



Republic of the Philippines
Department of Education
REGION IV-A CALABARZON
CITY SCHOOLS DIVISION OF BIÑAN CITY

**SCAFFOLDING TECHNIQUES FOR VOCABULARY ACQUISITION LEADING TO LITERACY
FOR THE GRADE 12 STEM STUDENTS OF BIÑAN INTEGRATED NATIONAL HIGH SCHOOL**



DIVINA P. MAMING
Master Teacher II
Binan Integrated National high School

ABSTRACT

Vocabulary acquisition is an indispensable approach for fostering language skills and proficiency. Of the multifarious techniques in the process, explicit instructions for students who are second language learners must be taken into account. It is important to identify words that learners use within their environment, present their articulation, elaborate word knowledge through their meanings and allow fluency in writing and in speech to develop in time. This study aims to understand the factors affecting vocabulary competence of the STEM 12 students of Binan Integrated National High School and determine whether the application of explicit instruction using scaffolding techniques may increase their level of competence. The research reveals that most STEM students had some level of difficulty in expressing themselves using the English language due to limited vocabulary familiarity. Other reasons include their insufficient knowledge of pronunciation and fear of social judgment when they commit mistakes in the process. Statistical data were tabulated and the result of the paired t-test yielded a significant difference between the test scores before and after incorporating vocabulary scaffolding techniques. This indicates that the mean post-test score of the students is significantly higher compared to their mean pre-test score. Therefore, incorporating vocabulary scaffolding techniques has significantly increased the test scores of the students after exposure to the intervention. The intervention is deemed effective in improving vocabulary competence of the students.

Keywords: *vocabulary acquisition, competence, explicit instructions, scaffolding techniques*

INTRODUCTION

Vocabulary is the building block of a sentence that helps one convey the intended meaning with a complete thought. Quoting from Barcroft, Sunderman, & Schmitt, (2011), lexis, the Greek for word, “refers to all the words in a language, the entire vocabulary of a language”. Lewis (1993) also defends that, “lexis is the core or the heart of language” (p. 89).

Having rich vocabulary gives a person an edge in communication. Having sufficient vocabulary is by far, a great aid for communication than just knowing the rudiments of correct grammatical construction of sentences. Without sufficient vocabulary, understanding and expressing one another’s ideas would lead to confusion and misinterpretation. Wilkins (1972) revealed that grammar can do little for the understanding of a text but good knowledge of vocabulary can do lead to better understanding of it. Thus, we see university students bringing with them their dictionaries rather than their grammar books.

This leads the researcher to the realization that teaching vocabulary is of utmost need among the Grade 12 STEM students considering the fact that they are those who have the probability to enter to college and push through higher education in the future. These soon to be scientists, doctors, mathematicians, engineers, and technology experts who have to prepare for speaking engagements and writing endeavors in the future and so, their jars of words and skills for oral and written communication must be honed.

Acquiring vocabulary according to content and context is significant among the students as they develop greater articulacy and confidence in English. It may be also considered that they create their own personal vocabulary learning strategies suited for their level. Studies show that those who are just beginning to learn vocabulary opt to absorb words through memorization, and advanced students, use context to acquire them (Ellis, 1994).

Nation & Meara, (2010) posited that English vocabulary is complex, because of the three main facets related to form, meaning, and use, as well as layers of meaning connected to the roots of individual words. This may be the reason why acquisition seem to be easier said than done. A language learner must withstand challenges of acquiring vocabulary for comprehension and communication (Swan and Walter, 1984).

The practical use of vocabulary should also be a consideration in teaching and or learning it. Nagy (1988) said that it is a must for educational sector to encourage students to increase their vocabulary knowledge with the purpose of using it both as a medium and as an end.

Teaching vocabulary helps students understand more words and their usage and communicate with others through English, as their medium. Voltaire purportedly said, “Language is very difficult to put into words.” When students learn vocabulary, they develop side-by-side, the four macro-skills holistically.

Joshi (2006) and Kame’enui & Baumann (2012) have pointed out that when students are aided with vocabulary instructions, the way they understand what they read, the manner they produce their written output, as well as their habit of listening and terminologies used in speaking also show remarkable improvement. Godwin - Jones (2010) has also posited that the competence in all areas of communication is greatly affected by one’s vocabulary acquisition. Joshi (2005) believed that possessing more vocabulary makes students crave to learn more. In most cases, those who struggle for ideas about a word tends to stop learning as well and so, there come the problems in communication. Allen (1983) found out that there is a very high possibility that lingual issues would affect communication; he revealed that communication fails when people are unable to say the right words. Thus, a conflict may eventually arise.

