

Enhancing Students Vocabulary Mastery by Using Differentiated Instruction in SMAN 7 Soppeng

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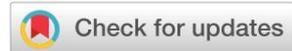
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ABSTRACT

Vocabulary mastery is a key challenge for EFL students in Indonesia, particularly at the senior high school level. This study aims to investigate the effectiveness of Differentiated Instruction (DI) in improving students' vocabulary mastery and engagement in English learning at SMAN 7 Soppeng. Employing a mixed-method explanatory sequential design, the research involved both quantitative and qualitative data collection. The quantitative phase used a quasi-experimental method with pre- and post-tests, while the qualitative phase employed semi-structured interviews to explore students' perceptions. This study was grounded in Tomlinson's theory (2001) of Differentiated Instruction, which emphasizes tailoring instruction based on students' readiness, interests, and learning profiles. In addition, Fredricks et al.'s (2004) theory of student engagement was used to examine behavioral, emotional, and cognitive aspects of learners' involvement. The findings revealed that DI significantly enhanced students' vocabulary acquisition and promoted higher levels of engagement. These results suggest that implementing DI is a beneficial instructional strategy to address diverse learning needs and foster active participation in vocabulary learning.

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Differentiated Instruction, Vocabulary Mastery, Student Engagement, Mixed-Method, EFL.

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1. Introduction

Vocabulary mastery is a crucial component in language learning, forming the foundation for effective communication in both oral and written forms. In the context of English as a Foreign Language (EFL), particularly in Indonesian senior high schools, students frequently struggle to acquire sufficient vocabulary, which in turn affects their overall language proficiency. At SMAN 7 Soppeng, for example, many students demonstrate limited vocabulary knowledge, making it difficult for them to comprehend texts, express ideas, and participate actively in class discussions.

One major cause of this problem is the widespread use of undifferentiated, traditional teaching methods. In such classrooms, instruction is often uniform, offering the same materials and learning tasks to all students regardless of their readiness levels, learning preferences, or interests (Aswad et al., 2019; Ritonga et al., 2020; Kyeongjae et al., 2025). This "one-size-fits-all" approach can result in disengagement, especially in heterogeneous classrooms where students have varied needs and capabilities. Vocabulary mastery plays a crucial role in enhancing speaking skills, as it provides the necessary words and expressions to convey thoughts clearly and accurately (Weda, 2018; Sachiya et al., 2025; Junaid et al., 2024). A rich vocabulary allows speakers to express themselves more precisely, avoid repetition, and engage in a wider range of topics. Therefore, improving vocabulary mastery significantly contributes to greater fluency and confidence in speaking (Prihandoko et al., 2021; Youngsun et al., 2024.; Suheri et al., 2025).

To address this issue, Differentiated Instruction (DI) offers a promising alternative. Based on the work of Tomlinson (2001), DI is a teaching philosophy that emphasizes adapting the content, process, product, and learning environment to meet individual learner differences in terms of readiness, interest, and learning profiles. In vocabulary teaching, this approach allows educators to create more flexible and inclusive lessons, enabling better student engagement and vocabulary acquisition.

This study is also grounded in the engagement theory of Fredricks et al. (2004), which categorizes student engagement into three dimensions: behavioural, emotional, and cognitive. These dimensions provide a useful framework to analyse how students respond to DI in the classroom.

Several previous studies have demonstrated the benefits of DI in language learning. For example, Subban (2006) argued that DI increases student motivation and helps teachers address diverse learning styles effectively. More recent studies, such as Khan & Khan (2023) and Nurelviani & Prastyo (2024), confirmed that DI significantly improves language acquisition in mixed-ability EFL classes. However, research on DI specifically targeting vocabulary mastery and student engagement in Indonesian senior high schools remains limited.

Thus, this study aims to explore the implementation of Differentiated Instruction in teaching vocabulary at SMAN 7 Soppeng and examine its effects on students' vocabulary mastery and their behavioral, emotional, and cognitive engagement. By employing a mixed-method approach, this study provides both quantitative and qualitative insights into the effectiveness of DI in the EFL classroom.

