills as the primary outcome in the present study, while learning motivation and learning interest represent affective conditions that stimulate and sustain engagement, learning independence represents a self-regulatory capacity that supports continued learning and practice, and vocabulary mastery represents a cognitive-linguistic resource necessary for expressing meaning. Examining these constructs within a single structural framework enables the present study to move beyond isolated predictors and investigate how psychological, self-regulatory, and linguistic dimensions jointly contribute to EFL learners' speaking performance.

Vocabulary mastery and speaking ability

To communicate, formulate, and express ideas fluidly during spontaneous interactions, individuals heavily rely on a rich internal lexicon. Consequently, data-driven studies confirm a multifaceted yet highly positive correlation between verbal proficiency and a learner's vocabulary depth. [Nguyen \(2025\)](#), for example, even though comprehension of a wide range of words correlates strongly with lexical evaluations in natural L2 discourse, it does not guarantee the utilization of advanced vocabulary during oral tasks. This discrepancy indicates that a vast passive vocabulary does not spontaneously result in the proficient deployment of sophisticated words when speaking. Similarly, research on productive vocabulary has shown that productive vocabulary knowledge is significantly related to L2 fluency, although its contribution may differ across other dimensions of speaking performance, such as comprehensibility and accentedness ([Sumoto et al., 2023](#)). More recent evidence from Moroccan EFL learners also indicates that both receptive and productive vocabulary breadth are positively associated with speaking ability, suggesting that different dimensions of vocabulary knowledge can contribute to variation in oral performance. Evidence from the Indonesian context further strengthens this relationship. [Bangun and Simanjuntak \(2022\)](#), through a meta-analysis of 21 studies involving 820 Indonesian EFL learners, found that vocabulary mastery had a positive effect on English-speaking ability. Similarly, [Nasution and Saragih \(2025\)](#) reported a strong relationship between vocabulary mastery and speaking ability among Indonesian students. These findings indicate that vocabulary mastery is an important foundation for speaking development, while also suggesting that its contribution depends on how lexical knowledge is accessed and used during oral communication.

The distinction between receptive and productive vocabulary is therefore important for understanding the role of vocabulary mastery in speaking performance. Receptive vocabulary refers to lexical knowledge that enables learners to recognize and understand words, whereas productive vocabulary concerns the ability to retrieve and use lexical items during language production. Productive vocabulary may have a more immediate relationship with oral performance because speaking requires active lexical retrieval rather than recognition alone. Nevertheless, receptive vocabulary remains relevant because broader receptive knowledge can provide a foundation for developing productive lexical knowledge. The evidence therefore suggests that vocabulary mastery is an important but insufficient condition for strong speaking performance, as learners also require

psychological engagement and the capacity to regulate their learning. Accordingly, the present study conceptualizes vocabulary mastery as a cognitive-linguistic resource that contributes to English speaking ability alongside learning motivation, learning interest, and learning independence. Examining these factors within an integrated structural model enables the study to determine whether vocabulary mastery contributes directly to speaking performance and whether learning independence provides an additional pathway through which linguistic resources may support oral development.

Learning interest and speaking engagement

Learning interest represents a distinct affective construct from learning motivation because it concerns learners' sustained attention, curiosity, and engagement with particular learning activities, whereas motivation refers more broadly to the reasons, direction, intensity, and persistence underlying learning behavior. Ma and Chen (2024) characterize learning interest in terms of learners' positive emotional involvement, sustained attention, and active participation in learning activities. Empirical research supports the relevance of learning interest to English-speaking development. Song (2024), for example, found that learning interest significantly contributed to students' English speaking skills in the Indonesian EFL context. Their findings suggest that learners who demonstrate greater interest in English learning may be more willing to participate in speaking activities and engage actively in language practice. Similarly, research on EFL learners has indicated that affective engagement can increase learners' participation and opportunities for language practice, which may subsequently support oral language development. However, the relationship between learning interest and speaking performance is not necessarily uniform because affective engagement may influence speaking development through learners' participation and learning behaviors rather than directly determining oral performance. Therefore, learning interest should be understood as an affective condition that sustains learners' engagement in speaking-related activities rather than as a direct guarantee of improved speaking ability.

Learning interest may also be associated with learning independence because sustained curiosity and engagement can encourage learners to take greater responsibility for their learning activities. Learners who are interested in English may be more likely to establish personal learning goals, seek additional language exposure, and engage in self-directed speaking practice (Oh, 2024). Evidence from the Indonesian context further supports the importance of self-regulated learning in speaking development. Xue and Ardasheva (2019) found a positive relationship between self-regulated learning and speaking skills among Indonesian university EFL students, suggesting that learners' active management of their learning may contribute to oral language development. Similarly, Sepriya et al. (2022) reported that Indonesian EFL students employed metacognitive, cognitive, resource-management, and motivational strategies when learning speaking skills. These findings provide empirical support for the possibility that learning interest may encourage engagement, while learning independence helps learners regulate and sustain that engagement through continued learning activities. Nevertheless, whether learning independence mediates the relationship between learning interest and speaking performance requires empirical testing. Accordingly, the present study examines learning interest as a distinct psychological predictor and investigates its structural relationship with learning independence and English speaking ability within an integrated model, alongside vocabulary mastery and learning motivation.