Sta. Ana, (2013) exposed that here in the Philippines, we metaphorically associate speaking the English language to the phrase, “nose-bleeding” to signify the difficulty one undergoes in dealing with an English exchange of information. One usually runs

out of words to say and hesitates to speak especially when he/she loses his/her thought in the process. Due to our inability to express ourselves, we also lose our self-confidence that leads to the total avoidance of this language.

According to Kamil et al. (2018), vocabulary knowledge is one of the determinants of a student's success in school. And so, Folse (2008) saw the necessity for every English language learner to optimize and expand their vocabulary knowledge.

Moreover, there is also a pressing need for every teacher to include vocabulary teaching in their lessons backed by activities that would reinforce previously studied material. Its main objective is to allow the learners to focus their attention on key vocabulary, inculcate in them the forms and meanings of the newfound words, and encourage them to find strategies for vocabulary learning that they would benefit from. The goal is to awaken students' enthusiasm for vocabulary learning and it must be achieved before and after the students leave the classrooms.

METHODOLOGY

Various instruments

The researcher utilized self-made instruments such as questions for group interview and survey questionnaire. Scaffolding techniques were researcher made, modified or adapted.

In the pretesting and post testing, the researcher used standardized test that was validated by the English Master Teachers.

Online Survey

This allowed the researcher to understand the reasons why the participants are hesitant to speak the English language and as to how they can be helped. This has also become useful in proceeding with the study.

Pretesting and Post Testing

The participants were asked to take a vocabulary assessment on face-to-face and online modalities. The test contained 50 items from variety of topics that STEM students

might have covered from the subjects offered in their strand.

In this way the researcher would have the empirical data to be used as bases for the Post testing method. All the results will be tabulated to arrive at a conclusion.

Scaffolding techniques for Vocabulary Acquisition

The participants were given explicit instructions through scaffolding techniques and strategies. They were provided with supplementary materials and were guided all throughout the sessions. The supplementary materials include the IPA pronunciation guide of the words, their definitions and sample sentences provided by the proponent. After series of exposure to the words, students used the words in constructing their own sentences. This led to the learners' experiential learning where they used the words in actual conversation with their fellow classmates and friends. The practice went on until they accumulated more vocabularies which they could use for communication.

RESULTS

1. What are the factors affecting the vocabulary competence of the Grade 12 STEM students at Biñan Integrated National High School?

Table 1 shows the preferred language most students use in communicating with others. Twenty-four out of 28 or 86% who responded to the question, "What language are you most comfortable expressing yourself in?" are inclined to use Tagalog rather than English and other dialects. Respondents claimed that it is more convenient to use the Tagalog since they could easily express their thoughts and be able to bring out a meaningful conversation. Others asserted that using the native language could avoid misunderstanding, confusion or even misinterpretation. They found it difficult, on the other hand, to choose appropriate words suitable to English collocation.

Table 1
Language Preference of Students in Communication

| Language | Respondents |
|----------------|-------------|
| Tagalog | 24 |
| English | 3 |
| Other Dialects | 1 |

Table 2 reveals several factors that affect STEM 12 students' vocabulary competence. It shows that most students or 57% of the total number of respondents have limited familiarity of the English words. Many of them also consider their inability to pronounce the words correctly and their fear of being judged unfairly in using English in the communication process. The reasons of having low comprehension may have been due to the fact that English is not their native language, and they, still, are on their English language learning curve. Low comprehension is not also true among all participants which may mean that students could understand English since it is their second language even if they barely use it in speaking.

Table 2
Factors Affecting the Vocabulary Competence of STEM 12 students

| Factors | Respondents |
|--|-------------|
| Limited English vocabulary | 16 |
| Insufficient knowledge of pronunciation | 10 |
| Fear of Judgement from people/environment | 10 |
| Public Speaking skill/fluency deficiency in speaking | 6 |
| Tagalog as the native language | 3 |
| Tagalog to English translation | 1 |
| English as a Second Language | 1 |
| Low Comprehension | 1 |

After considering these factors, the explicit instruction using scaffolding techniques prepared by the proponent was applied. The students were engaged in the activities and materials were provided for them. The materials consist of IPA or International Phonetic Alphabet pronunciation guides, word definition, visuals and images and sentence examples. The

teacher modelled the pronunciation, gives the definition, and elaborated the meaning through examples and visuals. These exposure to the language is a great aid for the learners to easily understand and retain the meaning and use of words in their memories.

