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The Effectiveness of Student-Teams Achievement Divisions (STAD) on Vocabulary Acquisition among EFL learners

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Abstract— *This research examined the effectiveness of Student Teams -Achievement Divisions (STAD) in increasing the vocabulary learning process of the international students taking the Vocabulary Builder course at the Center of English Language Studies in the Lapu-Lapu Cebu International College. It was aimed to measure the learners' performance before and after the adoption of the STAD strategy and to examine their experiences in using the approach during classroom activities. The study method consisted of a one-group experimental model with a qualitative investigation. A vocabulary test was created by the researcher to measure the learning objectives and a focus group discussion provided rich data about the perceptions, attitudes, and the challenges faced by the students in relation to STAD. A one-group experimental design was utilized to test 30 B1-level students from Japan, Taiwan, and Korea who participated in four weeks of STAD-based instruction involving whole-class teaching, team study, individual quizzes, and team recognition. The results showed that STAD implementation positively influenced vocabulary acquisition and encouraged greater participation when compared to traditional instruction design. Students had indicated that group work helped them develop a feeling of cooperation, enhanced confidence, and caused peer-to-peer support, which helped them to understand and remember newly learned lexical matters better. The positive experiences highlighted by the focus-group data were effective teamwork, increased motivation and exchange of perspectives; however, such problems as unequivalent contribution of the group members were observed. The experiment found that STAD is a good approach to use when enhancing learning vocabulary in multicultural EFL, and suggests using it in vocabulary instruction.*

Keywords— ***Cooperative learning, EFL learners, International students, Student Teams–Achievement Divisions (STAD), Vocabulary acquisition***

I. INTRODUCTION

The importance of vocabulary acquisition for English as a Foreign PLanguage (EFL) learners is underscored by the increasing demand for English proficiency in a globalized world. As the foundation for the four macro skills—reading, writing, speaking, and listening—vocabulary plays a vital role in academic success and meaningful communication. This importance becomes even more evident as English functions as the lingua franca for global communication, business, education, and diplomacy (Graddol, 2019; OECD, 2020). Despite this, EFL learners continue to struggle with vocabulary due to limited exposure, low motivation, and excessive reliance on traditional methods like rote memorization and word list drills, which are shown to have low retention (Elhamdi & Hezam, 2020; Webb & Nation, 2017).

Vocabulary is fundamental to both written and spoken communication. Nation (2022) stresses that inadequate vocabulary hampers learners' ability to interpret meaning and express ideas effectively, while Schmitt (2020) notes that vocabulary is more crucial than grammar for real communication. Vocabulary learning supports not only language skills but also the ability to make personal connections through language. However, learners often lack autonomy, motivation, and contextual support in acquiring new words (Teng, 2021). Assigning vocabulary without meaningful or interactive practice tends to be ineffective.

Non-native speakers typically have a vocabulary range of 10,000 to 15,000 words—significantly less than the 20,000 to 30,000 words used by native speakers (Dang & Webb, 2016; Webb & Nation, 2017; Teng, 2021) This gap limits access to academic materials and fluency in communication. Moreover, EFL learners are rarely exposed to real-life English use, which slows acquisition (Elhamdi & Hezam, 2020). Teng & Zhang (2021) also emphasize that ineffective memorization strategies and insufficient contextual input hinder long-term vocabulary learning. Students with restricted vocabulary knowledge tend to underperform in language-related subjects at the tertiary level (Nguyen & Boers, 2019; Webb & Nation, 2017).

Although studies have discussed vocabulary acquisition extensively, many classrooms still use outdated, ineffective approaches. These methods result in poor retention and disengaged students. While the literature advocates contextualized, meaningful instruction, the integration of cooperative learning methods like Student Teams-Achievement Divisions (STAD) into EFL vocabulary teaching is still underexplored. This gap presents an opportunity to evaluate alternative, peer-based strategies that encourage active learning.

This study sought to address this gap by exploring the effectiveness of the STAD model in improving vocabulary learning. At the Center of English Language Studies, Lapulapu-Cebu International College, traditional vocabulary instruction often isolates learners. STAD, developed by Johnson and Johnson (2009), involves grouping students into heterogeneous teams, fostering both teamwork and individual accountability. It encourages positive interdependence and provides equal opportunities for success.

Studies indicate cooperative approaches improve learning. For example, Marashi and Khatami (2017) noted cooperative learning has positive effects on creativity and motivation of EFL learners, which indicated elaboration and peer interaction promote deeper learning and critical thinking. Student Teams–Achievement Divisions (STAD) also supports learner autonomy and intrinsic and extrinsic motivation as evidenced by Ilyas (2017) and others (Ishtiaq et al., 2017), who observed STAD to increase the mastery of vocabulary through improved motivation.

