Edutech Insights: Journal of Digital Transformation
Vol. 1 No. 1 (2026), p. 63-77
Available online at https://cendikianusantara.com/index.php/edutech

Implementation of Differentiated Learning to Improve Student Motivation and Learning Outcomes in Elementary Schools

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Article History:
Received: 08 May 2026
Revised: 17 June 2026
Accepted: 29 July 2026

Keywords:
Reading Comprehension; Vocabulary Mastery; Reading Difficulties

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Abstract :
This study aimed to identify the characteristics and factors underlying reading comprehension difficulties among second-grade elementary school students. A descriptive qualitative design was used in an elementary school. Participants included second-grade students and their classroom teachers, who were selected purposively. Data were collected through classroom observations, structured questionnaires, semi-structured interviews, and document analysis, and analyzed using the interactive model of Miles, Huberman, and Saldaña. The results showed that most students experienced moderate reading comprehension difficulties despite demonstrating satisfactory reading fluency. Their main challenges included limited vocabulary mastery, difficulty identifying main ideas, understanding textual information, and organizing information to construct meaning. Further classroom observations indicated that reading instruction was still largely oriented toward decoding rather than focusing on comprehension. The study concluded that reading comprehension difficulties were influenced by linguistic and cognitive factors beyond basic decoding skills. These findings imply the need for vocabulary enrichment, explicit comprehension instruction, and active learning strategies to strengthen elementary school students' reading comprehension and support their ongoing literacy development.

INTRODUCTION

Education plays a strategic role in developing high-quality human resources who are capable of adapting to the rapid advancement of science and technology and an increasingly complex global environment (Kubrikov et al., 2025; Kutt & Odozi, 2026). At the elementary school level, education is intended not only to improve students' academic achievement but also to cultivate character, creativity, critical thinking, collaboration, communication, and independent learning as essential competencies for lifelong learning (Lan & Tuan, 2025; Sabil & Ryan, 2024). Consequently, learning should be designed to accommodate the diverse characteristics of students, including their readiness to learn, interests, learning profiles, and socio-cultural backgrounds (Prastyanti et

al., 2025). Previous studies have consistently demonstrated that student-centred learning provides greater opportunities for learners to develop their potential in line with their individual characteristics (Ani-Rus, 2022; Vasylechko et al., 2023). Therefore, implementing instructional strategies that recognise and respond to student diversity is a fundamental requirement for establishing an inclusive, equitable, and high-quality elementary education system that optimises every student's learning potential (Zhazira et al., 2024).

Despite educational reforms emphasizing student-centered learning, particularly through the implementation of the Merdeka Curriculum, classroom practices in elementary schools continue to face significant challenges (Rahmah et al., 2025; Wijayanti et al., 2024). Many teachers still employ a one-size-fits-all instructional approach, in which all students receive identical learning materials, teaching methods, and assessment practices regardless of differences in their learning readiness, interests, and learning profiles (Damanik et al., 2025; Marmoah et al., 2024). As a result, students with lower academic readiness frequently struggle to understand learning materials that exceed their current capabilities, whereas high-achieving students often experience insufficient academic challenges (Matobobo & Risinamhodzi, 2022; Ramadasa et al., 2026). This mismatch reduces the effectiveness of classroom instruction, limits student engagement, and gradually diminishes learning motivation. If these conditions persist, the primary objectives of the Merdeka Curriculum, namely, to create meaningful, adaptive, and student-oriented learning experiences, will be difficult to achieve sustainably (Alhapip et al., 2024).

These challenges remain evident in many elementary school classrooms, where teachers are required to manage students with highly diverse academic abilities, learning speeds, interests, and learning profiles (Munaf et al., 2025; Tanjung et al., 2026). Within the same classroom, some students complete learning tasks independently and enthusiastically, while others require continuous guidance to understand the same instructional content (Kitsou, 2026; Macqueen et al., 2025). However, limited instructional time, relatively large class sizes, and the continued reliance on conventional teaching approaches often prevent teachers from providing learning experiences that address the individual needs of every student (Güven et al., 2023; Yunitasari et al., 2025). Consequently, students with lower learning abilities tend to lose confidence and motivation, whereas more advanced students receive limited opportunities to extend their knowledge and skills. These classroom realities highlight the urgent need for instructional strategies that effectively accommodate learner diversity, ensuring that every student experiences meaningful, equitable, and personalized learning aligned with their individual potential (Ahmad & Parween, 2022; Dumont & Ready, 2023).