Learning independence and speaking development

Learning independence, closely related to the concepts of learner autonomy and self-regulated learning, refers to learners' capacity to take responsibility for and actively regulate their own learning processes. From the perspective of learner autonomy, independent learners can establish learning goals, select appropriate strategies, monitor their progress, and evaluate the outcomes of their learning. Similarly, self-regulated learning emphasizes learners' active regulation of their cognition, motivation, behavior, and learning strategies throughout the learning process (Ryan & Deci, 2020). Maisyaroh et al. (2024) further explain that learning independence involves defining learning goals, choosing

suitable learning techniques, monitoring progress, and evaluating learning outcomes. In the context of EFL speaking, these characteristics are particularly important because the development of speaking skills requires continuous practice, self-monitoring, strategic learning, and persistence beyond teacher-directed classroom activities. Learners with a high level of learning independence are therefore more likely to seek opportunities to practice English outside the classroom, expand and apply their vocabulary, monitor their pronunciation and fluency, and employ strategies to improve their interactional competence. Such proactive engagement increases not only the amount of practice but also the quality and purposefulness of learners' speaking activities.

Learning independence may serve as a mediating mechanism through which learners' psychological and motivational characteristics translate into observable speaking development. Rather than directly determining speaking ability, learning independence can facilitate the processes through which learners transform motivation, interest, and cognitive readiness into sustained learning behaviors. Learners who possess stronger motivation are more likely to set personal learning goals, organize their learning activities, practice speaking consistently, and persist when facing difficulties such as anxiety, fear of making mistakes, or limited confidence. Likewise, learners with strong interest in English tend to engage more actively in self-directed learning, maintain attention during learning activities, and explore challenging linguistic forms. Vocabulary knowledge may further support this process by providing learners with the lexical resources needed to formulate ideas, construct sentences, and participate more confidently in communicative interactions. Through goal setting, strategy selection, self-monitoring, and persistence, learning independence can connect learners' internal psychological resources with their actual learning behaviors and, ultimately, their English-speaking performance. Consequently, its mediating role is theoretically justified because learning independence represents the process through which motivation, interest, and cognitive resources are converted into sustained engagement and improved speaking ability.

Learning motivation and English-speaking development

Learning motivation is an important psychological factor in foreign language learning because it influences learners' willingness, effort, and persistence in engaging with language-learning activities. [Kumar \(2021\)](#) explains that intrinsic motivation encourages learners to participate willingly and sustain their efforts, while [Duyen and Hao \(2023\)](#) emphasize its role in learners' involvement, effort, and persistence in language tasks, including speaking activities. Highly motivated EFL learners are more likely to establish personal learning goals, devote time to speaking practice, seek opportunities to communicate in English, and persist despite difficulties such as pronunciation problems, limited vocabulary, or fear of making mistakes. Consequently, motivation is expected to contribute directly to English speaking development by encouraging sustained engagement and practice, which are necessary for improving fluency, pronunciation, vocabulary, grammar, and interactional competence. [Aleidan \(2024\)](#) further indicates that motivation helps transform learners' internal psychological resources into observable learning behaviors and outcomes.

Learning motivation is also expected to contribute to learning independence by encouraging learners to take greater responsibility for their own learning. Motivated learners are more likely to organize their study activities, seek additional learning resources, set personal goals, and engage in self-directed speaking practice. These behaviors are consistent with the principles of learner autonomy and self-regulated learning, which emphasize learners' ability to plan, monitor, regulate, and evaluate their learning processes ([Ma et al., 2023](#)). [Shang and Ma \(2024\)](#) similarly highlight the role of motivation in encouraging learners to take initiative and sustain independent language-learning activities. Therefore, in the present study, learning motivation is conceptualized as a psychological predictor of both learning independence and English speaking skills, while learning independence serves as the mediating mechanism that may translate learners' motivation into sustained, self-directed learning behaviors and, ultimately, improved speaking performance.

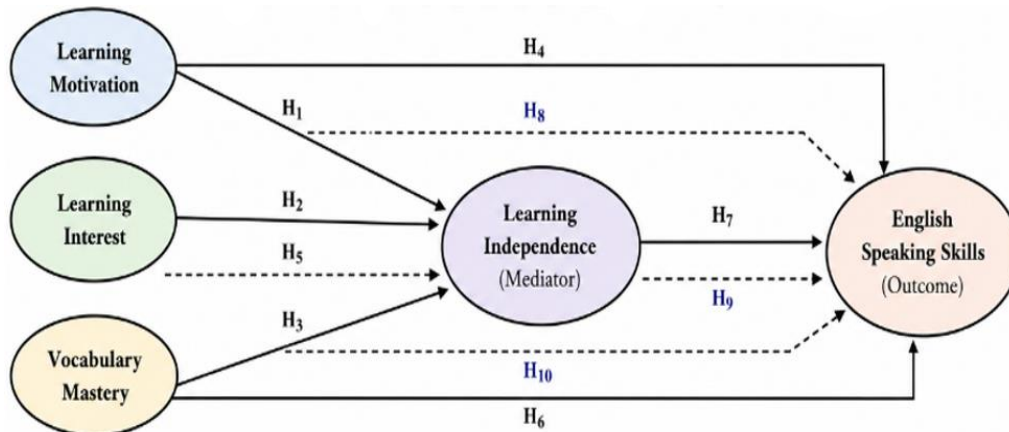
The need for an integrative model

Given the multidimensional nature of English-speaking skills, an integrative model is needed to capture the interplay of linguistic, cognitive, psychological, and learner-related factors. English speaking proficiency is not determined solely by linguistic knowledge, such as vocabulary mastery, but also by learners' motivation, interest, and ability to take responsibility for and regulate their own learning, referred to as learning independence. [Pramadanti \(2024\)](#) describes speaking as a complex productive skill that requires the coordination of cognitive, affective, and linguistic processes. Similarly, [Almayez et al. \(2025\)](#) emphasize that motivation and interest encourage learners to engage in active practice, persist in overcoming difficulties, and take communicative risks. In addition, [Bao et al. \(2024\)](#) highlight that learner autonomy supports self-directed learning by enabling students to monitor their progress and apply appropriate learning strategies, which is important for developing English speaking skills. These perspectives suggest that speaking development results from the interaction of learners' linguistic resources, psychological dispositions, and capacity to regulate their learning activities.

