

## Utilizing Vocabulary Word Mapping as a Remediation Strategy in Improving Vocabulary Level among Grade 6 – Newton Students

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### Abstract

In the framework of language development, the alignment of the curriculum to the learning domains funneled the essential contribution of vocabulary development in language learning for both Filipino and English in the Philippines. This study is a response to the intertwining problems regarding the vocabulary level of the learners and language learning, particularly in the Filipino subject. This quantitative study explored the effectiveness of utilizing the vocabulary word mapping strategy as a remediation strategy in improving learners' vocabulary levels in the Filipino subject to thirty-eight (38) grade six students. The data revealed that the vocabulary word mapping strategy is effective based on the improvement of the learners' scores from pretest to posttest. Furthermore, the study suggested that educational institutions should explore more vocabulary learning strategies that teachers may employ in their teaching that may lead to the opportunity for learners to strengthen their vocabulary skills in the Filipino language.

**Keywords:** vocabulary development, Filipino, vocabulary learning, vocabulary strategy, word mapping

### Introduction

Enriching vocabulary is important in helping individuals comprehend things and reach a target level of communicative competence (Sunalini & Kumari, 2018). In fact, it is one of the domains that is nurtured in the early years of the learners' education. As we grow as thinking individuals, it is innate for us to learn different concepts and ideas when we attempt to understand all tangible and intangible elements in our environment. Learning to speak and write different words is an ability based on how we process and decipher these ideas (Wallace, 2004). Vocabulary is defined as the understanding of terms and their definitions (Butler et al., 2010, p. 1). In the educational setting, different subject areas (e.g., science, mathematics, Filipino, and English) offer us unique, noteworthy, and intricate terminologies that we may re-encounter in the teaching-learning process (Owens, 2006; Huszti, 2022). These are words that were enriched in our minds, popping up when their usage became appropriate in certain situations. Vocabulary learning is not a demodded attribute in education as learners delve into processing information through the five macro skills such as writing, reading, speaking, listening, and viewing (Solpico,

2019). Hence, learners are engaged in learning different words from the different mediums that they are exposed to, basically, through maximizing classroom structures with different reading materials.

In 2007, the Department of Education (DepEd) inaugurated and implemented the Special Science Elementary School (SSES) project, which aims to prepare a learning environment for capable and talented students through a special mathematics and science curriculum that acknowledges multiple intelligences and is geared towards the development of learners' lifelong learning skills (Faustino & Hiwatig, 2012). Originally, the project started with fifty-seven (57) public elementary schools in 2007 and expanded in the later years, specifically to forty-three (43) public elementary schools in 2009. Since this program aims to provide learners with the opportunities, encouragement, and support to explore their potential and interest in mathematics, English, science, and technology, a designated curriculum for these learning areas is provided, which has a distinction from the curriculum of regular elementary schools (Lapus, 2009). Furthermore, despite the existence of this program, several problems in education arose. It can be noted that in the year 2019, the Programme for International Student Assessment (PISA) revealed that the Philippines scored lower in reading, mathematics, and science. According to a report by the Organization for Economic Cooperation and Development (OECD), over 80% of students in the Philippines did not reach a minimum level of proficiency in reading, which is one of the largest shares of low performers amongst all PISA-participating countries and economies. In the advent of this fiasco, the Department of Education plans to improve these areas of the educational system.

Special Science Elementary School (SSES) has a different time schedule for every learning area that supplements the desired goal of the curriculum. For subjects like mathematics, English, and science, the program time allotment is 80 minutes. Aside from that, Filipino subject has a time allotment of sixty (60) minutes. This idea alone possibly interrogates the influence of the time allotment given to these core subject areas. Although this program enables learners to become competent in achieving the content and performance standards of the curriculum (Faustino & Hiwatig, 2012), it is still a question of how it affects the learning opportunities of students in Filipino with its inequity in time compared to mathematics, science, and English. Furthermore, the medium of instruction in the three subject areas (mathematics, science, and English) differs from the Filipino subject. In the Philippines, English prevails as the predominant medium of instruction, as all subjects except the Filipino subject are taught in English, particularly in Grades 4-6 (Abuga et al., 2019).

