VOCABULARY ENHANCEMENT: LEARNING SCIENCE TERMS THROUGH WORD WALL ACTIVITIES

LESTER GENE V. AREVALO,

M.A.Ed. Mote Elementary School, Malita West District, Division of Davao Occidental
Mote, Pinalpalan, Malita, Davao Occidental, Philippines
E-mail: villegaslestergene@gmail.com

ABSTRACT

The study aimed to assess the impact of word wall activities on enhancing the vocabulary in learning Science terms of Grade 4 pupils of Mote Elementary School. A One Group Pretest – Posttest Design and One – Shot Case Study Design were used in the study. Nineteen (19) pupils have used as subjects of the study. The mean scores and standard deviations were calculated to define the data gathered.   Results showed that there is an increase of mean scores on the pupils' performance during the pre and post oral reading vocabulary test after the implementation of the word wall activities. Moreover, the results of the completion of the word wall activities made pupils read more words correctly. However, the results revealed that the word wall activities have positive impact on pupils' learning while doing the activities. Based on the interview, the "Words with ABC order" activity has lesser engagement to pupils compared to "Be the Teacher" activity which shows higher engagement to pupils learning. Generally, findings of the present study suggest that the word wall activities were much more effective since it enhanced the vocabulary learning on Science terms of Grade 4 pupils.

Keywords: *Vocabulary, Learning*

INTRODUCTION

My curiosity was caught when I had my Grade 4 Science class where my students can easily forget the words of science, but they can still articulate the meaning of their previous classes. I'm just passive when I present them with the terms of Science without knowing if they really understood the whole expression. Yet, I just deliberately ignore my pupils ' learning difficulties in the first 5 weeks of the school year because I always put on my mind that perhaps because of the transition in pupil learning in science subject where Grade 3 uses mother tongue (Sinigbuanong Binisaya) as a medium of instruction and for Science Grade 4 uses English as a language of instruction. Unknowingly, when I had my reflection on the outcome of their daily assessment, those difficulties pose alarming concern on my side as their science teacher as well as the learning of the pupil. Again, I don't take into account the impact of my pupils ' learning difficulty, which could lead to poor academic achievement in science at the end of their learning skills. There are a lot of scientific terms that my students sometimes mistake, mispronounce and forget. Based on the following information I have gathered on the successes of my pupil, it should be directed to address learning problems with a fluency in science. Therefore, an intervention in the classrooms should be carried out to address my pupil difficulty in reading fluency on certain Science terms. I found the following as viable solutions to the problem by admitting them in Reading Center of school to let the reading specialist to improve their reading

skills or setting 5-minutes reading drills before to start my lesson or rather allowing them to attend reading intervention set by the adviser in their reading classroom program. In this way, their reading skill would improve and the same time they can practice their own reading independently. Furthermore, as I assessed the various viable solution to the problem, this would also support the Reading Program of the Division of Davao Occidental as well as Department of Education which is the implementation of "Every Child is a Reader Program". Consequently, among the identified possible solutions, I decided to implement my own intervention that would really focuses on the reading fluency on the Science terms through Word Wall Activities. According to (Hall & Cunningham, 1999) that utilizing vocabulary activities may help students develop a sight word vocabulary that further allows them to retain the words and read text. Word wall activity is a strategy where the high-frequency word walls are usually located on a bulletin board or wall above or below the alphabet as this location allows the words to be a focal point of the classroom assisting students while reading and writing independently. The words are written with thick black marker or colored paper and are placed under the initial letter of the word. Students practice new and old words each day by looking at them, saying them, clapping, chanting, snapping the letters, writing the words on paper, and selfcorrecting the words with the teacher. Word walls also serve to teach word analysis and to build vocabulary from units of study. Word wall activities are incorporated to give students the opportunity to use these words in various ways. These words then become anchored in long-term memory allowing quick and easy access, promoting detection of patterns, and encouraging connections between words. It is suggested that word wall activities provide interactive ways to learn high-frequency words as they build word recognition by providing a visual and active engagement with words (Hall & Cunningham, 1999).

This action research will primarily intend to apply the word wall activities as an evidence-based strategy to improve the vocabulary development on Science. Thus, this action research seeks to answer the question "How do word wall activities enhance the vocabulary of Grade 4 pupils in Science?

METHODOLOGY
RESEARCH DESIGN
This study employed One Group Pretest – Posttest Design and One – Shot Case Study. In which One Group Pretest – Posttest Design provides a comparative description of a group of subjects before and after the experimental treatment while One – Shot Case Study where the single group is exposed to an experimental treatment and observed after the treatment.

POPULATION
The participant/s of this action research study were the nineteen (19) Grade 4 pupils of Mote Elementary School, Mote, Pinalpalan, Malita, Davao Occidental. The class has different reading level competence based on the result of the Pre - reading assessment of Phil –IRI school year 2019 -2020. Apparently, the Grade 4 class has the difficulty on the stage of transition from mother-tongue to English as a medium of instruction in teaching Science concept.

Table 1. Result of Pre – Reading Assessment of Phil – IRI in Grade 4 Pupils

Sexes / Reading Level	Male	Female	Total No. of Pupils
Non – Readers	0	1	1
Frustration Level	5	5	10
Instructional Level	2	3	5
Independent Level	1	2	3

SAMPLING
Complete enumeration sampling was used in this study in which all members of the whole Populations are measured. In this method, all the Grade 4 pupils of Mote Elementary School

were the subject of the study.