Thus, this study aimed to determine whether STAD improves students' vocabulary acquisition. It provided empirical support for integrating cooperative learning into vocabulary instruction, aiming to foster communicative competence, engagement, and long-term retention among EFL learners.

II. THEORETICAL BACKGROUND

Student Teams-Achievement Divisions (STAD)

The study was grounded on the premise that the Student Teams-Achievement Divisions (STAD) is an effective learning mechanism in vocabulary acquisition among international students. This assumption was rooted in three interrelated theoretical constructs as Social Constructivism and Social Interdependence Theory were the main theories supported by Cooperative Learning Theory. Each framework contributes an important understanding of cognitive, social and pedagogical aspects of group-based language learning.

As Vygotsky (1978) proved, individuals learn through interaction with others, and language develops within the Zone of Proximal Development (ZPD). Social Interdependence Theory, developed by Johnson and Johnson (2009), states that when positive interdependence exists in a group, cooperation and academic performance increase. Evidence supporting this includes cooperative learning models such as STAD, which, as tested by Slavin (1995), enhance students' achievement by integrating teamwork with individual accountability.

The Student Teams-Achievement Divisions (STAD) method is a cooperative learning program created by Robert E. Slavin and his team at Johns Hopkins University during the late 1970s. Following the cooperative learning theory and social interdependence theory, STAD focuses on group work, individual accountability, and shared opportunities for success. In this approach, students are assigned to small, heterogeneous groups and study in groups, assisting each other in mastering content and grasping main ideas assigned. Following team study sessions, individual quizzes are administered to students and scores are accumulated toward a team score for betterment, but not absolute success. This encourages all students, both talented and less talented, toward team achievement. As pointed out by Slavin (1995), in STAD not only is academic success promoted, but motivation, self-concept, and social skills are enhanced through cooperative learning environments. Through this model, the definition of learning is based on

the premise that learning is most productive when students have a feeling of constructive interdependence—where personal achievement results in group performance. Numerous studies have validated the effectiveness of STAD in various subjects, particularly mathematics and language (Slavin, 1991; Isnaini & Kurniawan, 2020).Recent evidence also confirms its effectiveness in improving language learning outcomes. Suranto and Zalukhu (2025) demonstrated that implementing the STAD cooperative learning model significantly enhanced Indonesian language learning among elementary students, resulting in higher post-test scores and positive learner engagement. These findings further reinforce the theoretical link between social constructivism and cooperative learning in promoting meaningful language acquisition. As a pioneer in school reform based on evidence, Slavin's work has had significant influence in designing cooperative learning strategies so that it is individually responsible and socially interactive among learners as they learn.

Student Teams-Achievement Divisions (STAD) is a cooperative learning approach that supports these constructivist principles through opportunities for active, student-centered learning in small, heterogeneous groups. The structured peer interactions allow students to engage with one another about concepts studied; work on vocabulary and explain it to one another; and collaboratively solve language tasks. Schunk (2020) supports this type of instructional setting by noting that students can learn more by being involved with the content, engaging in hands-on activities or inquiry, and applying it to the real-world, all of which were intrinsic to the STAD framework.

STAD has effectiveness in acquiring vocabulary, as revealed by the actual research. Research conducted by Purnami, Adnyani, and Suarnajaya (2024) in the Balindo Paradiso Training Center has been done stating that the STAD cooperative learning model which was used at this time greatly improved students' mastery of English vocabulary. It attempts several methods, including classroom observation, questionnaire, and written test, the authors found great improvement in students' performance. The passage reads, out of 25%, students who achieved the minimum pass grade of 85 increased to 60% after the implementation of STAD. Based on those results, it also shows that the approach is appealing and effective according to student feedback gained through questioners for good, positive, and collaborative learning. It discloses evidence for theoretical assumptions with social constructivism and cooperative learning, showing that the structure of peer interaction and group accountability, as personified in the frame of STAD, contribute to meaningful learning transfer.

STAD aligns with constructivist principles by promoting active, student-centered learning in small, diverse groups. Within this structure, students engage in meaningful peer interactions where they can discuss concepts, practice vocabulary, and collaboratively solve language tasks.