There have been numerous discourses on the exclusion of Filipino subjects from the college curriculum. In 2019, it was reported that the Supreme Court of the Philippines declared Filipino as a non-core subject, which means that it is no longer required for college students (Limos, 2019). Contrary to this idea, it is evident that the Filipino language is a strategic competence as a medium of instruction, particularly in seeking clarifications of the content delivered (Melegrito, 2022). Similar to the English curriculum guide in the K-12 program, the Filipino subject also stresses the vocabulary development of the learners. Some competencies allow learners to engage more in learning different words while, at the same time, targeting other domains, such as spelling and reading comprehension. Achieving these domains can be done

through the integration of stories. Prior to the reading activity, unlocking difficult and unfamiliar words is presented by the teachers. This is to help learners engage with the reading material in an undemanding manner that does not require them to think of the word's meaning upon reading. Hence, the salient features of vocabulary word mapping supplement the goal of allowing learners to understand the word and its relation to the examples.

In the context of language studies, vocabulary word mapping “is a strategy for representing knowledge in graphs” (Qomariyah & Nafisah, 2020, p.33). In word mapping, words are presented graphically in relation to one another, helping learners recognize connections between words, including synonyms and antonyms (Humaira, 2015). Swanson and Howerton (2007), as cited by Qomariyah and Nafisah (2020), argued that utilizing word maps allows learners to think of a word in a variety of ways. Furthermore, the learners helped to recognize connections between words, including synonyms and antonyms, and it offers a way for them to demonstrate and connect their prior knowledge to new concepts and, at the same time, serves as a useful tool to categorize information (Hakim, 2018).

Transitioning from one learning modality to another and adapting to emerging teaching-learning approaches support the continuing process of education (Secuya & Abadiano, 2022). The quest to strengthen the vocabulary development of learners is still in the loop of language learning, especially seeking best practices (Kai & Hua, 2021). Hence, a study on effective instruction posited the importance of effective vocabulary instruction like employing word mapping, which “means bringing students' attention to words in ways that promote not just knowing word meanings but also understanding how words work and how to utilize word knowledge effectively” (McKeown, 2019, p. 466). This paper aims to give a new perspective and provide findings on assessing vocabulary word mapping as a remediation strategy for improving the vocabulary level of learners in the Filipino subject among intermediate learners. Hence, similar to the studies mentioned in the previous pages, this academic work will serve as contemporary scholarly material that will shed light on concerns involving the performance of learners in vocabulary mastery and support the attainment of necessary vocabulary learning competencies in the Philippine context.

## **Literature review**

### *Educational Initiatives in Support to Vocabulary Development*

In 2019, the Department of Education issued Memorandum No. 173, “Hamon: Bawat Bata Bumasa,” also known as the 3Bs Initiative, which aims to support the implementation of the K–12 Basic Education Program. This memorandum stipulated guidelines for the realization of the initiative through integrating the “Big Six” as conceptual considerations. Specifically, the initiative should focus on six reading elements such as oral language, phonological awareness, phonics, vocabulary, fluency, and comprehension. Vocabulary is highlighted in this initiative to ensure learners’ expansion of knowledge in making sense of and understanding words. Supplying the vocabulary level of learners helps aid in knowing the words that students need to be aware of in order to comprehend texts that are progressively more difficult to read (Butler et al., 2010). However, a deficiency of vocabulary in the target language is one of the influencing factors constituting poor writing skills in both the Filipino and English languages

among elementary students. (Saavedra & Barredo, 2020).

### *Vocabulary Development in the Language Learning Domains*

Historically, educators have long acknowledged the importance of vocabulary development, especially in the 20th century when John Dewey viewed vocabulary as an essential subject where words are considered an instrument of thinking (Bintz, 2011). Presently, the Department of Education ensures that learning opportunities benefit learners in every subject area where they are expected to be fully competent. In this case, the K–12 Basic Education curriculum encompasses new sets of detailed standards and competencies that are essential for the learners' content attainment. In subject areas like Filipino and English, vocabulary development [pag-unlad ng talasalitaan] is one of the integrated language arts domains funneled across year levels starting from kindergarten to grade 12, similar to writing and composition, grammar awareness and structure, and reading and listening comprehension. For instance, "use words that are related to self, family, school, community, and concepts such as the names for colors, shapes, and numbers—EN1V-IIIa-e-5" is a learning competency necessary for the vocabulary development of Grade 1 learners. Additionally, "natutukoy ang kahulugan ng salita batay sa kumpas, galaw, ekspresyon ng mukha; ugnayang salita-larawan, F1PT-IIb-f-6" is a learning competency targeting vocabulary development in Filipino subject.