Recent studies have identified differentiated instruction as one of the most effective pedagogical approaches for addressing learner diversity in contemporary classrooms (Hu, 2024; Sharieff et al., 2025). This instructional approach enables teachers to modify learning content, instructional processes, learning products, and the classroom environment according to students' readiness levels, interests, and learning profiles (Spyropoulou et al., 2025). Empirical evidence consistently demonstrates that differentiated instruction promotes greater student participation, active engagement, critical thinking,

academic achievement, and overall learning satisfaction (Ramaila, 2025; Sapan & Mede, 2022). Furthermore, differentiated instruction creates more flexible and responsive learning environments in which students are encouraged to learn according to their individual needs and capabilities (Ardenlid et al., 2025; Kara & Tekindur, 2025). These findings indicate that differentiated instruction has considerable potential to support the successful implementation of student-centered learning policies. Nevertheless, the existing body of literature has predominantly emphasized learning outcomes and instructional effectiveness, while comparatively limited attention has been devoted to examining how differentiated instruction influences students' learning motivation, particularly within the context of elementary education (Muh. Asriadi, Hadi, Istiyono, et al., 2023).

Although previous research has provided valuable evidence regarding the effectiveness of differentiated instruction, several important limitations remain (Ahmad & Parween, 2022). Most existing studies primarily describe the implementation of differentiated instructional strategies or evaluate their effectiveness using quantitative measures of academic achievement, offering limited insight into the instructional processes through which differentiation enhances students' motivation to learn (Sun & Yusof, 2024). Moreover, many investigations have been conducted in secondary or higher education settings, leaving elementary school contexts underexplored despite their critical role in establishing students' lifelong learning attitudes and behaviors (Vakolia et al., 2025). Consequently, there remains insufficient understanding of how teachers implement differentiated instruction in elementary classrooms, what factors facilitate or hinder its implementation, and how these instructional practices contribute to fostering students' motivation to learn (Muh. Asriadi, Hadi, & Istiyono, 2023). Addressing these gaps is essential for developing a more comprehensive understanding of differentiated instruction and for strengthening its practical implementation within the framework of the Merdeka Curriculum.

Building on these limitations, the present study contributes to the literature by examining differentiated instruction from pedagogical and motivational perspectives in elementary education. Rather than focusing solely on instructional effectiveness or academic achievement, this research investigates how teachers implement differentiated instruction in daily classroom practices and how these practices influence students' learning motivation. The study specifically explores the alignment of instructional strategies with students' learning readiness, interests, and learning profiles within the Merdeka Curriculum. By integrating analyses of classroom implementation, supporting and inhibiting factors, and students' motivational responses, this research offers a more comprehensive understanding of differentiated instruction than previous studies. Consequently, it extends existing knowledge by providing empirical evidence on how differentiated instruction promotes meaningful, inclusive, and motivating learning experiences that support elementary students' academic and personal development.

Based on the identified research gaps, this study addresses three questions: (1) How do elementary school teachers implement differentiated instruction in classroom learning? (2) What factors support and hinder its

implementation? and (3) How does differentiated instruction influence students' learning motivation and learning outcomes? The study argues that instructional practices tailored to students' learning readiness, interests, and learning profiles encourage greater classroom participation, strengthen self-confidence, and enhance intrinsic motivation, leading to improved learning outcomes. Understanding the implementation of differentiated instruction is therefore essential for evaluating the effectiveness of educational reforms under the Merdeka Curriculum. Furthermore, the findings are expected to provide practical recommendations for teachers and schools in designing adaptive, equitable, student-centered learning environments that better accommodate diverse learner characteristics and educational needs.

RESEARCH METHODS

This study employed a qualitative descriptive research design to obtain an in-depth understanding of the barriers encountered by second-grade students in reading comprehension during Indonesian language learning. A qualitative descriptive approach was selected because it enables researchers to explore educational phenomena in their natural context while capturing participants' experiences, perceptions, and behaviors without manipulating the learning environment. This design is appropriate for identifying the forms of reading comprehension difficulties and the factors contributing to these challenges, thereby providing rich contextual evidence that cannot be adequately explained through quantitative measurement alone. In qualitative research, the researcher served as the primary research instrument, responsible for planning the study, collecting data, interpreting findings, and drawing conclusions through continuous interaction with participants and the research setting.

