

Mapping Elementary Students' Vocabulary Mastery, Learning Motivation, and Classroom Interaction in English Learning

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<https://doi.org/10.17977/um065.v6.i6.2026.12>

Article history

Submitted: 21 May 2026

Revised: 28 June 2026

Accepted: 29 June 2026

Published: 30 June 2026

Keywords

Classroom interaction

English proficiency

Learning motivation

Vocabulary mastery

Young learners

Abstract

English learning at the elementary school level plays an important role in supporting students' language development and communication skills. This study aimed to map elementary students' vocabulary mastery, learning motivation, and classroom interaction in English learning. A descriptive quantitative design was employed involving 150 students from Grades 4–6 in three elementary schools in Indonesia selected through purposive sampling. Data were collected using a vocabulary test, a learning motivation questionnaire, and a classroom interaction observation sheet. The data were analyzed using descriptive statistics, including means, percentages, frequencies, and visual mapping techniques. The findings revealed that students' vocabulary mastery was generally at a moderate level, with meaning recognition obtaining the highest score and pronunciation showing the lowest performance. Students' learning motivation was categorized as high, particularly in terms of participation and attention during English learning activities. Teacher encouragement and interactive learning activities were identified as the main factors supporting students' motivation. Classroom interaction was also found to be relatively active, although teacher talk remained more dominant than student talk. Interactive classroom activities, such as games, group discussions, and collaborative tasks, encouraged greater student participation and communication. The results indicate that vocabulary mastery, learning motivation, and classroom interaction are interconnected dimensions that characterize students' English learning experiences. These findings highlight the importance of creating supportive, interactive, and communicative learning environments to promote students' vocabulary development, motivation, and active classroom engagement in English learning.

1. Introduction

English is widely recognized as an international language that plays a significant role in communication, education, science, and global interaction. As globalization continues to influence educational systems worldwide, many countries have introduced English instruction at the primary school level to provide learners with early exposure to the language (Copland, Garton, & Burns, 2014; Shin & Crandall, 2014). In Indonesia, English learning at elementary schools is considered important because early language exposure may support learners' pronunciation development, vocabulary acquisition, and communicative competence (Suyanto, 2015). Young learners are generally believed to have greater sensitivity to language input and are more capable of developing positive attitudes toward foreign language learning when instruction is introduced at an early age (Pinter, 2017).

Among the various components of English learning, vocabulary mastery is considered a fundamental aspect of language development. Vocabulary serves as the basis for listening, speaking, reading, and writing skills because learners need adequate lexical knowledge to understand and express meaning effectively (Webb & Nation, 2011). Students with limited vocabulary often experience difficulties in understanding classroom instructions, participating in communication activities, and expressing their ideas in English. Consequently, vocabulary mastery is frequently regarded as one of the strongest predictors of successful language learning among young learners.

Besides vocabulary mastery, learning motivation plays a crucial role in determining students' engagement and achievement in language learning. Motivation influences learners' willingness to participate in classroom activities, persist when encountering difficulties, and invest effort in language learning tasks (Dörnyei, 2001). Previous studies have shown that motivated learners tend to demonstrate higher levels of participation, confidence, and language achievement compared to less motivated learners. Teacher support, enjoyable

learning activities, and positive classroom environments have also been identified as important factors that strengthen students' motivation to learn English (Pinter, 2017).

Another important factor in English learning is classroom interaction. Classroom interaction provides opportunities for learners to practice language use, negotiate meaning, receive feedback, and develop communicative competence through social engagement (Vygotsky, 1978; Walsh, 2011). Through interactions with teachers and peers, students are exposed to meaningful language input and are encouraged to actively use language in authentic classroom situations. Communicative Language Teaching (CLT) emphasizes that language acquisition is more effective when learners actively participate in communication rather than merely memorizing vocabulary and grammar rules (Richards & Schmidt, 2006).

Young learners are generally characterized as active, curious, and socially oriented individuals who learn effectively through meaningful interaction, repetition, and engaging activities (Pinter, 2017). Therefore, vocabulary mastery, learning motivation, and classroom interaction can be viewed as interconnected dimensions that influence students' English learning experiences. Vocabulary mastery represents the cognitive dimension of learning, motivation reflects the affective dimension, and classroom interaction represents the social dimension. Together, these dimensions contribute to students' participation and development in English learning contexts.

Several previous studies have examined vocabulary mastery among young learners, while other studies have focused on learning motivation or classroom interaction and communicative learning environments. However, these studies generally investigate the variables separately. Limited research has attempted to map vocabulary mastery, learning motivation, and classroom interaction simultaneously within elementary school English learning contexts. As a result, a comprehensive understanding of how these dimensions collectively characterize students' English learning experiences remains insufficient (Walsh, 2011).

Addressing this gap, the present study aims to map elementary students' vocabulary mastery, learning motivation, and classroom interaction in English learning. This study seeks to provide a comprehensive description of students' English learning characteristics by examining the cognitive, affective, and social dimensions that support language learning in elementary school contexts (Evenseth, Sydnes, Sydnes, Gausdal, & Gausdal, 2022). Specifically, the study investigates students' levels of vocabulary mastery, explores their learning motivation toward English learning, examines classroom interaction patterns that emerge during English learning activities, and develops an integrated mapping of vocabulary mastery, learning motivation, and classroom interaction to portray elementary students' English learning profiles. Through this integrated perspective, the study is expected to contribute to a deeper understanding of how these dimensions collectively characterize students' English learning experiences.