The implementation of STAD followed five structured steps to support vocabulary acquisition. First, students underwent a vocabulary pretest to assess their baseline proficiency and identify learning gaps. Based on the results, they grouped into heterogeneous teams of 5–6 members to encourage peer support and collaborative learning. Next, the teacher delivered whole-class instruction by introducing new vocabulary using definitions, visuals, and contextual examples appropriate for B1-level learners. Following this, students will engage in team study sessions where they review and reinforce the vocabulary through worksheets, flashcards, games, and other guided activities. During this phase, students quiz one another and discuss word meanings, while the teacher circulates to facilitate and support understanding. After the team practice, students took an individual quiz to assess their learning, promoting both personal responsibility and fair team contribution. Finally, each student's quiz score is compared with their pretest results, and points are awarded to their team based on individual improvement. This process ensures that recognition is based on progress, motivating all students to contribute to team success.

The Concept of Social Constructivism

This collaborative process reflects the core ideas of social constructivism, which highlight how learning happens best through interaction and shared experience. The center of this theory is the Zone Proximal Development (ZPD), the range of tasks that a learner can perform with the help of more knowledgeable others or teachers. Lev Vygostsky's Social Constructivism thesis states that social worlds arise from people's engagements with their culture and society. By means of social negotiating and determining whether personal comprehension is feasible, knowledge develops (Vygotsky, 1978). Essentially, all interactions between two or more people offer the opportunity to learn something new or expand one's knowledge. This is an illustration of the intellectual interchange that takes place when individuals communicate. Constructivist learning theories place a strong emphasis on students actively creating their own knowledge through meaningful interaction and involvement in social environments (Schunk, 2020.) Optimal learning is facilitated by cognitive processes including inquiry, introspection, and integrating new information with existing knowledge as constructivism asserts. The fundamental tenet of constructivism is that education is an active process of creating meaning rather than merely absorbing information,

and that this process is frequently facilitated by cooperation with peers, teachers, and a larger social environment.

Social Constructivism asserts that knowledge is created through language and social interaction; therefore, it is social rather than individual. It believes knowledge is created through social processes and interactions not merely by observing the outside world. So, we find a constructivist orientation to learning that assigns the same value to the experience of learning as it does to the knowledge that is acquired, or the process is just as important as the product.

Learning requires the learner to actively engage in creativity and self-organization. Teachers need to let students ask questions, propose their own theories, and test the theories for possibility. Conflicts between a student's current understanding and experience create tension that requires the student to reflect on their own beliefs before looking to different perspectives. So, instructors should not discourage or avoid conflicts occurring from students' perspectives, instead they should endorse them.

Additionally, social constructivism is concerned with the role culture and context have in comprehending social occurrences and building knowledge from meaning thus (Amineh & Asl, 2015). Social constructivism theory is based on underlying assumptions regarding reality, knowledge, and learning, which are the foundation for comprehending and applying social constructivist ideas into teaching.

Reality is not independently existing and objective but co-constructed and defined by human interaction according to a social constructivist perspective. The world is considered to be co-constructed by the members within a group, meaning that reality has been discovered rather than socially constructed. Knowledge is considered to be a result of social and cultural processes. Humans build meaning in their existence by way of the interactions that they have with other human beings and the world, and thus knowledge ends up being a dynamic and contextualized human creation. Social constructivists argue that actually learning is a social process when learning is taking place. Learning does not occur in the head, or due to passive reception of information. Rather, authentic learning springs from engagement in social, collaborative activities that entail negotiation, interaction, and sharing.

Constructivist educational approaches encourage autonomy, social learning, and higher order thinking. STAD allows students to meet new language numerous times, use it in context, and receive constructive feedback from peers. Thus, from a constructivist perspective, STAD provides a useful structure for learning vocabulary, especially for international students who benefit from socially engaging and supportive learning contexts (Schunk, 2020).

The efficiency of collaborative learning models such as Student Teams-Achievement Divisions (STAD) in promoting vocabulary acquisition, especially for multilingual and international students, has been confirmed by recent study. Ilyas (2017) conducted an experimental study with junior high school EFL learners and noted that students learned under STAD approaches had far better mastery of vocabulary than under conventional practices. The findings validate organized group activity under conventional practices. The findings validate that organized group activity under cooperative learning assists learners in consolidating the language into meaningful and contextual forms. A study by Ishtiq, Ali, and Salem (2017) also found that adult students learning English as a foreign language who were taught with the STAD method did much better on vocabulary tests (p=.002) than those who were not. This suggests that peer collaboration and shared responsibility support deeper cognitive engagement.