### *Vocabulary Learning Strategies*

Effective vocabulary instruction encourages teachers to have knowledge of research-based strategies and the ability to incorporate the teaching of vocabulary throughout the school day using beneficial strategies (Riback, 2018). Educators should also explore various teaching strategies and approaches to vocabulary development. Learners learn vocabulary through indirect exposure (e.g., conversations with others) and direct exposure (e.g., targeting individual words) to words in a variety of language contexts (Hanson & Padua, 2011). Graves (2006), as cited by Hanson & Padua (2011), enumerated four essential components of vocabulary instruction, which include "providing rich and varied language experiences, teaching individual words explicitly, teaching word-learning strategies, and fostering word consciousness" (p. 8). From time to time, teachers are expected to utilize different learning strategies in the classroom to meet learners' individual interests in the subject matter, as one strategy alone is insufficient for increasing learners' receptive and expressive vocabulary (Riback, 2018). Specific vocabulary learning strategies like wide reading, interactive read-aloud, student-friendly definitions, word games, teacher modeling, context clues, word-part information, and multiple exposure help learners increase their vocabulary. (Hanson & Padua, 2011; Riback, 2018).

### *Related Studies*

The evidence from some past research studies brought the importance of delving into other vocabulary-learning strategies, which will help address some gaps in this paper. To mention a few, Hakim's (2018) Classroom Action Research (CAR) study entitled "Improving Students' Vocabulary through Word Mapping Technique" revealed significant findings about the intervention. The study centered on third-grade students at Mataram Junior High School 7, where two cycles were conducted following the procedures. The authors administered a test and made observations, which were analyzed at the end of the cycle. It was emphasized in this

study that the standard passing level is 70%. During the first cycle, the result showed that the average score was 65%. After the second cycle, the results revealed that the average score was 73%. The results of the two cycles showed that teaching vocabulary through a word mapping strategy could help improve the learners' vocabulary mastery. Thus far, this work exemplifies the desired goals of this study: to experiment with vocabulary word mapping as a remediation strategy for improving learners' vocabulary levels. On the contrary, some gaps need to be reconciled in this paper. For instance, the author's work originated in Indonesia. It is crucial to contextualize the results of this study in the Philippines. Furthermore, the language used as the focal point of the study is English, which, in this paper, is switched to the Filipino language. There are a smaller number of studies pertaining to the use of vocabulary word mapping as a learning strategy that focuses on the English language. Hence, it is high time to test vocabulary word mapping using the Filipino language.

Another study explored the effectiveness of the word mapping technique in increasing student vocabulary. Humaira and Fatimattuzahro (2015) investigated the utilization of this strategy with 79 first-year students at SMAN 9 Mataram in Indonesia. The researchers employed a quasi-experimental research design in this study. In the data analysis, the study revealed that the mean score of the experimental group (26.78) was higher than the mean score of the control group (17.2). Based on the findings, the authors stated that the use of the word mapping technique is effective in teaching vocabulary. Hence, several implications of the utilization of the word mapping technique were formulated, such as helping the students examine the characteristics of the word concepts, categorize words, and identify the relationships among words that are similar as well as those that are different. The findings of this study indicate the desired goal of this paper, especially in presenting the result of the same remediation technique in the context of intermediate learners in the Philippines.

In addition, Al-Dulaimi (2022), in their study "The Impact of Word Map Activities on Primary School Students' Vocabulary Achievement," revealed significant results regarding the improvement of learners' vocabulary. In the study, 125 sixth-grade learners from Baghdad Governorate were selected as participants. The author also employed similar methodologies in this study, such as the experimental research design and pre- and posttests, in testing the hypothesis. Looking at the findings of this study, it is obvious that the author successfully yielded a significant result. The author concluded that word map activities are better than traditional methods of teaching vocabulary. Moreover, this served as the basis for the author's suggestion that curriculum designers should give more attention to word map activities. Most importantly, the author concluded that word map activities can also enhance the social communication of the learners and give them confidence to participate in the activities. Given the perspective of this study, we can assume that word mapping also contributes to the communicative competence of the learners.