The study was conducted at SDN 089/VI Sungai Manau during the 2024/2025 academic year. The school was purposively selected because preliminary observations and teacher discussions indicated that several second-grade students experienced persistent reading comprehension difficulties despite having acquired basic reading skills. Participants included second-grade students and their classroom teacher, selected purposively based on their relevance to the research objectives. Data were collected from January to March 2025 through classroom observations, structured questionnaires, semi-structured interviews, and document analysis. Observations examined students' reading behaviors during classroom instruction, questionnaires identified the extent of reading comprehension difficulties, interviews explored instructional practices and perceived learning barriers, while learning documents and students' work were analyzed to validate and strengthen the credibility of the research findings.

Data analysis followed the interactive qualitative analysis model proposed by Miles, Huberman, and Saldaña, consisting of data condensation, data display, and conclusion drawing/verification (Maehi et al., 2026). Data condensation involved selecting, simplifying, coding, categorizing, and organizing the collected information according to the research focus. Subsequently, the condensed data were systematically presented in the form of descriptive narratives, matrices, and thematic categories to facilitate interpretation and identify relationships among emerging themes. The final stage involved drawing conclusions through continuous verification by comparing

findings obtained from different sources and collection techniques. This iterative analytical process was conducted throughout the study until data saturation was achieved, ensuring that the identified themes consistently represented the participants' experiences and accurately reflected the phenomenon under investigation.

RESULTS AND DISCUSSION

Results

Students' Reading Comprehension Difficulties Were Predominantly at the Moderate Level

In this study, the level of reading comprehension difficulty refers to the extent to which second-grade students at SDN 089/VI Sungai Manau experience challenges in understanding written texts. Operationally, this construct was measured through students' ability to comprehend vocabulary, identify key information, understand the main ideas of a text, and retell the content using their own words. The questionnaire results from 21 respondents yielded a mean score of 55.95, with the highest score of 71, the lowest score of 44, and a standard deviation of 7.359, indicating variations in students' reading comprehension abilities. Trend analysis further revealed that 16 students (76.19%) were categorized as having a moderate level of reading comprehension difficulty, 3 students (14.28%) experienced a high level of difficulty, and 2 students (9.53%) were classified as having a low level of difficulty. These findings indicate that although most students possess basic reading skills, they continue to encounter considerable challenges in comprehending written texts.

Table 1. Students' Reading Comprehension Difficulties

Informant Position	Interview Excerpt	Indicator
Grade II Classroom Teacher	*"Most students are able to read the text fluently. However, when I ask them to explain the content of the passage, many of them become confused and simply repeat several sentences without understanding the meaning."*	Reading comprehension ability
Grade II Student	*"I can read the story, but when the teacher asks me what it means or asks me to tell it again, I often forget and do not know how to answer."*	Difficulty in understanding textual information

Table 1 shows that most second-grade students have acquired basic decoding and reading fluency skills. However, these technical reading skills are not accompanied by adequate comprehension skills. According to teachers, students often struggle when asked to explain the meaning of a reading passage or summarize it in their own words. Rather than demonstrating conceptual understanding, many students simply repeat sentences directly from the text. Researchers interpret this finding as evidence that students have developed mechanical reading skills but have not yet reached the level of meaningful reading comprehension, where readers actively construct meaning from written information.

The student's statement reinforces the teacher's observations by illustrating the learning difficulties from the learner's perspective. Although the student reported being able to read the text fluently, the student acknowledged

difficulties in explaining the meaning of the story and retelling the content after reading. This finding indicates that reading fluency alone does not ensure successful comprehension. Students appeared to struggle with processing textual information, integrating ideas across sentences, and constructing meaningful interpretations of the text. Consequently, they often failed to communicate the content using their own words despite demonstrating adequate decoding skills. The researcher interprets these findings as evidence that students' reading development remains concentrated on mechanical reading processes, while higher-order cognitive skills required for comprehension have not yet developed sufficiently.