Within this integrative perspective, learning independence is positioned as a mediating mechanism through which learners' motivation, interest, and linguistic resources may be translated into sustained learning behaviors and speaking performance. Independent learners are better able to organize practice, select appropriate strategies, monitor their progress, and apply their knowledge in authentic communicative situations. Thus, the proposed model allows both direct and indirect relationships to be examined, such as vocabulary mastery → English speaking skills and learning motivation → learning independence → English speaking skills. This framework provides a more comprehensive explanation of EFL speaking development by recognizing that linguistic knowledge and psychological factors may influence performance not only directly but also through learners' capacity to regulate and sustain their own learning. [Figure 1](#) presents the conceptual framework of the study and the hypothesized relationships developed from the relevant theoretical and empirical literature.

Figure 1

Conceptual Framework and Hypothesized Relationships



In this study, learning independence is conceptualized as the mediating mechanism through which psychological and cognitive factors contribute to English-speaking skills. Learning motivation stimulates learners' effort, persistence, and engagement in English learning, while learning interest reflects their willingness and sustained involvement in language-learning activities. Vocabulary mastery provides the linguistic resources necessary for learners to formulate ideas and participate effectively in communicative interactions ([Rodriguez et al., 2025](#); [Zhuang, 2023](#)). However, these internal resources may not automatically result in improved speaking performance unless learners can regulate and apply them through independent learning behaviors. Learning independence enables students to take responsibility for their learning by organizing speaking practice, selecting appropriate strategies,

monitoring their progress, and applying their linguistic resources effectively, thereby supporting fluency, accuracy, and interactional competence (Kafipour & Khoshnood, 2023). Accordingly, this study examines both the direct effects of learning motivation, learning interest, and vocabulary mastery on English speaking skills, and their indirect effects through learning independence. This integrative model emphasizes that psychological and cognitive resources may contribute to speaking development not only directly but also through learners' capacity to manage and sustain their own learning processes (Eriyanto et al., 2021).

METHODOLOGY

Research design

This study aimed to examine the relationships among learning motivation, learning interest, vocabulary mastery, learning independence, and English-speaking skills in the context of English as a foreign language (EFL) learning. Specifically, the study investigated both the direct relationships between the exogenous variables and English-speaking skills and the indirect relationships through the mediating role of learning independence. Achieving these objectives required a research design capable of simultaneously testing multiple hypothesized relationships among latent constructs while evaluating the proposed conceptual framework. Therefore, an explanatory quantitative research design was employed. The proposed model comprised learning motivation, learning interest, and vocabulary mastery as the exogenous variables, learning independence as the mediating variable, and English-speaking skills as the endogenous variable.

To test the proposed hypotheses, this study employed structural equation modeling (SEM) using the partial least squares (PLS) method (hereafter referred to as SEM-PLS). SEM-PLS was selected because it is well-suited for examining complex structural models involving multiple latent constructs, direct relationships, and mediating effects within a single analytical framework. The technique simultaneously evaluates the measurement model (outer model) and the structural model (inner model), enabling the assessment of construct reliability and validity alongside the testing of hypothesized relationships. Moreover, SEM-PLS is appropriate for prediction-oriented research and is robust when multivariate normality assumptions cannot be guaranteed, making it suitable for examining the proposed conceptual framework in this study (Sarstedt et al., 2020).

Population and sample

The target population of this study consisted of undergraduate students enrolled in English courses at ASA Indonesia University during the 2025/2026 academic year. The institution was selected because English is included in the undergraduate curriculum and students regularly participate in English learning activities involving speaking practice. The population was relevant to the research objectives because the study examined the relationships among learning motivation, learning interest, vocabulary mastery, learning independence, and English speaking skills. The study specifically focused on first-semester undergraduate students enrolled in the targeted English course during the data-collection period. The inclusion criteria were: (1) being an active first-semester undergraduate student enrolled in the targeted English course, (2) participating in English learning activities during the data-collection period, and (3) completing the required questionnaire and English language assessments. Students who did not complete the research instruments were excluded from the final dataset.

Purposive sampling was employed because the study required participants who met specific characteristics directly aligned with the research objectives. Probability sampling was not feasible because the researchers did not have access to a complete sampling frame of all eligible EFL students, and the study was conducted within a specific institutional and course context. This sampling strategy enabled the researchers to recruit participants who were directly relevant to the proposed conceptual framework. However, the use of purposive sampling limits the statistical generalizability of the findings to broader populations. Therefore, the findings should be interpreted primarily in relation to first-semester EFL learners with comparable educational and institutional characteristics rather than as representative of all Indonesian university students.