Similar to these related studies, Dilek and Yuruk (2012) probed the effects of using the semantic mapping technique in vocabulary teaching at the pre-intermediate level. In this study, the researchers compared the use of semantic mapping and the traditional technique in vocabulary learning and looked into the relationship between learners' beliefs about vocabulary learning strategies. The study included 32 learners from Selcuk University, of whom 15 were selected

as the experimental group, and 17 were selected as the control group. Quantitative data were collected through a two-part questionnaire consisting of 40-item questions for the pretest and posttest. Target vocabulary items were introduced with the semantic mapping technique to the experimental group and with the traditional technique to the control group. Based on the results, the authors revealed that the learners' beliefs and their preferences were related. Moreover, the difference between the two techniques was analyzed through t-calculations. It was revealed in the results that the semantic mapping technique is more effective than the traditional technique in vocabulary learning.

### *Research Questions*

The study's main objective is to explore vocabulary word mapping as a remediation strategy and attempt to provide a solution to the problem regarding the vocabulary level among grade six learners in the Filipino subject.

Specifically, this paper addresses the following questions:

1. What is the vocabulary level of Grade 6 – Newton during pretest?
2. Is there a significant difference between the vocabulary level of Grade 6 – Newton during the pretest and after the posttest?

## **Methods**

### *Pedagogical Setting & Participants*

This action study was conducted at the Molave Regional Pilot School – Training Center. Specifically, the Special Science Elementary School (SSES) under the Laurel building. The school is located in the municipality of Molave, province of Zamboanga del Sur. This is one of the few elementary schools offering the SSES program in the locality. The primary consideration of the researchers in selecting the research locale is its proximity and convenience, given that it is where they conducted their field study. Also, since the problem emerged in this area, it is imperative to gather the necessary information in this locale.

In addition, the researchers found it an ideal research environment based on the justifications identified during the preliminary investigation. However, this study can be replicated in another educational environment, given that all learners benefited from vocabulary instruction. It is important to note that the curriculum of these learners is different from those who are in regular classes. The Special Science Elementary School (SSES) supports its framework in fostering learners' knowledge in mathematics, science, and English within an eighty (80) minute time frame. With the emphasis of SSES on these three areas, targeting English as the medium of instruction, the competence of Grade 6 – Newton learners in understanding Filipino words implies a thorough focus on the instruction. It has been observed that the lack of vocabulary instruction in learning Filipino words might be a problem among these learners. Learners should be given the opportunity to explore more of the words that they encounter. Employing vocabulary word mapping is a potential remediation strategy for addressing the problem in Grade 6 – Newton pertaining to their vocabulary level. Thus, with the perceived problems of vocabulary learning, it can be justified that solutions can be provided through a comprehensive

implementation of the remediation in this locale.

To accomplish the objectives of this action study, the total population of Grade 6 – Newton students at the Special Science Elementary School (SSES) of Molave Regional Pilot School (MRPS) – Training Center were selected as participants. The participants were 13 male students and 25 female students. In total, 38 students from Grade 6 – Newton participated in this action research. The selection of the respondents largely relies on the focus of the problem regarding the vocabulary development of learners, which exists in this group of learners. Hence, the availability of the participants and the relevance of the problem in this group were taken into consideration in selecting the participants.

### *Design of the Study*

This study identified the vocabulary level of learners before and after remediation through vocabulary word mapping. Conducting pre- and posttests helped the researchers determine the vocabulary level of learners. Thus, the experimental research design was employed in this study.

Experimental research design is centrally distinguished as the best method to respond to questions involving high causality (Skidmore, 2008; Mitchell, 2016). It is based on the experimental manipulation of the research variables in the study (Kandel, 2011). Sirisilla (2023) asserted that experimental research design helps researchers execute their research objectives with more clarity and transparency. To complement the nature of the paper, this research design was utilized to attain the objectives of the study.

To acquire different sets of data during the intervention, pretest and posttest modeling were observed in the implementation process. Malik and Alam (2019) suggested that the idea of the pretest/posttest evaluation model is to measure the baseline knowledge of participants at the beginning of a course or lecture and compare it with the knowledge gained after the course. In addition, comparing respondents' posttest scores to their pretest scores enables researchers to see whether the activity successfully increased respondents' knowledge of the taught content. This helped the researchers analyze the data gathered.