The findings of this study are expected to contribute to English for Young Learners (EYL) research by providing an integrated description of cognitive, affective, and social dimensions of English learning among elementary school students. Practically, the findings may assist teachers in designing more interactive, motivating, and vocabulary-rich learning environments that support students' engagement and language development.

2. Method

2.1. Research Design

This study used a method to look at how well young students can speak English. It focused on things like how words they know why they want to learn English and how they interact with each other in the classroom (Hangga, Nisa, Khoirunnisa, & Wulan, 2024). The reason for choosing this method was to get a picture of what students are like when it comes to learning English. This method helped the person doing the research understand the students vocabulary, motivation and how they behave in class. This kind of research is good for finding patterns and seeing how things are related to each other in schools (Nation, 2011).

2.2. Research Participants

The study took place in three schools in Indonesia where students can learn English. These schools were chosen because they teach English and have ways of teaching. The study focused on elementary students because they are old enough to take tests and answer questions about their vocabulary and how they learn. There were 150 students in the study from Grades 4 to 6. The students were between 9 and 12 years old. Had been learning English in school. They were all different when it came to how they could speak English why they wanted to learn and how they behaved in class.

2.3. Sampling Technique

The study used a method called sampling. This means that the students were chosen because they fit criteria. The criteria were that the students had to be taking classes had been learning English for at least a year and were in the upper grades. This way the researcher could get students who could provide information about learning English (Ghozali, 2018).

2.4. Research Instruments

Three instruments were employed to collect data in this study: a vocabulary test, a learning motivation questionnaire, and a classroom interaction observation sheet. Prior to data collection, all instruments were subjected to content validation by two experts in English Language Teaching and elementary education to ensure their relevance, clarity, and suitability for young learners. Reliability testing was also conducted to determine the consistency of the instruments (Field, 2013).

2.4.1. Vocabulary Test

A vocabulary test was administered to assess students' vocabulary mastery. The test consisted of items measuring several vocabulary aspects, including spelling, pronunciation, meaning recognition, and word usage. The items were designed based on vocabulary indicators commonly used in English for Young Learners (EYL) contexts and were adjusted to the students' grade levels (Nation, 2011). To establish content validity, the test was reviewed by two experts in English education and elementary English teaching. Revisions were made based on their recommendations regarding item clarity and appropriateness. The reliability of the vocabulary test was examined using Cronbach's Alpha, and the coefficient exceeded the minimum acceptable value of 0.70, indicating satisfactory internal consistency. Content validity analysis yielded an Aiken's V coefficient of 0.89, indicating high content validity. Reliability testing using Cronbach's Alpha produced a coefficient of 0.82, demonstrating satisfactory internal consistency.

2.4.2. Learning Motivation Questionnaire

Students' learning motivation was measured using a structured questionnaire employing a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The questionnaire assessed four motivational dimensions: attention, confidence, persistence, and participation in English learning activities (Munawar & Suriyanti, 2024). The questionnaire items were adapted from established motivation constructs in language learning literature and were reviewed by experts to ensure content validity. Following expert validation, revisions were made to improve wording clarity and suitability for elementary school students. Reliability analysis using Cronbach's Alpha indicated that the questionnaire demonstrated acceptable internal consistency with a coefficient above 0.70. The questionnaire demonstrated strong content validity with an Aiken's V coefficient of 0.91. Reliability analysis yielded a Cronbach's Alpha coefficient of 0.87, indicating high internal consistency.

2.4.3. Classroom Interaction Observation Sheet

Classroom interaction data were collected using an observation sheet completed during English learning sessions. The observation instrument focused on teacher questioning, student responses, peer interaction, classroom participation, and collaborative learning activities. The observation sheet was developed based on classroom interaction indicators proposed in communicative language teaching and classroom discourse literature (Hangga et al., 2024). Content validity was established through expert review, and the observation criteria were refined accordingly. To enhance reliability, observation guidelines were clearly defined and applied consistently throughout the observation process. The instrument demonstrated satisfactory reliability and was considered appropriate for identifying classroom interaction patterns during English learning activities. The observation sheet obtained an Aiken's V coefficient of 0.88, indicating strong content validity. Reliability testing resulted in a Cronbach's Alpha coefficient of 0.80, demonstrating satisfactory reliability for classroom observation purposes.

Since the study employed three different instruments, namely the vocabulary test, learning motivation questionnaire, and classroom interaction observation sheet, it was necessary to evaluate their validity and reliability prior to implementation (Munawar & Suriyanti, 2024). Content validity was assessed by two experts in English Language Teaching and elementary education using Aiken's V, while reliability was measured using Cronbach's Alpha. The findings of these analyses are presented in Table 1.

Table 1. Results of Content Validity and Reliability Testing of Research Instruments

Instrument	Content Validity (Aiken's V)	Reliability (Cronbach's Alpha)
Vocabulary Test	0.89	0.82
Learning Motivation Questionnaire	0.91	0.87
Classroom Interaction Observation Sheet	0.88	0.80

Table 1 shows that all research instruments demonstrated strong content validity, with Aiken's V coefficients ranging from 0.88 to 0.91. According to the established criteria, values above 0.80 indicate a high level of content validity, suggesting that the instrument items were relevant and appropriate for measuring the intended constructs. Furthermore, the reliability coefficients (Cronbach's Alpha) ranged from 0.80 to 0.87, exceeding the minimum acceptable threshold of 0.70. These results indicate satisfactory to high internal consistency among the instrument items. Therefore, the vocabulary test, learning motivation questionnaire, and classroom interaction observation sheet were considered valid and reliable for use in this study.