Rather than relying on the conventional 10-times rule, which contemporary PLS-SEM methodological frameworks view as insufficient, this study employed an a priori power analysis to justify its sample size. To establish the minimum number of participants required for the structural framework, the computation incorporated an alpha error probability of 0.05, an anticipated effect magnitude of $f^2 = [\text{value}]$, a statistical power target of 0.80, and a maximum of four predictors for the endogenous variable. The calculation indicated that a minimum cohort of $[\text{value}]$ individuals was essential. Data collection yielded completed research instruments from 220 students, effectively surpassing the established statistical threshold and ensuring a more robust empirical foundation than traditional heuristics.

Regarding participant characteristics, all participants were first-semester undergraduate students. Additional demographic and academic characteristics, including gender, English proficiency level, and previous experience with English-speaking courses or activities, were collected. These characteristics provide important contextual information for interpreting the findings and facilitate a more transparent assessment of the study's applicability to learners with similar educational backgrounds.

Research instruments

This study employed both questionnaire-based and performance-based instruments to measure the research variables. The questionnaire was used to assess learning motivation, learning interest, and learning independence, whereas vocabulary mastery was measured using a vocabulary achievement test and English speaking skills were assessed through a structured speaking performance test. The questionnaire items were adapted from previously validated instruments reported in the relevant literature and modified to suit the Indonesian EFL context while preserving their original conceptual meaning. Responses to the questionnaire were measured using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Learning motivation was operationalized through indicators of learners' effort, persistence, and engagement in English learning. Learning interest reflected learners' attention, curiosity, and enjoyment during English learning activities, whereas learning independence represented learners' ability to regulate, monitor, and evaluate their own learning process. Vocabulary mastery was assessed using an objective vocabulary achievement test, while English speaking skills were evaluated using an analytic speaking assessment covering fluency, pronunciation, vocabulary, grammar, and comprehension.

Before the main data collection, the instruments underwent content validation to ensure their clarity, relevance, and appropriateness for the research context. The questionnaire and speaking assessment were reviewed by experts in English language education and educational measurement, and revisions were made based on their recommendations before administration. [If applicable: A pilot test involving students who were not included in the main sample was subsequently conducted to evaluate item clarity and administration procedures.] The quality of the reflective measurement model was subsequently evaluated using Convergent validity, which was assessed using outer loadings (≥ 0.70) and average variance extracted ($AVE \geq 0.50$), while internal consistency reliability was evaluated using composite reliability ($CR \geq 0.70$) and Cronbach's alpha (≥ 0.70). These criteria ensured that the measurement instruments demonstrated acceptable validity and reliability before the structural model was evaluated.

Measurement of English speaking skills

English-speaking skills were measured through a structured speaking performance test designed to assess students' oral communication ability in English. Each participant individually completed speaking tasks appropriate for first-semester EFL learners, including describing a familiar topic, expressing personal opinions, and delivering a short oral presentation. Participants were given approximately 3–5 minutes to complete the assessment under standardized classroom conditions. To ensure consistency, all participants received the same instructions, prompts, and testing procedures throughout the assessment.

The speaking performances were evaluated using an analytic speaking rubric consisting of five assessment dimensions: fluency, pronunciation, vocabulary, grammar, and comprehension. Each dimension was scored separately, and the scores were combined to obtain an overall English-speaking score for each participant. The rubric was adapted from established EFL speaking assessment criteria and modified to suit the objectives and proficiency level of the participants in the present study. To improve scoring consistency, all performances were assessed using the same rubric under identical scoring procedures before the scores were incorporated into the SEM-PLS analysis.

FINDINGS

Measurement model assessment (Outer Model)

The measurement model was evaluated using SEM-PLS to assess indicator reliability, internal consistency reliability, and convergent validity. Indicator reliability was first examined using outer loadings, with values of 0.70 or higher considered acceptable (Hair et al., 2019). Internal consistency reliability was subsequently evaluated using composite reliability (CR) and Cronbach's alpha (CA), both of which should exceed 0.70. Finally, convergent validity was assessed using average variance extracted (AVE), where values above 0.50 indicate that a construct explains more than half of the variance of its indicators.

Table 1 presents the results of the measurement model assessment. All indicators achieved outer loading values above the recommended threshold of 0.70, indicating satisfactory indicator reliability. Furthermore, all constructs demonstrated CR values ranging from 0.850 to 0.894 and CA values ranging from 0.735 to 0.841, both exceeding the recommended minimum value of 0.70, thereby confirming satisfactory internal consistency reliability. In addition, the AVE values ranged from 0.626 to 0.677, all of which were greater than 0.50, indicating adequate convergent validity. These findings demonstrate that the measurement model possesses acceptable reliability and convergent validity and is therefore appropriate for subsequent structural model evaluation (Hair et al., 2019).

Table 1

Measurement Model Assessment: Indicator Reliability, Internal Consistency Reliability, and Convergent Validity

Variable	Indicator	Outer Loading	Composite Reliability	Cronbach's Alpha	Average Variance Extracted (AVE)
Learning Motivation	<i>Attention</i>	0.788	0,877	0,813	0.640
	<i>Relevance</i>	0.814			
	<i>Confidence</i>	0.785			
	<i>Satisfaction</i>	0.812			
Learning Interest	<i>Positive feelings in learning</i>	0.798	0,850	0,735	0,654
	<i>Comfort while learning</i>	0.824			
	<i>Decision-making ability in learning</i>	0.803			
Vocabulary Mastery	<i>Spelling accuracy</i>	0.802	0,851	0,737	0,655
	<i>Accuracy of meaning</i>	0.808			
	<i>Accuracy of use in context</i>	0.818			
Independent Learning	<i>Activeness in the learning process</i>	0.826	0,894	0,841	0,677
	<i>Learning discipline</i>	0.842			
	<i>Self-confidence in learning</i>	0.816			
	<i>Responsibility in learning</i>	0.808			
English Speaking Skill	Vocal accuracy	0.801	0,870	0,801	0,626
	Voice intonation	0.810			
	Speech accuracy	0.782			
	Fluency	0.771			

Source: Author.