These interview findings were further supported by classroom observations and quantitative results. During classroom reading activities, most students participated actively and pronounced words correctly; however, only a few were able to answer comprehension questions accurately. Many students remained silent, guessed the answers, or repeatedly referred back to the text to locate information. They also experienced difficulties connecting the reading material with their prior knowledge and everyday experiences, indicating weaknesses in meaning construction and inferential thinking. The integration of questionnaire, interview, and observation data consistently demonstrates that the majority of second-grade students at SDN 089/VI Sungai Manau experience reading comprehension difficulties at a moderate level. Although students have acquired satisfactory basic reading skills, their ability to understand, interpret, and communicate textual meaning remains limited, suggesting that reading instruction should place greater emphasis on developing comprehension skills rather than focusing primarily on reading accuracy and fluency.

Students' Greatest Difficulty Lies in Reading Comprehension

The operational definition of this sub-finding refers to the specific aspects of reading skills that contribute most significantly to students' reading comprehension difficulties. These aspects were measured using five indicators;m the use of appropriate reading techniques and methods, efficient reading skills, reading speed, avoiding reading errors, and understanding reading content. The quantitative findings indicate that students achieved the highest average score in the use of appropriate reading techniques and methods (62), followed by efficient reading skills (61), reading speed (58), and avoiding reading errors (57). In contrast, the understanding reading content indicator obtained the lowest average score (55). These findings demonstrate that students have relatively adequate mechanical reading skills but continue to experience considerable difficulties in comprehending textual meaning, identifying essential information, interpreting vocabulary in context, and constructing meaning from written texts.

Table 2. Students' Difficulties in Understanding Reading Content

Informant Position	Interview Excerpt	Indicator
Grade II Classroom Teacher	*"Most students can read the text fluently, but they often fail to identify the main idea or explain the meaning of the passage using their own words. They usually repeat sentences directly from the text instead of demonstrating real understanding."*	Understanding reading content

Grade II Classroom Teacher	*"Students frequently ask about the meaning of unfamiliar words. Even after reading the passage several times, many still struggle to determine the important information contained in the text."*	Vocabulary comprehension and identifying key information	
Grade II Student	*"I can read the story, but sometimes I do not understand difficult words, so I cannot answer the teacher's questions correctly."*	Vocabulary comprehension	
Grade II Student	*"When the teacher asks me to explain the story in my own words, I often forget what I have read and only remember a few sentences."*	Retelling reading content	

Table 2 shows that the primary challenge students experience is not decoding written words, but rather constructing meaning from text. Classroom teachers consistently reported that although students demonstrate satisfactory reading fluency, they experience significant difficulty when asked to identify main ideas, interpret textual information, or express content in their own words. This discrepancy suggests that reading instruction has enabled students to develop basic decoding skills; however, these technical abilities have not yet developed into higher-level comprehension skills. From the researchers' perspective, this finding reflects an imbalance between mechanical reading competence and cognitive comprehension processes, where students may pronounce words accurately without fully understanding their meaning.

The students' responses further reinforce the teacher's observations by revealing that unfamiliar vocabulary and limited conceptual understanding hinder their ability to comprehend texts. Students admitted that they often forget the content immediately after reading or experience difficulty answering comprehension questions because they fail to understand important vocabulary. Critically, these findings suggest that vocabulary knowledge functions as a foundational component of reading comprehension. Limited lexical knowledge restricts students' ability to integrate ideas across sentences, identify relationships among concepts, and construct coherent mental representations of the text. Consequently, reading comprehension difficulties should not be interpreted solely as weaknesses in reading ability but also as indicators of insufficient vocabulary development and inadequate comprehension-oriented instructional practices.

The triangulation of questionnaire, interview, and classroom observation data consistently revealed that second-grade students' primary difficulty lies in reading comprehension rather than reading fluency. Classroom observations showed that although most students could read texts aloud confidently and with acceptable pronunciation, they encountered substantial challenges when required to infer meanings, identify key information, determine the main idea, or summarize passages. Many students repeatedly reread the text, relied on teacher guidance, or were unable to respond independently, indicating limited comprehension monitoring and meaning construction. Furthermore, reading instruction appeared to emphasize text decoding more than deep comprehension processes. These findings suggest that while students have developed basic decoding skills, they require more systematic instructional support to strengthen vocabulary understanding, inferential thinking, and higher-order reading comprehension abilities essential for meaningful learning.