2.5. Validity and Reliability

To ensure the effectiveness and accuracy of the research tools, evaluations of validity and reliability were conducted before the instruments were shared with the participants. Content validity was assessed to check whether the tools suitably represented the relevant research factors and indicators. Feedback related to the relevance, clarity, and suitability of the items for young learners was provided by experts, including faculty specializing in English education and elementary English teachers (Munawar & Suriyanti, 2024). Reliability testing was performed using Cronbach's Alpha to evaluate the internal consistency of both the questionnaire and vocabulary test items. Tools that produced Cronbach's Alpha values above 0.70 were considered reliable and fit for research use. The results from the validity and reliability assessments demonstrated that the research instruments were sufficiently appropriate and consistent for collecting the needed information.

2.6. Data Gathering Processes

The processes employed for data gathering in this research unfolded through a series of organized steps designed to secure the reliability and comprehensiveness of the gathered information. The first step involved planning, which encompassed choosing research locations, acquiring consent from educational institutions for conducting the study, and arranging the research tools (Ketchen, 2013). During this period, the researcher also liaised with teachers concerning the timeline for the research and the process of observing in classrooms. The second step consisted of validating the instruments, where experts thoroughly examined the vocabulary test, motivation questionnaire, and observation sheet to evaluate their relevance and appropriateness for elementary school pupils (Kralikova & Wessely, 2016). Adjustments were made based on the input from these specialists. The third step focused on the actual gathering of data, during which the vocabulary test and the motivation questionnaire were directly presented to students in classroom settings. Participants responded to the tools under the supervision of both the researcher and classroom educators.

The fourth step included observing classrooms, during which the researcher scrutinized English learning activities to discern interaction trends, student engagement, questioning behaviors, and peer interactions throughout communicative tasks. The final step involved organizing data, where all collected information was methodically arranged, coded, and compiled using spreadsheet applications before being analyzed statistically. This stage aimed to aid in the processing and understanding of the information.

2.7. Data Examination Approach

The information collected in this research was analyzed using descriptive statistical approaches to provide detailed insights into students' vocabulary abilities, their motivation for learning, and their interaction patterns in the classroom (Munawar & Suriyanti, 2024). The analysis included calculating mean scores, percentages, frequencies, and categorizations for each variable. Mean scores were utilized to assess the average performance of the students, while percentages and frequencies represented the range of responses and skill classifications among the participants (Jiang, Chen, Hou, & Liu, 2018). The classification method was employed to sort students' scores into different tiers, such as high, medium, and low. This categorization assisted in understanding the English language proficiency levels of elementary students. Additionally, data visualization methods were applied to showcase the findings in a more coherent and organized fashion (Grisanto, Wiryono, & Sunitiyoso, 2025). Various forms of visual aids, including charts, tables, and diagrams illustrating proficiency levels, were used to represent the connections and trends among vocabulary skills, learning motivation, and classroom interactions. These visual representations enriched the interpretation of the findings and provided a detailed summary of the English proficiency levels of young learners.

3. Results and Discussion

3.1. Results

3.1.1. Students' Vocabulary Mastery

The results of this research indicated that the overall mastery of vocabulary among elementary school students was assessed as moderate (Webb & Nation, 2011). According to the outcomes of the vocabulary test administered to 150 students in Grades 4 to 6, the average score for students' vocabulary mastery was 74.26 out of 100. This score suggests that the majority of students possessed fundamental English vocabulary

knowledge; nonetheless, various aspects of vocabulary application still necessitated enhancement, particularly regarding productive language use and contextual comprehension.

The analysis also revealed differences among the vocabulary indicators (Kralikova & Wessely, 2016). Meaning recognition attained the highest average score from the four indicators evaluated, this is indicating that students were relatively skilled in identifying and comprehending the meanings of familiar English words. This result implies that students had sufficient receptive vocabulary skills owing to their regular exposure to vocabulary items during classroom teaching. In contrast, pronunciation received the lowest average score, indicating that numerous students continued to face challenges in accurately pronouncing English words. This difficulty was likely affected by limited opportunities for oral practice and inadequate exposure to authentic English pronunciation in the context of classroom learning activities.

Moreover, the classification of students' vocabulary proficiency revealed that 28% of students were classified in the high proficiency category, 54% were deemed moderate, and 18% fell under the low proficiency category. These findings suggest that while most students had achieved a certain level of basic vocabulary competence, a considerable proportion still needed further instructional assistance to enhance their vocabulary mastery comprehensively.

Students' vocabulary mastery was assessed through four indicators, namely spelling, pronunciation, meaning recognition, and word usage (Ghozali, 2018). These indicators were selected to provide a comprehensive description of students' vocabulary knowledge, encompassing both receptive and productive aspects of vocabulary learning. The mean scores obtained for each indicator were calculated and categorized according to the established assessment criteria. The results of students' vocabulary mastery are presented in Table 2.