Outer loading values ≥ 0.70 indicate acceptable indicator reliability. CR and CA values ≥ 0.70 indicate satisfactory internal consistency reliability. AVE values ≥ 0.50 indicate adequate convergent validity (Sarstedt et al., 2020).

Discriminant validity – Fornell-Larcker

Table 2

Discriminant Validity-Fornell Lacker

	English Speaking Skills	Learning Independence	Learning Interest	Learning Motivation	Vocabulary Mastery
English Speaking Skills	0.791				
Learning Independence	0.764	0.823			
Learning Interest	0.675	0.703	0.809		
Learning Motivation	0.693	0.720	0.762	0.800	
Vocabulary Mastery	0.709	0.726	0.735	0.749	0.809

Source: Author.

Verifying reflective indicators through discriminant validity involves ensuring that item loadings exceed 0.70 or that the square root of a construct's AVE surpasses its correlations with other variables. Meeting these criteria demonstrates that the structural framework possesses exceptional distinctiveness and robust measurement boundaries. You can review the methodology guidelines on the original research platform (Hair et al., 2019).

Coefficient of determination of R-squared (R^2)

Table 3

Determination Coefficient Test (R-squared)

Variable	R Square	R Square Adjusted	Results
English Speaking Skills	0.674	0.665	Moderate
Learning Independence	0.638	0.631	Moderate

Source: Author.

The R^2 value evaluates a structural model's ability to predict both exogenous and endogenous variables. R-squared (R^2) values are obtained via linear regression testing. According to Hair et al. (2019), an R^2 value of 0.75 implies significant predictive accuracy, 0.50 suggests moderate, and 0.25 indicates weak predictive accuracy. The PLS algorithm yielded R^2 values of 0.674 for English speaking skill and 0.638 for learning independence.

Table 4

Prediction Accuracy Test (Q^2)

Variable	SSO	SSE	$Q^2 (=1-SSE/SSO)$
English Speaking Skills	592.000	350.754	0.408
Learning Independence	590.000	342.332	0.422

Source: Author.

Hair et al. (2019) state that, in addition to impact size, the parameters for assessing predictive relevance are 0.02 (small), 0.15 (medium), and 0.35 (big). Table 4 shows that the speaking skill variable has a predictive relevance value of 0.408, which is considered significant. The learning independence value is 0.422, which is likewise categorized as big.

Path coefficient analysis

Hypothesized relationships between the latent constructs were validated using a two-tailed bootstrapping method set at a 5% alpha level. According to the data summarized in Table 5, the confirmed pathways generated (p) -values below 0.05 and (t) -statistics exceeding the standard 1.96

threshold. Consequently, these metrics verify that the structural paths are statistically meaningful (Hair et al., 2019).

Table 5
Path Coefficient Analysis

Variable	Coefficient	Sample Mean	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Conclusion
Learning Interest -> English Speaking Skills	0.141	0.141	0.079	1.769	0.078	Rejected
Learning Interest -> Learning Independence	0.278	0.286	0.089	3.139	0.002	Accepted
Learning Motivation -> English Speaking Skills	0.095	0.097	0.105	0.907	0.365	Rejected
Learning Motivation -> Learning Independence	0.240	0.231	0.104	2.309	0.021	Accepted
Vocabulary Mastery -> English Speaking Skills	0.309	0.310	0.104	2.976	0.003	Accepted
Vocabulary Mastery -> Learning Independence	0.372	0.374	0.092	4.041	0.000	Accepted
Learning Independence -> English Speaking Skills	0.373	0.374	0.109	3.426	0.001	Accepted
Learning Interest -> Learning Independence -> English Speaking Skills	0.104	0.108	0.049	2.116	0.035	Accepted
Learning Motivation -> Learning Independence -> English Speaking Skills	0.089	0.087	0.048	1.860	0.063	Rejected
Vocabulary Mastery -> Learning Independence -> English Speaking Skills	0.139	0.138	0.049	2.856	0.004	Accepted

Source: Author 2026

Direct influence

According to the regression analysis shown in Table 5, numerous factors have direct influence on other variables. Although learning interest had no significant direct influence on English speaking abilities ($T = 1.769$; $P = 0.078$), it does have a favorable and substantial effect on learning independence. Learning motivation has no significant effect on English speaking abilities ($T = 0.907$; $P = 0.365$). However, it has a substantial impact on learning independence ($T = 2.309$; $P = 0.021$). Meanwhile, vocabulary mastery has a favorable and substantial influence on both English speaking abilities ($T = 2.976$; $P = 0.003$) and learning independence ($T = 4.041$; $P = 0.0001$). Furthermore, learning independence has a substantial effect on English speaking skills ($T = 3.426$; $P = 0.001$), suggesting that learning independence is vital in enhancing students' speaking abilities.