More empirical evidence comes from Purnami (2024) who found that teaching with STAD resulted in high vocabulary mastery rate – post-test mean score was 86.3% and 69.5% pre-test. As she explained, *"the cooperative learning model like STAD significantly increased student's vocabulary mastery by encouraging peer-to-peer explanation and team accountability, which created a more interactive and supportive learning environment"* (Purnami, 2024, p.233). Yawiloeng (2021) also found that peer scaffolding of EFL reading activities – clarifying meaning, asking questions, and co-constructing understanding – strongly improved vocabulary understanding and retention in multilingual classrooms. In this context, Ishtiaq, Ali, and Salem (2017) discovered that learning among EFL students was far more effective than under traditional frameworks, highlighting the structured and supportive aspects of its quiz-and-recognition stages.

In terms of vocabulary learning, the use of STAD gives foreign students the opportunity to participate in organized group activities that promote significant language exchanges, meaning clarification, and cooperative vocabulary usage reinforcement. This procedure promotes social integration and linguistic development, both of which are essential in multicultural educational settings.

Overall, Vygotsky (1978) sociocultural theory supported by recent studies (Ilyas, 2017; Ishtiaq et al., 2017; Purnami, 2024) provides a solid theoretical base for using STAD as a cooperative model to enhance vocabulary acquisition among international EFL learners.

The Concept of Social Interdependence

Social Interdependence Theory, which was initially developed by Deutsch (1949) and then refined by Johnson & Johnson in 1989, which argues that the operational structure or organizing principle of the interaction between others (cooperative, competitive or individualistic) plays a large role in group interaction and learning. STAD is a motivational design that creates interdependence among students as they work cooperatively, and team success depends on students' learning gains. This reciprocal structure allows for collaboration and the drive, accountability and support that is necessary, so active vocabulary falls into place. To be incentivized into contributing as well as improving language skills when the group succeeds. According to this interpretation of the theory, the structuring of goal structures in groups determines how members of that group interact and thereby affects learning, motivation and interpersonal relations.

At its core, Social Interdependence Theory is the idea that positive interdependence exists when group members feel such that they can succeed in the task at hand only if the other members succeed too. The negative interdependence, on the other hand, is when individuals believe they can only succeed at the expense of those with whom they compete, and no interdependence in which the outcomes are assumed to be independent of others' efforts (Johnson & Johnson 2009). Interdependence in a positive sense (promotive) leads to students motivating and helping on each other's activities, while interdependence in a negative sense (oppositional) produces competition and no cooperation.

Recent studies have indicated that positive interdependence in collaborative learning is central to success. Ahmadian, Amerian, and Tajabadi (2020) established that EFL learners engaged in group discussion practice learned and memorized more vocabulary and scored better on vocabulary tests than those who participated in non-cooperative activities. Lin (2018) also established that students learning words through collaborative activities scored better on vocabulary tests than cooperative learners. Thus, when we organize group work such as in STAD, students are able to tell, practice and rehearse in context using words–activities proven to enhance vocabulary retention and language acquisition.

A cooperative learning such as STAD is most effective to leverage the power of positive interdependence by combining collective goals, individual accountability and cooperative work to enhance language learning and student motivation (Ahmadian et al., 2020; Lin, 2018). In a language learning environment, structured social interaction is essential as it offers repeated practice and application of words on real communication.

Furthermore, recent studies have also discussed the flexibility of Social Interdependence Theory (SIT) to new learning environments as more recent studies also exist. Kwon and Park (2020) for instance constructed and validated Social Interdependence in Collaborative Learning Scale (SOCS) for measuring Students' Intersubjectivity Level in Collaborative tasks. Their findings substantiate that students with high mutual dependence show increased engagement and academic achievement (Davies et al, 2018 in Hofman et al., 1986) alike. Similarly, Gillies (2016) research finding supports SIT based structured cooperative learning environments for academic and personal growth.

Online and hybrid learning contexts are another example of where SIT has relevance as well. Despite the dissimilarities in communication style and dynamics of the environment and traditional classrooms, digital cooperative tasks correctly designed can trigger a powerful positive interdependence and group cohesiveness (van Leeuwen & Janssen 2019). This adds to the strength of the idea and how well it can be transferred between instruction formats.

Social Interdependence is an enthralling framework for international students learning vocabulary in a second language. Academic, linguistic and cultural obstacles make it hard for many international students to acquire vocabulary. In other words, STAD groups provide the social support of peers, fosters confidence through peer observation and sparks vocabulary contextualized. Vygotsky's perspective of learning through discourse and validation of SIT as interdisciplinary is in line with its notion. To sum up, Social Interdependence Theory postulates a validated theory —empirically based model to facilitate vocabulary learning of STAD cooperative learning at foreign students.

In conclusion, SIT establishes an educated-informed validated empiric model for cooperating STAD cooperative learning among foreign students' vocabulary acquisition. With respect to an interdependent collective, shared responsibility and cooperative interaction in real time, the dominating director of language learning becomes the social dimensions of learning via the social element of learning.