Limited Vocabulary and Information Processing Skills as the Primary Factors Contributing to Reading Comprehension Difficulties

This sub-finding operationally refers to the underlying factors that contribute to students' reading comprehension difficulties, specifically their limited vocabulary mastery and insufficient ability to process textual information. Vocabulary mastery is defined as students' ability to recognize, understand, and appropriately interpret words encountered in reading passages, whereas information processing refers to students' capacity to identify key ideas, establish relationships among textual information, infer meaning, and restate the content using their own words. Findings from the questionnaire and indicator analysis revealed that students obtained the lowest performance on the understanding reading content indicator (mean score = 55), suggesting that comprehension difficulties extend beyond basic decoding skills. These results indicate that students' inability to fully understand vocabulary and organize textual information significantly constrains their overall reading comprehension.

Table 3. Interview Findings on Vocabulary Limitations and Information Processing Difficulties

Interview Excerpt	Indicator	Informant
"Many students ask me about the meaning of unfamiliar words while reading. If they do not understand the vocabulary, they usually fail to understand the whole passage."	Vocabulary mastery	Grade II Classroom Teacher
"When students are asked to explain the reading, they often mention only isolated sentences rather than the main ideas because they have difficulty organizing the information they have read."	Information processing ability	Grade II Classroom Teacher
"Sometimes I know how to read the words, but I do not know what they mean, so I cannot answer the teacher's questions."	Vocabulary comprehension	Grade II Student
"I often forget the story after reading it because I do not know which parts are important."	Identifying key information and retelling	Grade II Student

Table 3 indicates that limited vocabulary mastery and weak information-processing skills are the primary factors underlying students' reading comprehension difficulties. Interview findings showed that students frequently paused to ask about unfamiliar vocabulary, and failure to understand individual words prevented them from comprehending the overall meaning of the text. The classroom teacher also reported that many students could recall isolated sentences but struggled to identify the main idea and connect related information. These findings suggest that vocabulary knowledge is essential for interpreting texts and constructing coherent meaning. From the researcher's perspective, reading comprehension difficulties involve not only linguistic limitations but also cognitive processes, including organizing, synthesizing, and integrating textual information, highlighting the need to strengthen both vocabulary development and higher-order comprehension skills.

The findings presented in Table 3 were reinforced by students' responses

and classroom observations. Although most students could pronounce words accurately, they often struggled to understand unfamiliar vocabulary, limiting their ability to answer comprehension questions, identify key information, and retell passages in their own words. Classroom observations further revealed that students frequently reread texts, relied on teacher assistance, and copied sentences directly instead of constructing independent responses. Many also experienced difficulty distinguishing main ideas from supporting details, resulting in incomplete summaries. These findings indicate that students allocate more cognitive resources to word recognition than meaning construction. Consequently, limited vocabulary knowledge and weak information-processing skills hinder reading comprehension, highlighting the importance of instructional strategies that strengthen vocabulary development, comprehension monitoring, and information organization.

Discussion

The findings of this study demonstrate that second-grade students' reading comprehension difficulties are predominantly at the moderate level, indicating that most students have acquired basic decoding skills but have not yet developed sufficient comprehension abilities (Marturano et al., 2025). This finding supports the theoretical perspective that reading comprehension extends beyond accurate word recognition and requires readers to actively construct meaning from written texts through vocabulary knowledge, prior knowledge, and cognitive integration (Li et al., 2026; Marturano et al., 2025). The results are consistent with previous studies reporting that many elementary students achieve satisfactory oral reading fluency while still struggling to understand textual meaning (Khoiri & Harsiati, 2025; Soares et al., 2023). However, unlike studies emphasizing inadequate decoding as the primary cause of comprehension problems, the present research reveals that students' major challenge lies in transforming fluent reading into meaningful understanding, emphasizing the importance of balancing technical reading proficiency with explicit comprehension-focused instruction (Bustamante-Mora et al., 2024; Gorčíková, 2025).