2. Methodology

The participants of this study were 30 tenth-grade students of SMAN 7 Soppeng, selected through purposive sampling. They were chosen based on their active participation in English vocabulary learning activities and representation of various learning profiles (visual, auditory, and kinesthetic). In the qualitative phase, six students were selected for semi-structured interviews, representing high, moderate, and low achievement levels based on the results of the vocabulary test and engagement questionnaire.

2.1 Instruments

This study used three instruments:

1. **Vocabulary Test:** A researcher-developed test was used to measure students' vocabulary mastery. It consisted of multiple-choice and matching questions covering targeted vocabulary items taught through DI strategies.
2. **Engagement Questionnaire:** Adapted from Fredricks et al. (2004), the questionnaire measured students' behavioral, emotional, and cognitive engagement using a 5-point Likert scale.
3. **Semi-Structured Interview Guide:** The interviews were designed to explore students' perceptions and experiences related to DI in vocabulary learning. The questions were categorized based on three types of engagement (behavioral, emotional, cognitive) and were validated by two experts in language education.

2.2 Procedures

The study was conducted in two phases. In the first phase, students were taught vocabulary using Differentiated Instruction strategies over four weeks. After the instruction, the vocabulary test and engagement questionnaire were administered. In the second phase, selected students were interviewed to explore their learning experiences and provide deeper insights into the survey results.

2.3 Data Collection

Quantitative data were collected through the vocabulary test and engagement questionnaire. After analyzing the results, six students were selected for qualitative interviews. The interviews were audio-recorded, transcribed, and coded for thematic analysis.

2.4 Data Analysis

Quantitative data were analyzed using descriptive statistics (mean, percentage) and normality and homogeneity tests using SPSS 25.0. The results of the vocabulary test and engagement questionnaire were used to determine students' performance and engagement levels. Qualitative data from interviews were analyzed using thematic analysis to identify patterns related to the impact of DI on student engagement and vocabulary learning. The themes were aligned with Tomlinson's (2001) framework of Differentiated Instruction and Fredricks et al.'s (2004) engagement theory.

2.5 Ethical Considerations

Before conducting the study, permission was obtained from the school principal and English teacher. Participants were informed about the purpose of the study, and written consent was obtained. Anonymity and confidentiality were maintained throughout the research process.

3. Result and Discussion

This section presents the findings of the study derived from both quantitative and qualitative data. The quantitative findings include results from the vocabulary test and student engagement questionnaire, while the qualitative findings are based on student interviews.

3.1 Quantitative Findings

a. Vocabulary Mastery

To measure vocabulary improvement, a pre-test and post-test were administered to 30 students. The results are shown below:

Table 1. Vocabulary Mastery Test Results

Test Type	Mean Score	Minimum	Maximum	Standard Deviation
Pre-Test	62.1	48	72	6.9
Posttest	78.4	64	90	7.1

The data show a significant improvement in students' vocabulary mastery, with the mean score increasing by more than 16 points. Additionally, 70% of students scored above the minimum mastery criterion (KKM), indicating that DI effectively supported vocabulary retention by addressing student differences in readiness and learning styles.

b. Student Engagement

Student engagement was measured in three domains: behavioral, emotional, and cognitive. The percentage of students demonstrating high engagement in each domain is presented below:

Table 2. Student Engagement Results

Engagement Type	High Engagement (%)
Behavioral	80%
Emotional	76,7%
Cognitive	73,3%

These results indicate that the majority of students experienced positive engagement during the vocabulary lessons. The use of differentiated strategies such as flexible grouping, visual and auditory materials, and tiered assignments likely contributed to these outcomes.

3.2 Qualitative Findings

The qualitative data from interviews supported the quantitative results and offered deeper insights into students' experiences with DI. Thematic analysis revealed three primary themes:

a. Increased Motivation and Participation (Behavioral Engagement)

"Saya lebih semangat belajar karena tugasnya sesuai kemampuan saya."

Students expressed increased motivation when they were assigned tasks that matched their skill level. This reflects Tomlinson's (2001) emphasis on differentiating content and process according to readiness.

They felt more confident in completing the tasks, which led to greater classroom participation. Several students mentioned that they were more willing to speak up and share ideas during discussions. This behavioral engagement shows how appropriate task design can foster active involvement and a positive learning environment.

b. Positive Emotional Responses (Emotional Engagement)

"Belajarnya jadi lebih seru karena pakai gambar, video, dan bisa diskusi dengan teman."