The Concept of Cooperative Learning

Cooperative learning by Johnson and Johnson (2009) occurs when students engage in small group learning to complete common academic goals and it is the students' individual, as well as group learnings. Cooperative learning is built on the assumption that positive interdependence exists; in turn, a student's success is dependent on other students' achievements of other members in the same learning group. This method pervades the field of education and in all aspects of instruction and learning. Research has

shown that it boosts academic achievement, retention of facts, higher academic self-esteem and positive attitude in approaching tasks (Johnson & Johnson, 2009).

Intervening at the group level (cooperative learning) of students inadequately ensures the success of cooperative learning. Johnson & Johnson (2009) suggests that there are five necessary components for it to be interconnected. These include positive interdependence, promotive interaction, individual accountability, learning and developing social interpersonal skills. When students understand they are interdependent – which means their success depends on peers' achievement. The specifics are promotive interaction as students facilitate and inspire each other to learn. Everybody needs to be accountable for, therefore, and the group performance will be altered with individual accountability for each student. The development of social skills (like leading, communicating, making decisions and solving conflict) must wait. Teachers need to organize their classrooms according to the principles of effective cooperative learning which result in a small heterogeneous group (preferably 4 or 5 students) and observe participation and mastery of the content. Recent empirical evidence in physical education confirms that effective cooperative learning implementations consistently include these five components and positively impact students' cognitive, social, physical, and affective learning outcomes (Bores-García et al., 2021).

These are all essential components by which the STAD principles of teaching students in small but mixed-ability groups work, making students responsible for their own learning and for group learning, and making them assist each other in learning material, particularly vocabulary in language learning contexts. Positive dependence on STAD makes one's success contribute to group success. In addition, participatory collaborative interaction supports peer instruction and concept clarification between students. Also, the systematic accountabilities and shared reflections in STAD are conditions that Gillies (2016) specifies as necessary for the development of deeper learning and long-term scholarly involvement. The STAD model, then, has not only theoretical support, but scientifically proven to be a successful cooperative learning strategy that fosters cognitive growth and meaningful peer engagement.

Cooperative learning is commonly used because student-centered teaching - collaborative learning offers a means for the student to work together. Out of all different models, STAD strategy is one efficient and feasible model of achieving cooperative learning principles in an actual language classroom. As per Ilyas (2017), STAD strategy worked to learn vocabulary, and the present study had tremendous outcomes to support this on a theoretical basis. This research concluded that students in the experimental class taught with STAD made significant vocabulary learning progress, from pre-test mean score 52.29 to post-test mean score 71.66; whereas the control group made comparatively small progress from 51.52 to 55.81. The findings determined that positive interdependence was maintained, one's achievement was contingent directly upon others' achievement in the group. It also involves individual responsibility, or each learner is responsible for his/her learning while they are within the group. All these elements encourage active participation, peer assistance, and common knowledge-construction-all the pillars of Social Interdependence Theory and Cooperative Learning Theory. From these paths, students are taught directly from vocabulary through structured group exercises, discussion, and peer assistance.

Rafique, Mansoor, and Bint-e-Mehmood (2021) found that using cooperative learning strategies like STAD really helps intermediate students develop their vocabulary. In their study, students who worked together did better than those in regular classrooms. They noticed that teamwork and individual responsibility were key parts of this success. These findings provide additional evidence to the advantage of STAD for supporting learning environments that are student-centred, where learning is interactive, and it is guided by peers that promote.

Collectively, the ideas from Social Constructivism, Social Interdependence Theory, and Cooperative Learning Theory work together well to explain why the STAD method is effective for teaching vocabulary. They all believe that learning occurs when individuals interact, collaborate, and share responsibilities in a social situation. STAD really puts these ideas into action by encouraging teamwork, personal accountability, and peer learning in small groups made up of diverse students. As stated by Ilyas (2017) and others, including Purnami, Adnyani, and Suarnajaya (2024), as well as Rafique, Mansoor, and Bint-e-Mehmood (2021), STAD effectively boosts vocabulary skills, keeps students engaged, and improves academic performance, particularly in diverse classrooms where students speak different languages and come from various cultures.

Taking these into account, it is evident that STAD (Student Teams-Achievement Divisions) is a solid choice for helping students improve their vocabulary in learning a new language. It is a thoughtfully planned approach to make sure students can really connect with the material, interact with each other, and take charge of their own learning in a supportive environment.