Indirect influence

According to the results of the indirect impact study, learning interest has a substantial indirect influence on English speaking skills via learning independence ($T = 2.116$; $P = 0.035$); hence, the hypothesis is supported. This suggests that students' learning interests might improve their English speaking abilities by increasing their learning independence. Meanwhile, learning motivation has no significant indirect influence on English speaking skills via learning independence ($T = 1.860$; $P = 0.063$), hence the hypothesis is rejected. On the other hand, vocabulary mastery has a substantial indirect influence on English speaking skills via learning independence ($T = 2.856$; $P = 0.004$), indicating that the hypothesis is supported. Overall, our data indicate that learning independence serves as a significant mediating variable, notably in relating learning interest and vocabulary mastery to English speaking skills.

DISCUSSION

The findings indicate that learning interest does not directly contribute to the development of English speaking skills among Indonesian EFL learners. Although learners may demonstrate strong curiosity, enthusiasm, and positive feelings toward learning English, these affective characteristics alone may not be sufficient to improve their oral communication performance. From the perspective of student engagement theory, learning interest represents an important affective component of engagement; however, the development of speaking skills also requires sustained behavioral engagement through regular speaking practice, meaningful interaction, and opportunities to use English in communicative contexts. This finding is consistent with [Noyan et al. \(2025\)](#), who argued that speaking proficiency develops through continuous communicative practice rather than positive affective orientations alone. However, it contrasts with [van Harsel et al. \(2019\)](#), who reported that learners with higher learning interest tended to participate more actively in speaking activities and consequently demonstrated better English speaking skills. This inconsistency may be explained by the Indonesian EFL context, where learners may have limited opportunities to communicate in English beyond the classroom. Thus, while learning interest may encourage positive engagement with English learning, its effect on speaking development may depend on whether that interest is translated into sustained learning behaviors, such as regular practice, active participation, and self-directed learning. This finding therefore suggests that learning interest may function as a motivational foundation for speaking development rather than as a sufficient direct determinant of English speaking skills.

The findings indicate that learning interest positively contributes to the development of learning independence among Indonesian EFL learners. Students who demonstrate greater curiosity, enjoyment, and sustained interest in learning English are more likely to regulate their own learning by setting learning goals, seeking additional learning resources, monitoring their progress, and taking responsibility for their learning activities. This finding is consistent with learner autonomy theory, which suggests that learners' interest can encourage active engagement and self-directed learning behaviors that foster learning independence. The present finding supports [Li and Singh \(2021\)](#), who reported that students with higher learning interest tend to study independently because they are intrinsically motivated to explore learning materials beyond classroom requirements. However, this result contrasts with the findings of [Zhang et al. \(2026\)](#), who argued that learning interest alone may not be sufficient to develop learner autonomy because many students continue to depend on teacher guidance and structured instructional support. This discrepancy may be explained by differences in educational contexts and learning cultures. In the Indonesian EFL context, students with strong learning interest may be more likely to develop learning independence when they are provided with opportunities for self-directed learning. Nevertheless, the development of learner autonomy may also depend on complementary factors such as self-regulation skills, learning discipline, and supportive instructional environments. Theoretically, these findings suggest that learning interest can serve as an important affective foundation for the development of learning independence, while its contribution to learner autonomy may be strengthened when learners are provided with opportunities to exercise greater control over their learning processes.

The findings indicate that learning motivation does not directly influence English speaking skills among Indonesian EFL learners. Although motivation encourages learners to engage in English learning activities, it does not necessarily lead to improved speaking performance unless it is translated into consistent communicative practice and active language use. From the perspective of self-determination theory, motivation functions as an important driving force that encourages learners to initiate and sustain learning activities; however, the development of speaking proficiency also depends on behavioral engagement, opportunities for authentic communication, and continuous practice. This finding is consistent with [Hu et al. \(2026\)](#), who argued that motivation alone is insufficient to improve speaking ability because learners also require adequate vocabulary, pronunciation skills, confidence, and supportive learning environments. However, this result contrasts with [Oh \(2024\)](#), who reported that highly motivated learners tend to participate more actively in speaking activities and consequently achieve better speaking performance. This inconsistency may be explained by the Indonesian EFL

context, where students have relatively limited opportunities to communicate in English outside the classroom. Thus, the absence of a direct effect does not imply that learning motivation is irrelevant to speaking development; rather, it suggests that its contribution may depend on whether motivation is translated into sustained learning behaviors and meaningful opportunities for language use. Theoretically, this finding refines the application of self-determination theory in the Indonesian EFL context by suggesting that motivation alone may not be sufficient to produce observable speaking outcomes without behavioral engagement, supportive learning environments, and self-directed learning practices.

The findings indicate that learning motivation positively contributes to the development of learning independence among Indonesian EFL learners. Students who possess higher levels of learning motivation are more likely to take responsibility for their own learning by setting learning goals, managing their study time effectively, seeking additional learning resources, and monitoring their academic progress. From the perspectives of self-determination theory and learner autonomy theory, motivation provides the internal impetus that encourages learners to engage in self-directed learning behaviors, thereby fostering greater learning independence. This finding is consistent with [Lin et al. \(2025\)](#), who reported that motivated learners tend to become more autonomous because they actively regulate their learning processes to achieve their educational goals. However, this finding contrasts with [Melati et al. \(2025\)](#), who argued that learning motivation alone may not necessarily promote learning independence, as some students continue to depend on teacher guidance and structured instructional support despite being highly motivated. This discrepancy may be explained by differences in educational contexts and learning environments. In the Indonesian EFL context, learning motivation is more likely to strengthen learning independence when students are provided with opportunities to engage in self-regulated learning and are supported by appropriate instructional strategies and learning resources. Theoretically, these findings support the view that motivation can serve as an important psychological foundation for learner autonomy while also suggesting that its contribution to learning independence is strengthened when learners are given opportunities to exercise control over their learning processes. Thus, learning motivation functions not only as a source of engagement but also as an important factor in fostering learners' autonomy and responsibility for their English learning.