Table 2. Students' Vocabulary Mastery Scores

Indicator	Mean	Category
Spelling	75.40	Moderate
Pronunciation	68.15	Moderate
Meaning Recognition	81.27	High
Word Usage	72.21	Moderate

To map students' vocabulary mastery in English learning, four vocabulary indicators were evaluated: spelling, pronunciation, meaning recognition, and word usage. These indicators represent essential components of vocabulary knowledge that contribute to students' ability to understand and use English words effectively. Descriptive statistical analysis was conducted to determine the mean score and achievement category for each indicator. The results are presented in Table 2.

In addition to the descriptive statistics presented in Table 2, a visual mapping of students' vocabulary mastery was conducted to facilitate comparison across the assessed indicators. The bar chart highlights variations in students' performance in spelling, pronunciation, meaning recognition, and word usage. This visualization provides a clearer overview of the strengths and weaknesses in students' vocabulary mastery. The results are presented in Figure 1.

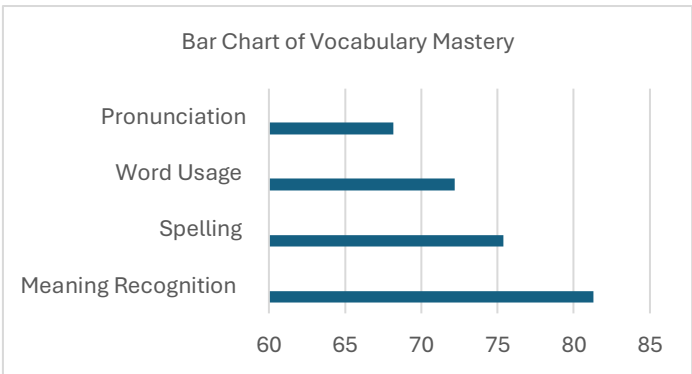


Figure 1. Bar Chart of Vocabulary Mastery

Figure 1 clearly demonstrates that meaning recognition emerged as the most prominent vocabulary aspect among students, whereas pronunciation was identified as the least developed area. This situation underscores the necessity of integrating more interactive speaking and pronunciation exercises into English language education for young learners.

3.1.2. Students’ Learning Motivation

The analysis of students’ learning motivation revealed that the majority of elementary school students exhibited moderate to high levels of motivation in their English studies (Kralikova & Wessely, 2016). According to the results from the motivation questionnaire, the overall average score for students’ learning motivation was 79.13, suggesting that students generally showcased positive attitudes and enthusiasm towards participating in English learning activities.

Among the various indicators of motivation, participation recorded the highest score, with attention and confidence following closely behind. This outcome indicates that students were actively engaged in class activities and exhibited significant interest in English learning when teachers employed engaging instructional methods. Conversely, persistence received the lowest average score, indicating that some students still faced challenges in sustaining motivation when confronted with difficult vocabulary tasks or unfamiliar language content.

An examination of motivational factors revealed that encouragement from teachers emerged as the most influential element impacting students’ motivation to learn English. Students noted that compliments, constructive feedback, and supportive classroom environments greatly enhanced their confidence and readiness to engage in English lessons (Subasman, Westhuizen, Kogoya, & Jejen, 2025). Additionally, games and interactive activities were recognized as particularly motivating learning strategies because they fostered enjoyable and less stressful classroom settings. Incentives such as stickers, scores, and verbal praise also had a beneficial effect on students’ enthusiasm, though their impact was somewhat less significant compared to that of teacher encouragement and games.

These findings indicate that emotional support and interactive teaching methodologies are crucial in motivating young learners. Students appeared to feel more confident and involved when teachers facilitated communicative and enjoyable classroom experiences, rather than exclusively relying on traditional teaching methods (Kralikova & Wessely, 2016).

Students’ learning motivation was analyzed to identify the extent to which they were engaged and interested in English learning activities. The analysis focused on several motivational dimensions, including attention, confidence, persistence, and participation. Descriptive statistics were used to determine the overall level of students’ motivation toward learning English. The results are presented in Table 3.

Table 3. Students’ Learning Motivation Levels

Indicator	Mean	Category
Attention	80.42	High
Confidence	77.18	Moderate
Persistence	73.56	Moderate
Participation	85.37	High
Overall Mean	79.13	High

The information reveals that student involvement and focus constituted the most influential motivational elements among learners. This suggests that younger students tended to exhibit a high level of enthusiasm for engaging in interactive classroom exercises, especially when educational content was presented through captivating techniques.

3.1.3. Prevalent Motivational Elements

The findings from the questionnaire additionally uncovered the motivational factors that students favored during activities related to English language learning (Armenakis & Harris, 2009). To gain a deeper understanding of the factors that encourage students to participate in English learning, the study further examined the motivational elements preferred by learners. These factors provide insights into the classroom conditions and learning activities that most effectively support students’ engagement and enthusiasm. The findings are summarized in Table 4.

Table 4. Students’ Preferred Motivational Factors in English Language Learning Activities

Motivation Factor	Percentage
Teacher Encouragement	41%
Games and Interactive Activities	35%
Rewards and Appreciation	24%

The results reveal that the motivation provided by teachers was the most significant factor encouraging elementary school students. Positive interactions between teachers and students greatly enhanced students’

confidence and engagement in English learning activities. Additionally, games and interactive learning exercises were crucial in sustaining students' interest and minimizing learning-related anxiety.

The results indicate that the motivation for learning among young individuals is greatly affected by the classroom environment, support from teachers, and communicative learning tasks. When teaching methods are interactive, supportive, and enjoyable, students are more inclined to develop favorable attitudes toward learning English (Ghozali, 2018).