III. METHODOLOGY

The research employed a one-group experimental design to investigate the impact of the Student Teams Achievement

Division (STAD) cooperative learning strategy on vocabulary acquisition among international students. The research focused exclusively on students enrolled in the Vocabulary Builder course at the Center of English Language Students of Lapulapu-Cebu International College. Instead of utilizing a pretest-posttest approach, the study assessed the students' vocabulary acquisition levels before and after the implementation of the STAD method. The objective was to examine whether continuous exposure to STAD contributes to measurable improvements in vocabulary learning. The findings are expected to offer valuable insights for enhancing instructional materials through the implementation of the STAD cooperative learning strategy in English as a Second Language (ESL) settings.

Research Hypothesis:

Ho1: There is no significant difference in the vocabulary performance of the experimental group before and after using the STAD strategy.

Scoring Procedures

The qualitative interpretation of the respondents' vocabulary acquisition skills and their corresponding scores were based on the following scoring ranges, aligned with the learning goals outlined in the Vocabulary Builder course, as approved by TESDA.

Raw Scores	Categories	Description
0 - 6	Did Not Meet Expectations	Shows very weak vocabulary knowledge. The student struggles to identify correct meanings and interpret words in context, requiring significant support and practice. (24–30 mistakes; 0%–20% accuracy)
7 - 12	Fairly Satisfactory	Demonstrates limited vocabulary knowledge. The student shows partial understanding but frequently misinterprets meanings or struggles to use context clues. (18–23 mistakes; 21%–40% accuracy)
13 - 18	Satisfactory	Shows developing vocabulary skills. The student can identify some correct meanings and use context clues, but inconsistently and with noticeable errors. (12–17 mistakes; 41%–60% accuracy)
19 - 24	Very Satisfactory	Demonstrates solid vocabulary understanding. The student often identifies correct word meanings, distinguishes terms, and uses context effectively, with only occasional errors. (6–11 mistakes; 61%–80% accuracy)
25 - 30	Outstanding	Demonstrates excellent mastery of vocabulary. The student consistently identifies correct meanings, uses context clues effectively, and shows strong comprehension of familiar and unfamiliar terms. (0–5 mistakes; 81%–100% accuracy)

To ensure practicality, validity, and reliability of the main instrument, pilot testing is of utmost importance. Accordingly, a research-made test was pre-tested to 10 students to verify students' difficulties in dealing with the items which ensure completeness and clarity of the instrument. Cronbach Alpha was used as a statistical tool to find out the reliability of the test. The pilot test/dry run responses yielded a Cronbach Alpha value of 0.680. It indicated that the reliability of the test is acceptable.

For the qualitative data gathered through Focus Group Discussions (FGD), Braun and Clarke (2006) thematic analysis method was applied. This involves familiarization with the data, generating initial codes, identifying patterns or themes, reviewing and defining these themes, and producing a narrative report. This approach helps interpret students' experiences, perspectives, and challenges in vocabulary learning under the implemented strategy.

IV. ANALYSIS AND RESULTS

Table 1: The vocabulary acquisition level of the EFL learners before using the STAD

Performance Level	Frequency	Percentage
Did not meet Expectations	0	0.00
Fairly Satisfactory	10	33.33
Satisfactory	15	50.00
Very Satisfactory	5	16.67
Outstanding	0	0.00
Total	**30**	**100.00**
Average	**14.7**	**Satisfactory**

As shown in Table 1, before the intervention, the majority of the EFL learners achieved a Satisfactory level of vocabulary acquisition, with 15 students (50.00%) falling into this category. This was followed by 10 students (33.33%) who demonstrated a Fairly Satisfactory performance, and 5 students (16.67%) who reached a Very Satisfactory level. Notably, none of the students fell into the Did Not Meet Expectations or Outstanding categories.

The computed average score of 14.7, which corresponds to a Satisfactory performance level, suggests that students had a moderate understanding of vocabulary before the intervention but still had significant room for improvement.

The findings indicate that the students' vocabulary acquisition levels prior to the intervention were generally average to below-average for most participants. Since the majority were clustered in the Satisfactory and Fairly Satisfactory categories, it highlights the need for targeted instructional strategies and enhanced teaching materials to support students in developing stronger vocabulary skills.

These baseline results establish a foundation for assessing the effectiveness of subsequent teaching approaches and serve as a reference point for measuring potential improvements in students' vocabulary acquisition.