The findings indicate that vocabulary mastery positively contributes to the development of English speaking skills among Indonesian EFL learners. Adequate vocabulary knowledge enables learners to retrieve words more efficiently, construct meaningful sentences, and express ideas with greater accuracy and fluency during oral communication. From the perspective of lexical competence, vocabulary serves as an essential foundation for communicative competence because learners require sufficient lexical resources to formulate messages and maintain interaction in real time. Consequently, learners with broader vocabulary knowledge are more likely to communicate confidently and experience fewer lexical retrieval difficulties while speaking. This finding is consistent with [Wan et al. \(2025\)](#), who reported that vocabulary mastery facilitates clearer communication, greater fluency, and increased confidence in speaking. However, the finding contrasts with [Taye and Lodebo \(2026\)](#), who argued that vocabulary knowledge alone does not necessarily improve speaking performance because effective oral communication also depends on grammatical competence, opportunities for authentic practice, and supportive learning environments. This discrepancy may be explained by differences in educational contexts. In the Indonesian EFL context, where opportunities to use English outside the classroom are relatively limited, vocabulary mastery provides an essential linguistic resource that enables students to participate more actively in classroom speaking activities. Theoretically, this finding supports the view that lexical knowledge constitutes an important linguistic resource for oral communication while also suggesting that its contribution to speaking development is strengthened when learners have opportunities to apply vocabulary through meaningful communicative practice. Therefore, strengthening learners' vocabulary should be accompanied by communicative activities that allow them to apply their lexical knowledge in meaningful speaking situations, thereby promoting the development of English speaking skills.

The findings indicate that vocabulary mastery positively contributes to the development of learning independence among Indonesian EFL learners. Learners with adequate vocabulary knowledge are better able to understand learning materials, interpret instructions, access English-language resources independently, and engage in self-directed learning without relying excessively on teacher support. From the perspective of self-regulated learning theory, sufficient vocabulary knowledge can enhance learners' cognitive capacity to plan, monitor, and evaluate their own learning activities, thereby fostering greater learning independence. This finding is consistent with [Pramadanti \(2023\)](#), who argued that students with stronger vocabulary knowledge are more capable of studying independently because they can comprehend texts, explore additional learning resources, and complete learning tasks autonomously. However, this finding contrasts with [Azzahra and Utami \(2025\)](#), who suggested that vocabulary knowledge alone may not be sufficient to promote learning independence, as learners may still depend on teachers' guidance to understand learning materials and complete academic tasks effectively. This inconsistency may be attributed to differences in learning environments and instructional practices. In the Indonesian EFL context, vocabulary mastery may provide an important cognitive foundation that enables learners to engage in autonomous learning, although the development of learning independence also depends on complementary factors such as learning motivation, self-discipline, and access to appropriate learning resources. Theoretically, this finding supports self-regulated learning theory by suggesting that learners' linguistic resources can facilitate their ability to regulate and manage learning activities independently. Therefore, vocabulary mastery should be integrated with instructional strategies that encourage learners to regulate their learning and take greater responsibility for their own learning processes.

The findings indicate that learning independence positively contributes to the development of English speaking skills among Indonesian EFL learners. Students who are able to regulate their own learning tend to take greater responsibility for improving their speaking competence by practicing independently, seeking additional learning resources, monitoring their progress, and evaluating their performance. From the perspectives of learner autonomy theory and self-regulated learning theory, learning independence encourages learners to engage in continuous and purposeful learning activities that can enhance speaking fluency, pronunciation, accuracy, and communicative confidence. This finding is consistent with [Mawalim et al. \(2025\)](#), who reported that autonomous learners actively utilize various learning resources and practice opportunities, leading to better speaking performance. However, this finding contrasts with [Muslim and Mahbub \(2023\)](#), who argued that learning independence alone may not be sufficient to improve speaking ability because some autonomous learners focus primarily on receptive language skills or experience speaking anxiety despite studying independently. This discrepancy may be explained by differences in learning environments and opportunities for authentic communication. In the Indonesian EFL context, where English exposure outside the classroom is relatively limited, learning independence can enable students to create additional opportunities for self-directed speaking practice. Nevertheless, its effectiveness may depend on the availability of meaningful communicative activities, constructive feedback, and supportive learning environments. Theoretically, this finding supports learner autonomy theory and self-regulated learning theory by demonstrating that learners' ability to regulate and take responsibility for their learning can facilitate the development of speaking competence. Therefore, fostering learning independence should be accompanied by instructional strategies that encourage learners to actively practice English in authentic communication contexts, thereby promoting the development of English speaking skills.