### *Research Instrument*

To obtain the appropriate data needed in this study, the researchers employed two sets of test questionnaires with fifteen (15) items of teacher-made vocabulary questions categorized into three parts with words extracted from the reading material entitled "Ang Naguguluhang Galunggong" (The Confused Blue Mackerel Scad). The first part of the test is based on its definition, with five underlined words used in the sentences (kahulugan). The second part largely focuses on antonyms (magkasalungat), with five selected words from the reading material. The third part of the test focuses on synonyms (magkasingkahulugan). The table below presents the selected Filipino words from the story that were used in the remediation strategy, along with their English translation.

Table 1.

## Selected Filipino Words from the Story Used in the Remediation Strategy

<b>Part 1. Definition (Kahulugan)</b>	<b>Part 2. Antonyms (Magkasalungat)</b>	<b>Part 3. Synonyms (Magkasingkahulugan)</b>
<i>arosep</i>	<i>umiling</i>	<i>Tukador</i>
<i>bahura</i>	<i>sambit</i>	<i>kapanayamin</i>
<i>presinto</i>	<i>maghuntinghan</i>	<i>bughaw</i>
<i>tinyente</i>	<i>magiliw</i>	<i>lawak</i>
<i>kabihasanan</i>	<i>katanungan</i>	<i>pamayanan</i>

The first set was administered during the pretest to measure the vocabulary level of the learners. The researchers conducted a reading session employing the vocabulary word mapping strategy to unlock difficult Filipino words during the reading session. The pretest and posttest were administered with three hours duration to give ample time for learners to accomplish the test. The three hours durations of the assessment include the process of distributing the test questionnaires, reading test instructions, and checking the tests. After the one-month intervention implementation, the second test questionnaire was administered, which included different vocabulary questions conceptualized based on the lesson content delivered during the remediation. This is to ensure the validity of the test questions, as it is imperative to conceptualize the questions of the pretest and posttest to avoid exposing the students to the same questions and options.

*Data collection and analysis*

The researchers employed the following steps in the data-gathering process:

As the primary step in the data gathering process, preparing the test questions, improvising materials for the remediation strategy, and obtaining letters of approval were considered essential steps to help the researchers start the data gathering process. The questions were based on the subject matter to be delivered, which will become the central focus of the remediation. In addition, the letters were utilized to ask permission from the school head, teachers, and students to conduct a class session with the participants.

After finalizing the research instruments and asking the permission of the authority concerned, the researchers scheduled a specific date and time for the data gathering, which is very important as the researchers consider the convenience and availability of the participants. When the schedule was set, the researchers began plotting the whole duration of the implementation of the data gathering. The remediation started in the first week of March by administering the pretest to the participants. After the pretest, the implementation started for the rest of the weeks, where learners were engaged in the reading material and knowing words utilizing the remediation strategy. The implementation of the remediation strategy was usually conducted three times a week, particularly on Monday, Wednesday, and Friday. To ensure that learners are given the opportunity to manage their learning, they are obliged to list down all the words that are difficult for them to comprehend. During the entire duration of the remediation process, the researchers noted these words and unlocked these terms for the learners' comprehension.

The researchers employed reading materials and a PowerPoint presentation in the

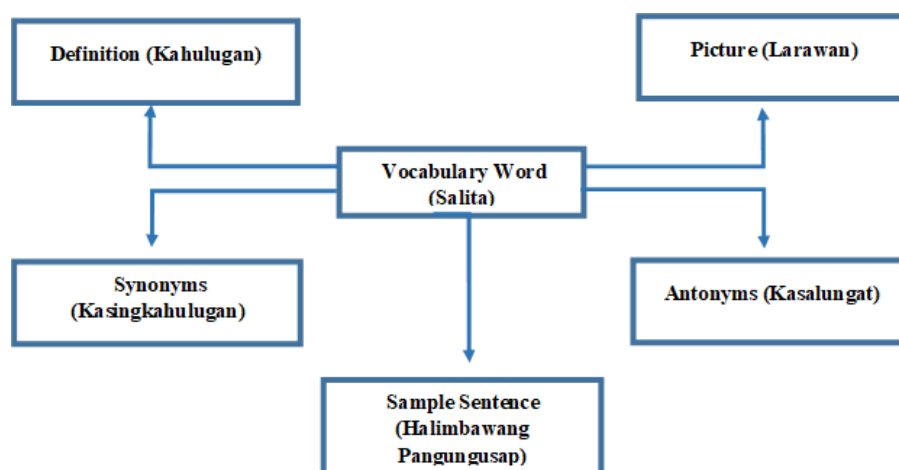


implementation of the entire month of the remediation process that took place in March. The application of PowerPoint presentation is grounded on the idea of Ng and Ranti (2022), who posited that the utilization of PowerPoint presentation highlights the learners' positive attitude towards lectures presented in the Microsoft PowerPoint slides. In a technology-driven world, the role of lecturers and educators in the present time is to use technology to keep students engaged during class sessions (Vu, 2022).