3.1.4. Classroom Interaction Patterns

The results from classroom observations suggested that interactions during English lessons typically fell within moderate to active engagement levels. The interaction process encompassed communication between teachers and students, as well as collaboration among students during class assignments and communicative tasks. The observation findings indicated that interactive learning activities, such as games, group discussions, role-playing, and question-answer sessions, motivated students to take part more actively in their English learning experiences (Atmoko, Wardhana, Muktabar, Ni, & Alfarhisi, 2024).

According to the data gathered from the three elementary schools, interactions between teachers and students occurred more frequently than those among students themselves. Teachers primarily took on leading roles in initiating conversations, posing questions, clarifying vocabulary, and directing classroom activities. Nonetheless, students showed notable engagement when teachers employed communicative learning methods and cooperative tasks (Hepburn & Brown, 2001).

Moreover, the analysis highlighted that questioning activities were among the most prevalent forms of interaction in the classroom. Teachers regularly used questions to assess students' comprehension, prompt involvement, and encourage dialogue. Students tended to respond favorably to straightforward and context-based questions, particularly when teachers incorporated visual aids, games, or real-life scenarios into their instruction. However, more intricate questions often led to lower levels of student responses, as some learners hesitated to express their thoughts in English (Diddeniya et al., 2020).

Regarding participation, the majority of students were actively involved in classroom activities when the learning environment was both interactive and enjoyable. Group-centered tasks and peer collaborations significantly enhanced students' willingness to communicate and engage during English lessons. Students seemed to exhibit greater confidence in interacting with peers during games and collaborative assignments rather than speaking alone in front of the entire class.

The observations also indicated notable differences in the frequency of teacher talk versus student talk. Teacher talk predominated during most classroom sessions, as teachers were tasked with providing explanations, instructions, and feedback (Jiang et al., 2018). Nevertheless, communicative classroom activities augmented the frequency of student speech, especially during paired work, group discussions, and vocabulary games. This observation implies that communicative teaching strategies positively influence the establishment of more equitable patterns of interaction within the classroom.

Classroom interaction was observed to identify patterns of communication and participation during English learning activities. The observation focused on teacher-student interaction, peer collaboration, questioning behavior, and students' active involvement in classroom tasks. The descriptive results of the classroom observations are presented in Table 5.

Table 5. Classroom Interaction Observation Results

Interaction Aspect	Frequency	Category
Teacher Questioning	85%	High
Student Responding	73%	Moderate
Peer Interaction	69%	Moderate
Classroom Participation	81%	High
Collaborative Activities	76%	Moderate

The results suggest that engagement in the classroom and inquiries from the teacher were the most significant elements of classroom interaction. In contrast, interactions among peers showed relatively lower occurrence rates, indicating that students still needed additional chances for cooperative communication during English learning tasks.

An important aspect of classroom interaction is the balance between teacher talk and student talk (Hepburn & Brown, 2001). Examining this distribution provides valuable information regarding the extent to

which students are actively involved in communication during English learning activities. The comparison between teacher talk and student talk is presented in Table 6.

Table 6. Teacher Talk vs Student Talk

Interaction Type	Percentage
Teacher Talk	62%
Student Talk	38%

The findings indicate that teacher-led discussions were more prevalent compared to student exchanges during activities aimed at learning English. Despite students engaging enthusiastically in various communicative tasks, the nature of classroom interactions was predominantly oriented towards the teacher. This observation highlights the necessity for instructional methods that are more focused on students, promoting increased opportunities for learners to engage actively in communicating in English.

To facilitate a clearer understanding of classroom communication patterns, the interaction data were visually mapped (Hangga et al., 2024). This visualization illustrates the relationships among teachers and students during English learning activities and highlights the dominant interaction flows observed in the classroom. The interaction mapping is presented in Figure 2.

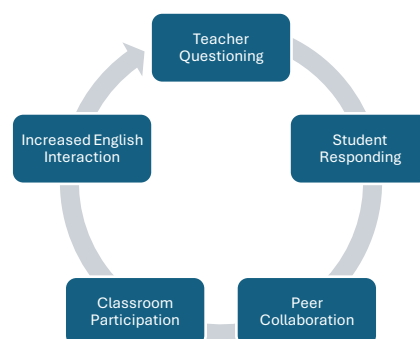


Figure 2. Interaction Mapping Diagram

Greater student involvement and English communication among young pupils resulted from the interaction mapping above showing that teacher questioning was the first trigger for student answers and group interaction.

3.1.5. Establishing English Competence Level Among Young Students

The researcher was able to group students' English ability into three primary levels high ability, mild ability, and low ability by using vocabulary knowledge, learning drive, and classroom interaction data (Nuzli, Nadeak, Mini, Jejen, & Hardiyanti, 2023). Students were grouped using a mix of criteria, including their classroom conduct, answers to motivation surveys, and results on vocabulary exams.

The study found that students that are highly skilled have a good grasp of vocabulary, a great degree of excitement for learning, and actively participate in class discussions. These students were usually confident in responding to inquiries, using proper English vocabulary, and taking part in communicative exercises. In addition to this, when working in class, they were inclined to be excited about learning English and engaging in peer discussion.

Most of the participants were in the moderate proficiency group. Though these pupils had a respectable amount of drive and an adequate vocabulary, they kept displaying inconsistent classroom attendance and little confidence in speaking. They could grasp basic vocabulary and classroom directions, but they occasionally found difficulty actively using English in communicative encounters.