The findings indicate that learning independence mediates the relationship between learning motivation and English speaking skills among Indonesian EFL learners. This finding suggests that learning motivation alone may be insufficient to directly improve speaking performance; rather, motivated learners are more likely to develop greater learning independence, which subsequently enables them to engage in self-directed learning activities that support the development of their speaking competence. From the perspectives of self-determination theory and self-regulated learning theory, motivation can function as an important psychological drive that encourages learners to

regulate their learning, establish learning goals, monitor their progress, and seek additional opportunities to practice English independently. These self-regulated learning behaviors can subsequently contribute to the development of English speaking skills. This finding is consistent with [Li and Singh \(2021\)](#), who reported that motivated learners tend to become more autonomous and actively participate in learning activities, leading to better language learning outcomes. However, this finding contrasts with [Namaziandost et al. \(2024\)](#), who argued that learner autonomy may develop through various learning activities, such as reading, writing, or listening, without necessarily being associated with speaking competence. This discrepancy may reflect differences in educational contexts and instructional practices. In the Indonesian EFL context, where opportunities to use English outside the classroom remain limited, learning motivation appears to contribute to speaking development primarily through learning independence, which enables learners to create additional opportunities for consistent English practice beyond formal classroom instruction. Theoretically, this finding supports and extends self-determination theory and self-regulated learning theory by demonstrating that learning independence can function as a behavioral mechanism through which learners' motivation is translated into observable speaking development. These findings therefore highlight the important mediating role of learning independence in transforming learners' motivation into meaningful improvements in English speaking performance.

The findings indicate that learning independence does not significantly mediate the relationship between learning motivation and English speaking skills among Indonesian EFL learners. This suggests that although motivated learners may demonstrate greater enthusiasm and engagement in learning English, such motivation does not necessarily translate into higher speaking performance through learning independence. From the perspectives of self-determination theory and self-regulated learning theory, learning motivation represents an important psychological resource; however, its contribution to speaking performance may depend on whether learners translate their motivation into sustained self-regulated behaviors, such as consistent speaking practice, goal setting, self-monitoring, and meaningful engagement in communicative activities. In the absence of such behaviors and sufficient opportunities for communicative practice, motivation alone may be insufficient to foster learning independence that leads to improved English speaking skills. This finding is consistent with [Stotzer et al. \(2025\)](#), who argued that motivated learners may focus primarily on receptive learning activities, such as reading and listening, rather than engaging regularly in speaking practice. However, this finding contrasts with [Goodarzi and Namaziandost \(2025\)](#), who reported that motivated learners tend to seek speaking opportunities, obtain feedback, and regulate their learning more effectively, thereby improving their speaking competence. This inconsistency may be explained by differences in educational settings, learning opportunities, and the extent to which learners are encouraged to engage in self-directed communicative activities. In the Indonesian EFL context, where opportunities for authentic English communication remain limited, learning motivation alone may not be sufficient to develop learning independence in ways that substantially improve English speaking skills. Theoretically, this finding refines the application of self-determination theory and self-regulated learning theory by suggesting that the motivational resources described by these frameworks may not automatically translate into speaking outcomes through learning independence when opportunities for sustained communicative practice are constrained. Therefore, instructional support, meaningful speaking practice, constructive feedback, and learning environments that encourage self-directed communication are needed to assist learners translate their motivation into observable speaking development.

The findings indicate that learning independence mediates the relationship between vocabulary mastery and English speaking skills among Indonesian EFL learners. This suggests that vocabulary knowledge contributes to speaking development not only by providing learners with the lexical resources required for oral communication but also through its association with learners' capacity to engage in self-directed learning activities. From the perspective of self-regulated learning theory, learners with stronger vocabulary mastery may be better able to understand English learning materials, access English-language resources, and engage in independent speaking practice, thereby

strengthening their learning independence. Through these self-regulated learning behaviors, learners can create additional opportunities to practice and apply their vocabulary, which may support greater fluency, accuracy, and confidence in communicative situations. This finding is consistent with Shi (2025), who reported that learners with richer vocabulary knowledge communicate more effectively, participate more actively in learning, and demonstrate greater autonomy in managing their learning processes. However, this finding contrasts with Teye and Lodebo (2026), who argued that vocabulary knowledge alone does not necessarily promote learner autonomy because independent learning is also influenced by factors such as self-discipline, learning strategies, motivation, and opportunities for authentic language use. This discrepancy may be explained by differences in educational contexts and instructional practices. In the Indonesian EFL context, where exposure to English outside the classroom remains relatively limited, vocabulary mastery may facilitate speaking development through learning independence by enabling learners to access resources and create opportunities for self-directed English practice. Theoretically, this finding supports and extends Self-Regulated Learning Theory by suggesting that learners' linguistic resources can contribute to speaking development through a self-regulatory learning process rather than solely through their direct linguistic contribution. Therefore, vocabulary tasks should be associated with learning activities that foster learner autonomy, self-regulation, and meaningful communicative practice.

CONCLUSION

This study aimed to examine the relationships among learning interest, learning motivation, vocabulary mastery, learning independence, and English speaking skills, with particular attention to the mediating role of learning independence. The findings indicate that learning interest and learning motivation did not directly influence English speaking skills, although both were significantly associated with learning independence. Vocabulary mastery, in contrast, showed significant relationships with both learning independence and English speaking skills. Furthermore, learning independence significantly mediated the relationships between learning interest and vocabulary mastery and English speaking skills, but did not significantly mediate the relationship between learning motivation and English speaking skills. Theoretically, these findings highlight learning independence as an important mechanism through which learners' interest and vocabulary resources can contribute to speaking development, while suggesting that motivation alone may not be sufficient to produce speaking gains. Practically, English language instruction should integrate opportunities for self-directed learning, vocabulary development, and meaningful speaking practice to strengthen learners' independence and speaking competence. Given the cross-sectional design and single-institution context, future research should employ longitudinal or experimental designs, involve more diverse populations, and test self-efficacy and willingness to communicate to further explain the development of English speaking skills.

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CONFLICT OF INTEREST STATEMENT:

The author declares that there is no conflict of interest regarding the publication of this paper.

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