The learners read the story first and identified the difficult words in the selection. The researchers presented the vocabulary words according to the format of the word mapping strategy. Through the aid of PowerPoint presentation, the researchers presented the word, its definition, synonyms, antonyms, sample sentences, and a picture representing the word. In addition, the researchers applied animation effects in the presentation to reveal the information subtly to the learners. This procedure was ensured to allow the learners to get a full grasp of the word and its relation to the information included in the strategy. The figure below illustrates the vocabulary word mapping format employed in the remediation process.

Figure 1.

#### Vocabulary Word Mapping



After administering the test questions in the entire class session scheduled for the data gathering, the researchers started interpreting and analyzing the data gathered. This procedure helped the researchers present the collected data from the pretest and posttest. The data were presented in an orderly and organized manner to answer the focus of the study. As part of the intervention process, the principal, reading coordinator, and adviser of the selected class assessed the vocabulary level tests before and after the conduct of the test to ensure the validity and coherence of the materials to what has been presented in the remediation process. Comments were also provided by the authorities involved in this study as experts in the pedagogical aspect, in support of the remediation process by giving feedback on which area should be strengthened and mastered, such as the presentation of the words using the strategy. In addition, all the data gathered was treated accordingly based on the data analysis selected by the researchers. Thus, this procedure allowed the researchers to develop and further understand

the succeeding sections of this paper where these inputs are needed.

Accordingly, statistical analysis provides meaning to data that needs to be put in context with the proper usage of statistical tools in order to extract meaningful information from experimental data (Ali & Baskar, 2016; Cowan, 1998). This analysis helped show the precise number of data distributions in this study and effectively revealed a significant result from the data gathered.

Furthermore, a classification of students' achievement in the vocabulary level test was adopted from Arikunto (2009), as cited by Putri & Refnaldi (2020). To classify learners' vocabulary level, the classification will be based on percentage scores ranging from 0-49, 50-59, 60-74, 75-89, and 90-100. The classifications are excellent, good, fair, less, and poor. In the context of this study, the levels used for the interpretation are outstanding, above average, satisfactory, below average, and insufficient.

Table 2.

The Classification of Students' Vocabulary Level adopted from Arikunto (2009) as cited by Putri & Refnaldi (2020)

Score Range	Classification	Level
90-100	Excellent	Outstanding
75-89	Good	Above Average
60-74	Fair	Satisfactory
50-59	Less	Below Average
0-49	Poor	Insufficient

## Results/Findings and Discussion

This chapter presents the results, analysis, and interpretation of the data gathered. The data were extracted and obtained through statistical analysis, as indicated in the procedure.

### *Participants Vocabulary Level during Pretest*

Learning the meaning of new words alone does not ensure word mastery, although it is an important primary step in vocabulary learning (Sharakhimov & Nurmukhamedov, 2021). At this level, multiple-choice tests put emphasis on measuring learners' vocabulary breadth, which pertains to the number of words for which students may have some level of knowledge (Dougherty Stahl & Bravo, 2010). The participants' vocabulary levels were measured prior to the implementation of the remediation strategy. Given ample time to finish the test, the learners were given full discretion to answer the questions based on their understanding, regardless of their familiarity or unfamiliarity with the words. Following the interpretation of the classification of students' vocabulary level adopted from Arikunto (2009) as cited by Putri & Refnaldi (2020), the percentage scores of the learners were measured to identify their vocabulary level.

Table 3.