Students in the low competency group lacked inspiration, passive classroom involvement, and limited vocabulary competence at the same time. During classroom instruction, these kids often depended much on teacher guidance, hesitated to answer questions, and shunned speaking activities. Their limited vocabulary and lack of confidence appear to be the main causes of their reduced engagement in English learning activities.

Following the separate analyses of vocabulary mastery, learning motivation, and classroom interaction, an integrated mapping was conducted to provide a comprehensive profile of students' English learning characteristics. This mapping combines the cognitive, affective, and social dimensions examined in the study to identify overall learning patterns among elementary school students. The results are presented in Table 7.

Table 7. English Proficiency Mapping

Proficiency Level	Characteristics	Percentage
High Proficiency	High vocabulary mastery, strong motivation, active interaction	27%
Moderate Proficiency	Adequate vocabulary, moderate motivation, inconsistent participation	56%
Low Proficiency	Limited vocabulary, low confidence, passive participation	17%

Most students belonged into the intermediate competence level, according to the findings. Based on this finding, most elementary school pupils had developed basic English ability, but they still need more help to increase their proactive language use and communicative self-assurance.

Furthermore, the inclusion of vocabulary, drive, and interaction data showed that English competence in young kids is multidimensional. Students who had great vocabulary knowledge did not always show active participation if their motivation levels were low. Highly driven students sometimes struggled with communication since their vocabulary was limited. Consequently, students' English competence development is influenced by a mix of classroom engagement, learning enthusiasm, and vocabulary knowledge (Dörnyei, 2001).

To provide an integrated overview of the key dimensions investigated in this study, a heatmap analysis was conducted. The heatmap enables visual comparison across indicators of vocabulary mastery, learning motivation, and classroom interaction, allowing patterns and relative strengths to be identified more easily. The results are displayed in Table 8.

Table 8. Heatmap of Vocabulary Mastery, Learning Motivation, and Classroom Interaction Indicators

Indicator	High	Moderate	Low
Vocabulary Mastery	■■■■	■■■	■
Learning Motivation	■■■■	■■■■	■
Classroom Interaction	■■■	■■■■	■■

As seen in the heatmap, classroom interaction had more variability among students, but learning motivation had the widest distribution across proficiency levels (Aghajari & Chen, 2025). To complement the integrated mapping analysis, a radar chart was used to visualize students' performance across the major dimensions investigated in this study. The chart provides a holistic representation of the relative strengths and weaknesses observed in vocabulary mastery, learning motivation, and classroom interaction. The visual representation is shown in Figure 3.

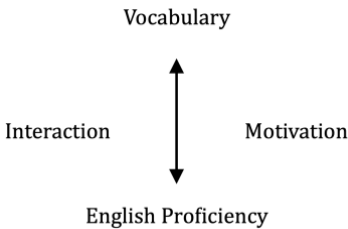


Figure 3. Radar Chart Representation

The relationship between vocabulary mastery, classroom interaction, and learning motivation in influencing students' English competence is depicted by the radar chart representation. To further illustrate the distribution of students' learning profiles, a quadrant mapping analysis was conducted (Haryawan, Prihastini, & Cahaya, 2023). This visualization categorizes students according to their relative levels of vocabulary mastery, learning motivation, and classroom interaction, enabling a clearer interpretation of different learning profile patterns. The results are presented in Figure 4.

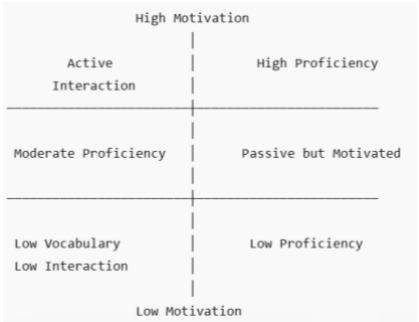


Figure 4. Quadrant Mapping of Students' English Learning Profiles

The quadrant mapping indicates that students that are highly motivated and interact frequently usually possess better English ability levels. Conversely, low competence was often attributed to pupils who lacked great drive and had minimal social contacts. These findings underline how important it is to include cognitive, motivational, and interactive components into young students' English learning.

3.2. Discussion

The findings of this study provide a comprehensive overview of the current state of English vocabulary mastery, learning motivation, and classroom interaction among elementary-level learners. The results reveal a distinct profile: students possess a stronger receptive vocabulary compared to their productive skills, demonstrate relatively high learning motivation driven by external encouragement, and experience classroom interactions that remain predominantly teacher-centered.

3.2.1. Vocabulary Mastery: Receptive vs. Productive Knowledge

The data clearly indicate that students' vocabulary mastery is characterized by a significant gap between receptive and productive knowledge. Learners achieved their highest scores in meaning recognition tasks, which involve matching English words with corresponding definitions or pictures. Conversely, scores for pronunciation and correct word usage in context were notably lower. This pattern strongly suggests that students are more adept at recognizing and understanding English words when they encounter them passively than at actively retrieving and using those words in speaking or writing (Shin & Crandall, 2014).

This finding is highly consistent with established vocabulary acquisition theory. Scholars such as Nation (2011) have long posited that receptive vocabulary (words understood when heard or read) typically develops earlier and more rapidly than productive vocabulary (words used correctly in speech or writing). The primary reason is the nature of language exposure: learners receive extensive language input before they are required to produce independent output. In the classroom, students frequently engage with listening and reading texts, which builds recognition skills. However, without sufficient structured practice in retrieval and use, these words remain in the receptive lexicon (Webb & Nation, 2011).