As there has been consistent research foregrounding the importance and need for effective instructional strategies**,** teachers are encouraged to adopt approaches that promote active learning and engagement. As for Alqahtani (2015) where the focal point of his study is that without intentional and interactive approaches, EFL learners can often only withhold limited vocabulary which explains why there are a lot of students who remain at the average level or below average levels. Recent studies have also emphasized the importance of cooperative learning and technology-enhanced strategies. Basri, Busa, and Tahir's (2022) study in Makassar disclosed that cooperative learning groups substantially improved students' vocabulary acquisition, exhibiting the favorable effect of a collaborative environment on language learning. Correspondingly, Nurkhamidah and Rofiah (2020) found that the application of the STAD strategy in the classroom has boosted elementary students' mastery of vocabulary in creating simple sentences, demonstrating the effectiveness of STAD in language performance.

Furthermore, studies have shown that interactive and student-centered strategies are remunerative in multimedia and flipped classrooms. For example, Liu (2022) disclosed that the use of mobile digital flashcards of EFL learners have increased vocabulary mastery compared to students who are exposed to traditional teaching methods. In a study of Hung (2023) it showed that tertiary students who created and used video learning materials in a flipped classroom have attained substantial growth in vocabulary than those who only took teacher-made content. These findings show and suggest that strategies that promote active participation, collaboration, and multimodal engagement such as STAD can traverse the gap that is being observed in performance and would result in stronger vocabulary acquisition development.

Table 2: The vocabulary acquisition level of the EFL learners after using the STAD

Performance Level	Frequency	Percentage
Did not meet Expectations	0	0.00
Fairly Satisfactory	0	0.00
Satisfactory	10	33.33
Very Satisfactory	11	36.67
Outstanding	9	30.00
Total	**30**	**100.00**
Average	**21.87**	**Very Satisfactory**

As shown in Table 2, after the intervention, there was a notable improvement in the students' vocabulary acquisition levels. The highest proportion of students, 11 participants (36.67%), achieved a Very Satisfactory level, followed closely by 9 students (30.00%) who reached the Outstanding level. Additionally, 10 students (33.33%) remained in the Satisfactory category.

It is significant to note that no students were rated under the Fairly Satisfactory or Did Not Meet Expectations categories, indicating an overall positive shift in vocabulary acquisition performance. The computed average score of 21.87, corresponding to a Very Satisfactory level, demonstrated a substantial improvement compared to the students' performance before the intervention.

The results imply that the students developed a stronger grasp of vocabulary after the intervention, as evidenced by the substantial increase in the number of students achieving Very Satisfactory and Outstanding performance levels. This suggests that instructional approaches and materials designed to actively engage students can contribute significantly to improving their vocabulary acquisition.

Furthermore, these findings highlight the effectiveness of implementing structured and interactive learning strategies in enhancing students' overall language proficiency. The improvements recorded here provide a strong foundation for evaluating and refining future instructional designs aimed at supporting EFL learners in developing essential vocabulary skills.

The results in Table 2 are also in line with the previous studies that have established the positive effects of STAD on the vocabulary development of students. As an example, Tuan (2018) has shown that EFL learners, when taught by the means of STAD, were retaining vocabulary better than the students taught using the traditional teacher-centered teaching approach. The researchers explained these gains by the fact that organized collaboration with peers and accountability promoted more active involvement of students in new vocabulary.

On the same note, Nurkhamidah and Rofiah (2020) observed that STAD application in the EFL classrooms in Indonesia had a significant impact on vocabulary acquisition among the students. Their findings emphasized that group competition and cooperation influenced students to be more active and this more vocabulary was acquired. These results are similar to the gains in the current research, especially the significant growth in the number of those students who scored on the 'Very Satisfactory' and 'Outstanding' scales.

More recently, Sugandi, Latief and Natsir (2022) discovered that the creation of student study groups based on the use of cooperative learning, e.g., STAD, resulted in the improvement of vocabulary acquisition among students and the development of improved collaboration skills. This implies that interpersonal communication and collective accountability are essential in the enhancement of language performance. Based on this, as Hung (2023) showed, STAD with gamified activities led to motivation as well as vocabulary acquisition supporting the perception that dynamic and interactive group-based interventions also work.

Taken together, these studies prove that STAD is a viable teaching tool in the process of enhancing vocabulary learning in EFL learners. The gains noted in this research, in which no students were left at the 'Fairly Satisfactory' or 'Did Not Meet Expectations' level, again contribute to the argument that the structure of cooperative learning can significantly improve the language proficiencies of the students.