## Grade 6 – Newton Pretest Scores

Score	Score (in %)	Frequency	Descriptive Equivalent
0	0	0	Insufficient
1	6.67%	1	Insufficient
2	13.33%	0	Insufficient
3	20%	1	Insufficient
4	26.67%	0	Insufficient
5	33.33%	0	Insufficient
6	40%	2	Insufficient
7	46.67%	1	Insufficient
8	53.33%	11	Below Average
9	60%	2	Satisfactory
10	66.67%	5	Satisfactory
11	73.33%	2	Satisfactory
12	80%	10	Above Average
13	86.67%	3	Above Average
14	93.33%	0	Outstanding
15	100%	0	Outstanding
<b>Total</b>		<b>38</b>	
<b>Mean</b>			<b>9.55</b>
<b>Mean Percentage Score</b>			<b>63.67</b>
<b>Standard Deviation</b>			<b>0.437</b>
<b>Overall Interpretation</b>			<b>Satisfactory</b>

The researchers conducted a 15-item pretest for the students in Grade 6 – Newton to measure their prior knowledge of the words used in the test and in the vocabulary word mapping remediation strategy. The table above presents the test scores of the participants on a fifteen-item vocabulary test. Table 3 revealed the vocabulary level of Grade 6 – Newton students, as they obtained a mean of 9.55, a mean percentage score of 63.67, and a standard deviation of 0.437 during the conduct of the pretest. It is indicated based on the scores that thirteen (13) students were classified as above average with percentage scores ranging from 75% to 89%; nine (9) students with percentage scores ranging from 60% to 74% were classified as satisfactory; eleven (11) students with percentage scores ranging from 50% to 59% were classified as below average; and five (5) students with percentage scores ranging from 0% to 49% were classified as insufficient. Based on the mean percentage score of the learners, the vocabulary level of Grade 6 - Newton is classified as satisfactory.

#### *Participants' Vocabulary Level after Posttest*

After the implementation of the vocabulary word mapping strategy, the researchers conducted a 15-item vocabulary test following the same format as the pretest but differing in content, example sentences, and choices. The posttest shows whether a student has gained progress during the remediation, and it reveals how much each student's knowledge improved after the delivery of the instruction (Hornbuckle, 2022). The table below presents the complete details

of the learners' scores in the posttest, along with their equivalent percentage, number of frequency, and descriptive equivalent.

Table 4.

Grade 6 – Newton Posttest Scores

Score	Score (in %)	Frequency	Descriptive Equivalent
0	0	0	Insufficient
1	6.67%	0	Insufficient
2	13.33%	0	Insufficient
3	20%	0	Insufficient
4	26.67%	0	Insufficient
5	33.33%	0	Insufficient
6	40%	1	Insufficient
7	46.67%	0	Insufficient
8	53.33%	3	Below Average
9	60%	5	Satisfactory
10	66.67%	0	Satisfactory
11	73.33%	2	Satisfactory
12	80%	4	Above Average
13	86.67%	3	Above Average
14	93.33%	5	Outstanding
15	100%	15	Outstanding
<b>Total</b>		<b>38</b>	
<b>Mean</b>			<b>12.61</b>
<b>Mean Percentage Score</b>			<b>84.07</b>
<b>Standard Deviation</b>			<b>0.442</b>
<b>Overall Interpretation</b>			<b>Above Average</b>

Table 4 shows the scores and vocabulary level of the students based on the posttest. The students obtained a mean of 12.61, a mean percentage score of 84.07, and a standard deviation of 0.442. It is indicated based on the scores that twenty (20) students with percentage scores ranging from 90% to 100% were classified as outstanding, seven (7) students with percentage scores ranging from 75% to 89% were classified as above average, seven (7) students with percentage scores ranging from 60% to 74% were classified as satisfactory, three (3) students with percentage scores ranging from 50% to 59% were classified as below average, and one (1) student with a percentage score ranging from 0% to 49% was classified as insufficient. Based on the results of the mean percentage score, the vocabulary level of the learners is above average. It is revealed that there is an improvement in the student's scores in the posttest compared to their pretest scores after the intervention.

*Significant Difference of Pretest and Posttest*

To identify the significant difference between the mean and mean percentage scores during the pretest and posttest, the table below summarizes the results to formulate conclusions from the given data.

Table 5.

Difference of Pretest and Posttest Mean and Mean Percentage Score

	<b>Mean</b>	<b>Mean Percentage Score (MPS)</b>	<b>Interpretation (MPS)</b>
Pretest	9.55	63.67	Satisfactory
Posttest	12.61	84.07	Above Average
<b>Difference</b>	<b>3.06</b>	<b>20.4</b>	

Table 5 revealed the difference in the mean and mean percentage scores of the pretest and posttest. Based on the table, there is a 3.06 difference in the mean scores from the pretest to the posttest. Moreover, the mean percentage score increased by 20.4, a difference from 63.67 during the pretest to 84.07 after the posttest.