Furthermore, this disparity implies that current English instruction at the elementary level may be skewed toward recognition-based activities (Atmoko et al., 2024). Common tasks include word-picture matching, multiple-choice identification, and sorting exercises. While these activities are valuable for building initial vocabulary size, they do not necessarily transfer to productive skills. Communicative activities that encourage active language production such as role-plays, sentence building, or oral storytelling appear to be less emphasized. Consequently, students become efficient decoders of meaning but remain hesitant and less accurate when required to pronounce words or use them in grammatically appropriate sentences.

3.2.2. Learning Motivation: The Role of the Social Environment

Despite the challenges in productive vocabulary, the study revealed a relatively high level of learning motivation among students toward English learning. This positive attitude is not an inherent trait but is largely shaped by external factors. Teacher encouragement emerged as the most influential factor, followed by positive classroom support and interactive learning activities. Students reported feeling more motivated when teachers praised their efforts, provided clear guidance, and created a non-threatening atmosphere where mistakes were tolerated as part of learning (Haryawan et al., 2023).

These results align with self-determination theory Ryan and Deci (2000) and Dörnyei's (2001) work on second language motivation, both of which emphasize the critical role of the learning environment. Young learners, in particular, are highly sensitive to social feedback. When they experience warmth, encouragement, and structured support, their intrinsic motivation is nurtured. Conversely, a cold or critical environment can quickly diminish enthusiasm (Ryan & Deci, 2000; Dörnyei, 2001).

Interactive activities such as language games, group competitions, collaborative storytelling, and pair-work tasks were found to enhance students' enjoyment and engagement. These activities create a low-anxiety context where students are willing to take risks with language. As Pinter (2017) notes, motivation in young learners is sustained when learning experiences are meaningful, enjoyable, and socially engaging. Therefore, the presence of such activities in the observed classrooms partially explains the high motivation levels. However, it is important to note that motivation, while high, is directed more toward participating in fun activities than toward the effortful work of mastering productive vocabulary. This subtle distinction suggests that teachers need to harness existing motivation and channel it toward more demanding language tasks (Pinter, 2017).

3.2.3. Classroom Interaction: Teacher Talk Dominance with Active Participation

The findings reveal an interesting duality in classroom interaction. Although students participated actively in several learning activities, classroom communication remained largely dominated by teacher talk. At first glance, this appears contradictory; however, closer examination indicates that student participation mainly occurred in response to teacher-initiated prompts, such as short answers, choral repetition, and one-word responses. Opportunities for extended student communication, including sustained speaking turns, peer questioning, and topic initiation, were relatively limited.

These findings suggest that students were behaviorally engaged but had restricted opportunities to develop communicative competence through authentic language use. The teacher remained the primary source of instruction, discourse control, and evaluation. This interactional pattern is consistent with previous studies indicating that teacher-centered communication is common in English as a Foreign Language (EFL) classrooms, particularly at the elementary level, where teachers often prioritize classroom management and language modeling (Richards, 2006; Walsh, 2011).

From a sociocultural perspective, language learning develops most effectively through meaningful social interaction within learners' zones of proximal development (Walsh, 2011). Therefore, students require opportunities not only to respond to teachers but also to negotiate meaning, exchange ideas, and collaboratively construct knowledge with their peers. Similar findings were reported by Graves et al. (2023), who emphasized that active peer interaction contributes significantly to language development and learner engagement.

The results also indicate that participation alone does not necessarily lead to productive vocabulary development. While students demonstrated willingness to participate, their language production remained limited when interaction patterns were predominantly teacher-directed. This finding supports the view that productive vocabulary growth requires repeated opportunities to retrieve, apply, and manipulate newly learned words in meaningful communicative contexts. Without such opportunities, vocabulary knowledge may remain largely receptive rather than becoming actively usable in communication.

Furthermore, the findings demonstrate a close relationship between vocabulary knowledge, learning motivation, and classroom interaction. Students with stronger receptive vocabulary and higher motivation may still encounter difficulties in developing productive language skills if classroom interaction does not provide sufficient opportunities for authentic communication. Consequently, interactional practices within the classroom play a crucial role in facilitating the transition from receptive knowledge to productive language use.

3.3. Implications

The findings of this study have several pedagogical implications for English language teaching at the elementary school level. First, vocabulary instruction should extend beyond teaching word meanings to include pronunciation practice, contextual usage, and opportunities for productive application. Such an approach can help learners transform receptive vocabulary knowledge into productive vocabulary skills.

Second, teachers should incorporate communicative learning activities that require active word retrieval and meaningful language use. Activities such as information-gap tasks, pair work, role-playing, collaborative problem-solving, and project-based learning can encourage students to use newly learned vocabulary in authentic communicative situations.

Third, classroom interaction patterns should be gradually shifted from teacher-centered to more learner-centered approaches. Increasing opportunities for peer-to-peer communication can enhance students' speaking confidence, improve vocabulary retention, and foster communicative competence. By creating a classroom environment where students actively negotiate meaning and interact with peers, teachers can provide more balanced opportunities for language development.

Finally, teacher professional development programs may benefit from emphasizing interactional strategies that promote student talk and collaborative learning. Such strategies can help teachers create more communicative classrooms while maintaining effective instructional support for young language learners.