Table 1. Samples of the Study

	Sexes		Total Number of Pupils
	Male	**Female**	
Grade 4 Aguinaldo	**9**	**10**	**19**

RESEARCH INSTRUMENT

The word wall activities had a total of 10 activities that were performed within 5 weeks. Every activity was participated by the whole class within time duration of 15 – minutes which was part of the elicit phase of the teaching – learning process. The week 1 consist of the following activities: "Be the teacher", and "Guess that Word", week 2 – "Let's be Creative" and "Letters in my First Name", week 3 – "Letters in Words" and "Rainbow Writing", week 4 – "Shape of the Word" and "Word Wall Toss" and week 5 – "Wordo" and "Words in ABC Order". At the end of the 10 - word wall activities, pupils were administered the post oral reading vocabulary test. At the completion of this study, 10 randomly chosen pupils for unstructured interview.

DATA GATHERING/COLLECTION

The first method of data collection was the 35 – item pre and post oral reading vocabulary test which was used to measures the gain of knowledge from the conduct of the study until the end of the implementation of strategy to compare the pupil's performance in Science. The second method of collection of data was the teacher unstructured interview which provides information of changes on how well his pupils understand and use reading strategies over time based on the teacher casual interview from the ten (10) randomly chosen pupils.

DATA ANALYSIS

The mean and standard deviation were used to determine whether or not the word wall activities can enhance the vocabulary of Grade 4 pupil in Science. All statistical calculations were performed using JASP software.

ETHICAL CONSIDERATIONS

Anonymity was protected throughout this study and pupil's names were not use on the interview or observation as they assigned a number to assure confidentiality.

RESULTS AND DISCUSSIONS

Results of Pre and Post Oral Reading Vocabulary Test

As can be seen in Table 2, the results of the pre and post vocabulary test indicated that reading fluency of pupils increased at the end of the intervention. Pupils increased words read correctly as the mean increased from 9.21 to 15.16. This indicates that the completion of the word wall activities the pupils read more words correctly. The standard deviations of 21.4 and 20.9 respectively, suggest that improvement with all pupils did occur. This implies that high standard deviations also indicate that even though most pupils improved, some of the pupils still struggled with reading fluency and reaching the 35 – word expectation for Grade 4 pupils. When administering the post vocabulary test, some pupils still struggled because they were focusing on sounding out the sight words.

Table 2. Results of Pre and Post Vocabulary Test

	N	**Mean**	**Standard Deviation**
Pre – Vocabulary Test	19	9.21	1.75
Post– Vocabulary Test	19	15.16	2.01

This finding indicates that the word wall activities might have been a factor that helped to build and strengthen high-frequency word vocabulary resulting in the increase of words to read

correctly. According to Jasmine and Schiesl (2009) that adding activities that relate to the word wall may result in positive pupil's engagement and could be considered one more effective instructional strategy for teachers. Moreover, the word wall activities might be effective way in increasing the vocabulary development of pupils and the teacher may continue utilizing this as important components of the reading program to enhance the vocabulary in Science.

RESULTS OF TEACHER'S CASUAL INTERVIEW

Based on the results of the interviews indicated that all pupils enjoyed the word wall activities because according to them *"nyaleba kami tuosadanga, sir"* and they believed that the activities helped them to learn the words through activity and they added *"aw madegumanyakanamikyedeen, sir"*. Most of the participants considered "Be the Teacher" as their favorite activity because based to them *"kyaleemannamituoyadangaa be the teacher kaymadegyatigegnakanamikyedeen"* meaning they liked to play school and enjoyed playing the role of a teacher. Contrarily, many pupils indicated that their least favorite activity was "Words in ABC Order" maybe because they were confused by this activity and thought it too challenging, and, therefore, were less engaged. However, teachers should not be deterred from using an activity because pupils think it too challenging. This activity may have been better suited at a later time or been more clearly instructed. Overall, the enthusiasm presented by the participants indicated that their perceptions of word wall activities help them to learn sight words which might have enhanced their vocabulary on Science terms.

CONCLUSIONS

From the data gathered, the researcher concluded that the word wall activities can enhance the vocabulary on learning Science terms of Grade 4 pupils. Results suggest that despite pupils varied academic abilities, the word wall activities were one factor that might have helped to enhance high-frequency word vocabulary. With the development of a more extensive high-frequency word vocabulary on Science terms through the use of word wall activities, pupils might further increase reading fluency ultimately enhancing their vocabulary on Science terms.

RECOMMENDATIONS

The following are suggested in the light of the above results and conclusions:

1. Further studies may conduct in different grade levels and in different subject areas.
2. Future researchers may be able to enhance the testing tool where the duration of evaluation may have increased as this may boost the validity of the results.
3. Similar research can be conducted to the identified least learned competencies in Science and cover more topics.
4. Further studies may conduct by integrating these activities on making Daily Lesson Plan (DLP) to address issues on how to make differentiated instructions.

REFERENCES

1. **HALL, D., AND CUNNINGHAM, P.** (1999). Multilevel word study — Word charts, word walls, and word sorts. In I. Fountas& G. Pinnell (Eds.), Voices on Word Matters — Learning about Phonics and Spelling in the Literacy Classroom (pp.114-130). Portsmouth, NH: Heinemann.
2. **JASMINE, J. AND SCHIESL, P.**(2009). The Effects of Word Walls and Word Wall Activities on the Reading Fluency of   First Grade Students Reading Horizons, 49(4).
   i. fromhttps://scholarworks.wmich.edu/reading_horizons/vol49/iss4/5