Table 3: The significant difference in the vocabulary acquisition of the EFL learners before and after performing the STAD

Vocabulary Acquisition Level of the EFL learners	SD	Mean	Mean difference	Statistic	p	Decision	Interpretation
Posttest	5.28	21.90	7.17	14.5	<.001	Reject Ho	Significant
Pretest	4.40	14.70					

Effect Size: 2.65

*Significant if $p < 0.05$

**Highly Significant if $p < 0.01$

Table 3 shows that the students' vocabulary acquisition levels significantly improved after the intervention. The posttest mean score of 21.90 was notably higher than the pretest mean score of 14.70, resulting in a mean difference of 7.17. The computed t-statistic of 14.50 with a p-value < .001 indicates that the difference between the pretest and posttest scores is highly significant.

Additionally, the computed effect size of 2.65 suggests a very large practical impact based on Cohen's guidelines, meaning the intervention had a strong and meaningful influence on students' vocabulary acquisition.

The findings provide strong evidence that the intervention substantially enhanced the vocabulary acquisition of the EFL learners. The significant increase in scores demonstrates that incorporating structured, interactive, and collaborative strategies in vocabulary instruction can lead to marked improvements in language proficiency.

Moreover, the large effect size implies that similar instructional approaches could be highly beneficial if applied to other contexts with EFL learners. Educators may consider integrating more active learning strategies into their teaching to foster better vocabulary retention and acquisition.

The difference between pretest and posttest students' performance surfaces strong proof as other studies concluded the effectiveness of STAD strategy on language learning improvement. For example, Tuan (2018) reported that STAD promoted teamwork and accountability for effective retention of new words among EFL learners; thus had a positive effect on vocabulary acquisition. Likewise, Nurkhamidah and Rofiah (2020) found that implementation of STAD proved better in vocabulary mastery than conventional methods, highlighting the importance of structured group interaction in second language classrooms.

Later research offers additional evidence of significant influence of cooperative learning. Sugandi et al. (2022) demonstrated that establishing study groups through cooperative learning procedures enhanced vocabulary learning achievements in Indonesian EFL students, noting that peer support and working collaboratively increase engagement and retention. In a different setting, Hung (2023) illustrated that cooperative and gamified team-based approaches enhanced both motivation and vocabulary performance, confirming that learner-centered group work can contribute to significant acquisition.

These results overlap with the results of the present study, especially the huge effect (2.65) which suggests a strong practical influence of STAD on vocabulary learning. Both pieces of evidence combined lead to an indication that structured cooperative strategies do not only enhance test performance but also foster a more interesting and supportive learning environment. This demonstrates the possibility of STAD to be implemented more widely in any EFL setting in order to foster a greater vocabulary development and language competence.

Students' Experiences in their use of STAD

The sharing of students' experiences in the use of STAD was conducted face-to-face with eight (8) voluntarily participating students who signed the consent form. The actual interview with respondents provided perceptions from the students and a representative picture on the implementation of STAD in their Vocabulary Builder classes, which might not have been covered by the survey questionnaire alone. The respondents answered the survey questionnaire before they were invited for the interview

and questions were interpreted in their own language for better understanding.

Before the conduct of the sharing, the volunteered students were gathered, and a letter requesting their permission to take part in the interview, along with the mechanics of the inquiry, was read to them. Since they all agreed on the terms presented to them, the students then proceeded to the schedule. The teacher asked the students about their most convenient time for the conduct of the interview. Since all committed to spare their time at 4 to 5 o'clock in the afternoon, the date was already set. The sharing was recorded with permission through a phone recorder.

The main question about the students' experiences during the conduct of the Student Teams-Achievement Divisions (STAD) was first read aloud. The sub-questions supporting the main inquiry revolve on the same element of STAD reflected in the survey questionnaire. The students' answers were categorized into sub-topics revolving around the students' experiences on STAD in their Vocabulary Builder class. The following subtopics are: the advantages and disadvantages of STAD, feeling during the use of STAD, preference of strategy in acquiring vocabulary and the aspects of STAD that helped students understand texts or passages better.

On the whole, STAD was effective in stimulating not only the learning of vocabulary but general text comprehension as it promoted peer scaffolding. Rokmana et al. (2025) also showed that STAD, together with media support, could enhance vocabulary learning and understanding as it allowed students to develop and explain meanings together. Moreover, Khalid and Hammed (2023) discovered that STAD has a substantial positive effect on reading comprehension as students enjoyed mutual views and explanations provided by peers.

V. CONCLUSION

The study concludes that the Student Teams-Achievement Divisions (STAD) significantly improved the vocabulary acquisition of EFL learners. Learners' performance increased from moderate to very satisfactory and outstanding levels, supported by a statistically significant difference and a large effect size. The approach also promoted teamwork, collaboration, and responsibility among students, though issues of group dependence emerged. Overall, structured, interactive, and collaborative strategies proved effective in enhancing vocabulary mastery and language proficiency.

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