Another important finding is that the lowest achievement consistently appeared in the indicator of understanding reading content, whereas appropriate reading techniques and efficient reading skills received relatively higher scores (Farrell et al., 2025). This result is consistent with previous empirical studies showing that mechanical reading skills generally develop earlier than higher-order comprehension abilities among elementary learners (Dewitz & Graves, 2024; Pongsophon, 2026). Existing literature explains that comprehension requires complex cognitive processes, including inference making, identifying main ideas, summarizing information, monitoring understanding, and integrating ideas across sentences (Mustopa et al., 2024). The present study supports these perspectives by demonstrating that students could read texts fluently but experienced considerable difficulty explaining meaning, identifying key ideas, or retelling passages in their own words. Furthermore, qualitative evidence from interviews and classroom observations revealed that these comprehension difficulties became especially evident during authentic classroom learning activities.

The findings further indicate that limited vocabulary mastery and insufficient information-processing skills are the primary factors underlying students' reading comprehension difficulties (Farrell et al., 2025; Pongsophon, 2026). This finding aligns with theories emphasizing vocabulary as a fundamental predictor of reading comprehension because lexical knowledge enables readers to interpret sentences, establish semantic relationships, and construct coherent mental representations of texts (Arslan & Polat, 2025; Wahid et al., 2025). Previous studies consistently demonstrate that students with broader vocabulary knowledge achieve higher comprehension performance than those with limited vocabulary (Gorčíková, 2025). The present study confirms this relationship while also highlighting the important role of information-processing abilities, including organizing ideas, identifying essential information, and synthesizing textual content. Unlike studies examining vocabulary and comprehension separately, this research illustrates how vocabulary limitations and cognitive processing weaknesses interact simultaneously to constrain students' ability to understand written texts comprehensively (Navya & Thangam, 2026).

From a theoretical perspective, this study contributes to reading comprehension research by demonstrating that comprehension difficulties should be interpreted as the result of interactions among linguistic knowledge, cognitive processing, and instructional practices rather than isolated weaknesses in reading fluency (Marturano et al., 2025; Quezada et al., 2023). The integration of quantitative findings with interview and observational evidence strengthens the understanding that reading comprehension is a multidimensional construct requiring coordinated development of vocabulary, inferential thinking, comprehension monitoring, and meaning construction (Ferroni & Jaichenco, 2022). Practically, these findings highlight the necessity for elementary teachers to implement comprehension-oriented instructional strategies instead of focusing predominantly on oral reading accuracy (Hurwitz et al., 2022). Classroom instruction should therefore incorporate vocabulary enrichment, guided questioning, collaborative discussion, summarization activities, repeated reading with constructive feedback, and opportunities for students to explain texts using their own language to deepen comprehension (Hunsu et al., 2024).

Overall, this study contributes to elementary literacy education by providing empirical evidence on the characteristics and causes of second-grade students' reading comprehension difficulties. The triangulation of questionnaire, interview, and classroom observation data strengthens the credibility of the findings by presenting a comprehensive understanding of students' reading behaviors and learning experiences. Theoretically, the study supports existing literature that reading comprehension develops through the integration of decoding skills, vocabulary mastery, and higher-order cognitive processes (Nasirova et al., 2024). Practically, the findings offer valuable guidance for teachers and policymakers to design literacy instruction that emphasizes vocabulary development and active comprehension strategies from the early grades.

CONCLUSION

This study concludes that the most significant finding is that second-grade

students' reading comprehension difficulties are primarily associated with limited vocabulary mastery and insufficient ability to process textual information rather than weaknesses in basic reading fluency. The findings demonstrate that students are generally able to decode words accurately but continue to struggle with interpreting meanings, identifying key ideas, and reconstructing information from texts. The study contributes to literacy research by providing a comprehensive explanation of reading comprehension difficulties through the integration of quantitative findings, interviews, and classroom observations, thereby enriching the understanding of reading comprehension as a multidimensional construct. Nevertheless, the study was limited to one elementary school with a relatively small sample size. Future research should involve larger and more diverse populations, employ longitudinal or experimental designs, and investigate the effectiveness of comprehension-based instructional interventions in improving elementary students' reading achievement.

ACKNOWLEDGEMENT

The authors sincerely express their gratitude to the Principal, teachers, students, and the entire academic community of SDN 089/VI Sungai Manau for granting permission and providing valuable support throughout the research process. Their cooperation, openness, and active participation greatly contributed to the successful completion of this study. The authors also appreciate all individuals who assisted in the data collection and validation processes, making this research possible. Their contributions are deeply appreciated and have significantly enhanced the quality and credibility of this study.

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