3.4. Limitations

Despite its contributions, this study is subject to several limitations that should be acknowledged. First, the research employed a descriptive quantitative design based on a relatively modest sample of 150 students drawn from only three elementary schools selected through purposive sampling. Consequently, the findings may not be generalizable to the broader population of elementary school learners in Indonesia or other educational contexts, and caution should be exercised when extending these conclusions beyond similar settings.

Second, the cross-sectional nature of the study allowed data to be collected at a single point in time, thereby restricting the ability to capture developmental changes in students' vocabulary mastery, motivation, and classroom interaction over time. A longitudinal design would provide richer insight into how these three dimensions evolve and influence one another across different stages of English language learning.

Third, although the instruments employed in this study demonstrated satisfactory validity and reliability, the learning motivation questionnaire relied on students' self-reports, which are inherently susceptible to social desirability bias and subjective interpretation, particularly among young learners who may have limited metacognitive awareness of their own motivational states. Similarly, the classroom interaction observation sheet, despite being guided by clear indicators, involved a degree of observer judgment that may have introduced subjectivity into the coding of interaction patterns.

Fourth, the study relied primarily on descriptive statistical analysis, including means, percentages, and frequencies, without employing inferential statistical procedures to examine the strength and significance of the relationships among vocabulary mastery, learning motivation, and classroom interaction. As a result, the interconnections among these three dimensions discussed in this study should be interpreted as descriptive patterns rather than statistically confirmed associations.

Finally, contextual factors such as teacher qualifications, class size, instructional materials, and school resources were not systematically controlled or examined, even though these factors may considerably affect vocabulary mastery, motivation, and classroom interaction. Future research is therefore recommended to employ longitudinal or mixed-methods designs, incorporate inferential statistical analysis such as correlation or structural equation modeling, involve larger and more diverse samples across different regions, and account for contextual variables in order to generate a more comprehensive and generalizable understanding of the interplay among vocabulary mastery, learning motivation, and classroom interaction among young English language learners.

4. Conclusion

This research aimed to evaluate the vocabulary skills, learning motivation, and classroom participation of young English learners at the elementary school level, and the findings collectively answer these objectives by revealing that while students possess a moderate range of English proficiency with stronger receptive vocabulary (meaning recognition) than productive skills (pronunciation and word usage), they demonstrate significantly high learning motivation driven primarily by teacher encouragement and engaging activities, yet classroom interaction remains largely teacher-dominated, limiting opportunities for extended student communication. The results confirm that vocabulary knowledge, motivation, and interaction are interconnected but not automatically aligned a student may have rich vocabulary but low communication confidence, or strong motivation without mastery of expressive language. Therefore, to address the research goals, successful English instruction for young learners must move beyond vocabulary acquisition alone and deliberately integrate dynamic, interactive classroom structures (such as pair work and group discussions) alongside sustained motivational support, because meaningful communication opportunities are the critical bridge that transforms passive word recognition into active, confident language use.

Author Contributions

Every author contributed equally to the writing of this manuscript. The final version of the manuscript has been reviewed and approved by all of the writers.

Funding

The writing of this piece and/or the execution of this research did not receive any financial backing. The authors affirm that no funding organization was involved in any aspect of the study, including its design, data gathering, data analysis, result interpretation, manuscript preparation, or the choice to submit the work for publication.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/ or publication of this article.

Ethics and Consent Declarations

The ethical standards governing research involving human subjects in education were followed in this study. Before data collection, the classroom teachers and the participating primary schools gave their consent for the study to be carried out. Under current institutional regulations governing non-invasive educational research, formal institutional review board approval was not necessary since the study only included low-risk educational tasks like classroom observations, questionnaires, and vocabulary tests.

Prior to taking part in the research, all participants and their guardians gave their informed consent. Written permission from schools and verbal explanations to students about the study's goals and methods were used to obtain consent. Participants were told that their participation was voluntary and that they were free to drop out of the study at any moment without suffering any repercussions.

All data gathered was anonymized during data processing and reporting in order to safeguard the privacy and confidentiality of the participants. The manuscript did not include any personally identifiable information. The data were only utilized for research purposes and were kept in a safe location. Due to the fact that young students are a vulnerable group, the research placed a particular emphasis on fostering a secure, courteous, and encouraging classroom atmosphere throughout the duration of the experiment. Where needed, the participating institutions' permission for publication was secured. This piece does not contain any personally identifiable information about the participants.

Data Availability

The data sets that were produced or examined during the current research are available from the corresponding author upon request. Among the shared data may be classroom observation summaries, vocabulary test results, questionnaire responses, and processed quantitative data. In accordance with ethical research criteria, all data sets have been made anonymous in order to protect the privacy and confidentiality of participants.

Declaration on AI Use

The authors state that none of the scientific concepts, analyses, interpretations, or findings in this article were produced by artificial intelligence (AI) or AI-supported technologies. Under close human supervision, AI-assisted instruments were solely used to enhance grammar, language clarity, and readability. The authors retain complete accountabilities for all intellectual material, interpretations, and ultimate judgments. The authors of this work are not identified as such using AI tools.

Acknowledgement

The author would like to thank the participating elementary schools, instructors, and children for their helpful involvement and cooperation in this project. Additionally, I want to express my gratitude to coworkers and academic reviewers who offered helpful criticism and encouragement throughout the study and writing of the paper. In addition, the author expresses gratitude to the organization for helping him finish this study.

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