Not considering so much the grammatical aspect of sentence construction, as this is not part of the study, the students did fairly well in expressing themselves in writing and in speaking after the incorporation of the scaffolding techniques.

2. What is the level of vocabulary competence of the Grade 12 STEM students prior to incorporating vocabulary scaffolding techniques in terms of context, usage, delivery, and confidence?

Table 1 shows the proficiency level of the respondents based on the pretest scores. Prior to incorporating vocabulary scaffolding techniques, only 3.1% of the students had indicated a pretest score equivalent to "proficient". Most of the students (56.3%) are nearly proficient while the rest of the students (40.6%) are least proficient. On average, the mean pretest score of the respondents indicated that they are nearly proficient (mean = 26.56 ± 6.14) prior to incorporating vocabulary scaffolding techniques.

Table 1
Pretest scores of Respondents Prior to incorporating vocabulary scaffolding techniques

| Score Range | Proficiency Level | f | % |
|--------------|----------------------------------|-----------|-------|
| 45-50 | Highly Proficient | | |
| 38-44 | Proficient | 1 | 3.1% |
| 25-37 | Nearly Proficient | 18 | 56.3% |
| 13-24 | Low Proficient | 13 | 40.6% |
| 0-12 | Not Proficient | | |
| Total | | 32 | |
| Mean | 26.56 (Nearly Proficient) | | |
| SD | 6.14 | | |

3. What is the level of vocabulary competence of the Grade 12 STEM students after incorporating vocabulary scaffolding techniques in terms of context, usage, delivery, and confidence?

Table 2 shows the proficiency level of the respondents based on the posttest scores. After incorporating vocabulary scaffolding techniques, 3.1% of the students had indicated a posttest score equivalent to “highly proficient” while 18.8% are proficient. Most of the students (65.6%) are nearly proficient while the rest of the students (12.5%) are least proficient. On average, the mean posttest score of the respondents indicated that they are still nearly proficient (mean = 31.13 ± 6.98) after incorporating vocabulary scaffolding techniques.

Table 2
Posttest scores of Respondents Prior to incorporating vocabulary scaffolding techniques

| Score Range | Proficiency Level | f | % |
|--------------|-------------------|----------------------------------|-------|
| 45-50 | Highly Proficient | 1 | 3.1% |
| 38-44 | Proficient | 6 | 18.8% |
| 25-37 | Nearly Proficient | 21 | 65.6% |
| 13-24 | Low Proficient | 4 | 12.5% |
| 0-12 | Not Proficient | | |
| Total | | 32 | |
| Mean | | 31.13 (Nearly Proficient) | |
| SD | | 6.98 | |

4. Is there a significant difference in the vocabulary competence of the Grade 12 STEM students before and after incorporating vocabulary scaffolding techniques in terms of context, usage, delivery, and confidence?

Table 3 shows the comparison of the scores of the students before and after incorporating vocabulary scaffolding techniques. Mean post-test score is higher than the mean pre-test score which would suggest that the students performed better in the posttest. Result of the paired t-test yielded a significant difference ($t = -4.692$, $df = 31$, $p < .001$) between the test scores before and after incorporating vocabulary scaffolding techniques. This indicates that the mean post-test score of the students is significantly higher compared to their mean pre-test score. Therefore, incorporating vocabulary scaffolding techniques has significantly increased the test scores of the students after exposure to the intervention.

Table 3
Comparison of Pretest and Posttest Scores

| | Mean | SD | t | p |
|----------|-------|------|--------|--------|
| PRETEST | 26.56 | 6.14 | - | <0.001 |
| POSTTEST | 31.13 | 6.98 | 4.692* | |

* Significant at the 0.001 level

Despite indicating similar mean proficiency levels before and after exposure to the intervention, the findings reveal that there was a decrease in low proficient students (from 13 to 4), an increase in proficient students (from 1 to 6) and the emergence of 1 highly proficient student. This suggests that the incorporation of vocabulary scaffolding techniques has significantly increased the proficiency levels of the respondents. The intervention is deemed effective in improving vocabulary competence of the students.