## Discussion

The study aimed to delve into the effectiveness of vocabulary word mapping as a remediation strategy. Consistent with the objectives of the study, the succeeding paragraphs explain the relevant findings based on the data gathered.

In relation to the pretest scores, the author was able to present the vocabulary level of the learners. Evidently, several factors in reading significantly contribute to vocabulary acquisition of the learners, which is stipulated in the learners' exposure to the words. This idea is supported by You (2011), who posited that repetitive exposure, explanation of the words, and translation support more effective vocabulary acquisition. In comparison, Afzal (2019) argued that learners faced several problems in learning the vocabulary, including knowing the meanings of new words, pronouncing new words, using new words correctly, memorizing the words, and spelling new vocabulary. It can be noted that based on the researchers' observation, falling through the application of these factors reflects the results of the learners' scores in their pretest. The findings of Qomariyah & Nafisah (2020) forwarded a significant conclusion on the application of word mapping strategy as an effective strategy where the learners gained interest in the utilization of this strategy. Hence, these areas mentioned are given emphasis in the word mapping remediation strategy.

In addition, the result of the posttest revealed a significant result on the improvement of the learners' scores after the remediation process. These results are consistent with the findings of Abate and Tefera (2015) in their study about the role of semantic mapping strategy among one hundred twelve (112) eighth-grade students. It is revealed that there is an improvement in the learners' scores who are exposed to the strategy. The learners obtained a mean score of 19.25 during the posttest compared to the 9.75 mean score in their pretest. Similarly, Marianca et al. (2022) explored the effectiveness of word-mapping strategies among ninth-grade learners. The data shows that the learners obtained a mean score of 81.60 during the posttest and 46.04 in their pretest. Both findings resulted in the conclusion that the application of word mapping strategy effectively improved the learners' vocabulary.

To provide a significant insight on the improvement of the learners' scores from their pretest and posttest, the difference in the scores was formulated. It can be noted there is a 20.4

significant difference between the pretest and posttest percentage scores. These results correspond to the significant findings of Biemiller and Boote (2006), as cited by Butler et al. (2010) in their review of the current research on vocabulary instruction. The authors highlighted the 12% average gain of learners with a repetitive engagement of learning words in the reading material. In addition, the authors revealed that a 10% additional average gain occurred when explanations of words were taught directly during the reading of the story. Thus, it is evident that the vocabulary word mapping remediation strategy resulted in an improvement in the test scores of students in the Filipino subject.

## Conclusion

This action research assessed the effectiveness of vocabulary word mapping as a remediation strategy in improving the vocabulary level of 38 students in Grade 6 – Newton in Molave Regional Pilot School – Special Science Elementary School (MRPS-SSES). As stated in the previous pages, this paper will provide a new perspective on the utilization of a vocabulary learning strategy that focuses on the Filipino subject. Thus, the vocabulary word mapping strategy has been explored in this paper, particularly as the basis of the analysis during the remediation.

Based on the findings, the utilization of vocabulary word mapping brought to light an improvement in the pretest and posttest scores of the learners. Looking back to the results, the 63.67 mean percentage score of the learners after the pretest increased to an 84.07 mean percentage score after the posttest. Based on its interpretation, the vocabulary level of the students after the pretest is satisfactory and reclassified as above average after the posttest. Thus, it can be noted that the vocabulary word mapping strategy is effective in improving the vocabulary level of 38 students in Grade 6 – Newton.

Based on the occurring findings and conclusions of the study, here are several recommendations to be considered. It is recommended that teachers should explore not only one vocabulary learning strategy but also accessible strategies that will help learners widen their vocabulary in the content area. Reading coordinators are responsible for initiating reading programs in schools. It is recommended that reading coordinators implement vocabulary word mapping and other vocabulary learning strategies in reading programs conducted in the school. It is ideal to include these strategies in reading pantries where learners may explore different reading materials enriched with different vocabulary learning strategies. Moreover, this paper could be a good work to be replicated and can become a springboard for research that centers on vocabulary development and vocabulary word mapping strategies. It is recommended that future researchers do further studies on this remediation strategy in different contexts and research designs.

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### **Biodata**

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