The integration of multimedia and peer interaction enhanced students' emotional connection to the lessons. It made the classroom more enjoyable and reduced stress and boredom.

Students reported feeling happier and more relaxed during the learning process, which contributed to a more supportive atmosphere. They looked forward to class activities and were more open to participating in group work. This emotional engagement aligns with Fredricks et al.'s (2004) framework, which highlights enjoyment as a key indicator of emotional involvement. Overall, the use of engaging materials and collaborative learning positively influenced students' emotional attitudes toward learning.

c. Deepened Thinking and Personal Reflection (Cognitive Engagement)

"Saya jadi berpikir lebih dalam karena tugasnya menantang dan disuruh jelaskan pakai kata sendiri."

Students engaged in higher-order thinking by analyzing vocabulary, making connections with prior knowledge, and explaining ideas in their own words.

They developed a deeper understanding of the material as they were encouraged to go beyond memorization and actively construct meaning. Some students also began to question and evaluate the information critically, showing signs of independent thinking. This kind of cognitive engagement fosters long-term retention and the ability to apply knowledge in new contexts. It reflects the principles of learner-centered instruction, where students take an active role in their own learning process.

3.2 Discussion

The findings indicate that Differentiated Instruction positively influences both vocabulary mastery and student engagement. The improvement in vocabulary test scores demonstrates that DI helps students understand and retain vocabulary better by providing instruction that aligns with their needs and preferences. Meanwhile, increased levels of behavioral, emotional, and cognitive engagement suggest that students are more involved and invested in their learning process when taught through DI strategies.

These results support previous studies that highlight the effectiveness of DI in diverse classrooms (Subban, 2006; Tomlinson, 2001). In particular, DI helps bridge learning gaps by offering multiple pathways to understanding vocabulary, whether through visual aids, cooperative learning, or leveled tasks. Moreover, the alignment with Fredricks et al.'s (2004) engagement theory emphasizes the holistic benefits of DI—not only in learning outcomes but also in emotional and psychological investment in learning.

In the context of EFL classrooms in Indonesia, where student diversity is high, implementing Differentiated Instruction can be a practical and impactful strategy. However, teachers need adequate training and resources to plan and manage DI effectively.

The results demonstrate that Differentiated Instruction can significantly improve both vocabulary mastery and student engagement in EFL classrooms. The increase in post-test scores suggests that DI enhances vocabulary learning by aligning instruction with students' readiness, interests, and learning profiles. The engagement findings align with the framework of Fredricks et al. (2004), which highlights the importance of behavioral, emotional, and cognitive aspects in fostering deep learning. Additionally, the qualitative data confirmed that DI created a more inclusive and responsive learning environment, leading to greater student involvement and success. These findings are in line with previous research (e.g., Subban, 2006; Khan & Khan, 2023; Nurelviani & Prastyo, 2024) that supports the effectiveness of DI in diverse language learning contexts.

4. Conclusion

This study aimed to investigate the implementation of Differentiated Instruction in teaching vocabulary at SMAN 7 Soppeng and its impact on students' vocabulary mastery and engagement. The findings from both quantitative and qualitative data revealed that Differentiated Instruction significantly contributed to improving students' vocabulary performance and enhancing their behavioral, emotional, and cognitive engagement.

The vocabulary test results indicated that most students achieved satisfactory scores after receiving instruction that considered their readiness levels and learning preferences. In addition, students reported high levels of engagement, especially in classroom participation, emotional enjoyment, and use of cognitive strategies. Interview data supported these findings, showing that students felt more motivated, comfortable, and intellectually challenged through varied and personalized instruction.

In sum, Differentiated Instruction can serve as an effective strategy to meet the diverse needs of students in EFL classrooms and foster a more engaging vocabulary learning environment. The study suggests that EFL teachers, especially in Indonesian senior high schools, should consider incorporating Differentiated Instruction into their teaching practices. By adjusting content, process, and product based on students' readiness and learning profiles, teachers can create more inclusive and effective vocabulary lessons. This approach not only improves academic performance but also supports students' emotional well-being and cognitive development.

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