DISCUSSION

Communication remains the paramount foundation of local, national or global understanding. With the emergence of the internet and expansion of virtual spaces, communication comes in handy. If our students have acquired rich vocabulary and have developed better communicative practices and skills, their confidence in writing and speaking will bring them anywhere in the world and will make them successful in their chosen fields.

Apart from home, school is the best place for students to sharpen their awareness and cognizance of words from the wealth of vocabularies to draw from. Teachers for the most part, have every opportunity to incorporate vocabulary learning in their classes and by doing so, they are readying the learners for a deeper perception of the lesson.

In the course of the study, it can be realized that reading cannot be separated from learning vocabulary. A poem, a story, a novel, even school textbooks or mere movie subtitles have their share of mustering our knowledge of words to bring about good contents for writing and conversation. Reading is not just a rewarding habit but a beneficial way for improving our capability to self-expression. As I see it, teachers must encourage students to read or expose them to

contextualized reading materials rather than nourishing them with lectures in the classrooms.

Words are sources of power. Every word one utters may either create conflict and misunderstanding or give rise to a solution to a problem, a newly-formed friendship, a winning in a speaking or writing contest, a great presentation, a well-documented innovation or even a promotion. So, one must capitalize on cultivating his and his students' communicative aspects to be more resilient and productive citizens.

ACKNOWLEDGEMENTS

My heartfelt gratitude goes to God, the Almighty, and to all the people who have in one way or another have become influential and supportive as I get through this action research. Mr. Oliver Caliwag, Principal III of Binan Integrated National High School for allowing me to conduct this study in BINHS, Dr. Freddie John Calumno for his expertise in statistics and untiring support as a research coordinator, to Mrs. Freda B. Gragas for her time and effort poured in validating and editing this piece of work, to Ms. Josephine Briones and Ms. Ma. Ria Calub for the validation procedure and to all the respondents and their parents for letting their children participate in this endeavor.

REFERENCES

- Ellis, R. (1994). *The Study of Second Language Acquisition*. Oxford: Oxford University Press
- Fromkin, V., and Rodman, R. (1974). *An Introduction to Language*. U.S.A., Rinehard and Winston, Inc.
- Godwin-jones, R. (2010). *Emerging technologies from memory places to spaces algorithms: Approches to second language vocabulary learning*. *Language Learning & Technology*, 4.
- Grabe, W., & Stoller, F. L. (1997). *Content-based instruction: Research foundations*. In M. A. Snow & D. M. Brinton (Eds.), *The content-based classroom: Perspectives on integrating language and content*. New York: Longman.
- Joshi R. (2005) *Vocabulary: A Critical Component of Comprehension*. *Reading & Writing Quarterly*. 21, 209-219.
- Pulido, D. (2011). *MEASURING SECOND LANGUAGE VOCABULARY ACQUISITION*. James Milton. Clevedon, UK: Multilingual Matters, 2009. Pp. v 278. *Studies in Second Language Acquisition*, 33(3), 471-472. doi:10.1017/S0272263111000106
- Nation, I. S. P., & Meara, P. (2002). *Vocabulary*. In N. Schmitt (Ed.), *An introduction to applied linguistics* (pp. 35-54). London: Arnold
- Nagy, W. E. (1988). *Teaching vocabulary to improve reading comprehension*. Newark, Delaware: International Reading Association.
- Stanovich, K. E. (1986). *Matthew Effects in reading: Some consequences of individual differences in the acquisition of literacy*. *Reading Research Quarterly*, 21, 360-406
- White. Barcroft, J., Schmitt, N., & Sunderman, G. (2011). *Lexis*. In J. Simpson (Ed.), *The Routledge Handbook of Applied Linguistics* (pp. 571-583). Abingdon, UK / New York: Routledge
- Wilkins, D. A. (1972). *Linguistics in Language Teaching*. Cambridge: MFT Press.
- Edvardsen, J. P. (2010). *Second Language Learning and Acquisition Among Filipino Children of 1st Generation Immigrants in their Two Years Stay in Norway*. Norway
- Sta. Ana, Michael (2013) *7 Reasons Why Filipinos CAN'T Speak English Better. Exposing You To Philippine's Bigger Picture. A Journal on Travel, Food People, Culture and Arts*. <https://whatmichaellikes.blogspot.com/2013/09/7-reasons-why-filipinos-cant-speak.html>