

Morphemic Analysis Instruction in Developing Students' English Vocabulary

AREE TEHLAH

Rajamangala University of Technology Srivijaya ,

Rattaphum College, Songkhla, Thailand

Email: maleng_gan@hotmail.com

Abstract— The purpose of this study were: 1) to investigate the learners' background knowledge of English vocabulary; 2) to investigate the effectiveness of morphemic analysis instruction (MAI) in developing students' English vocabulary; and 3) to investigated the relationship between students' English vocabulary knowledge and vocabulary size. A morphemic analysis test, a vocabulary level test and the treatment of morphemic analysis lesson were used as the instruments of this study. Subjects were 61 of second-year vocational students majoring in Business Computer at Rajamangala University of Technology Srivijaya, Rattaphum College, Songkhla Province. The data gathered from the tests were analyzed by Statistical Packages for the Social Sciences (SPSS) using the series of T-tests and Pearson's Correlation Coefficient. The findings showed that 1) learners were at a low level of English vocabulary background knowledge; 2) the morphemic analysis instruction could enhance the learners' knowledge of English vocabulary and showed a significantly difference at 0.05 levels; and 3) regarding the subjects' vocabulary size, the highest mean score was shown at the 1000-word level whereas the lowest mean score was found at the 5000-word level. When separated into two groups of high and low vocabulary achievers, among high vocabulary achievers, a significant correlation was found between the 1000-word levels. On the contrary, a correlation was not found among the low vocabulary achievers.

Keywords- *morphemic analysis instruction (MAI); English vocabulary knowledge; vocabulary size;*

I. INTRODUCTION

Vocabulary knowledge is a crucial role in language leaning for fluently language use (Nation, 1993). It is central and crucially important for second language (L2) learners to study a non-mother tongue language. Vocabulary size, as well, is an indicator of how well the L2s can perform academic language skills such as, reading, listening, and writing (Bear, Invernizzi, Templeton and Johnston, 2008). Ellis (1997) argues that vocabulary knowledge is a predicator of learners' discourse comprehension, which allows grammatical rules to be patterned in the learners' mind. Having inadequate vocabulary can obstruct learners' reading comprehension in a way that makes it more likely the learners will face difficulties in the path of academic achievement.

In the L2 classroom, vocabulary learning and teaching is a central activity. Students are likely to apparently understand words before doing other activities. One way in which vocabulary learning can be fostered is through the use of learning strategies. Suggested potential vocabulary learning strategy is the use of morphemic analysis activity to learn academic words. Morphemic analysis is defined as the process of breaking down morphologically complex words into their constituent morphemes (word meaning parts). With morphemic analysis, learners are able to learn morphemes and morphemic boundaries by disassembling complex words into meaningful parts. For instance, the word musician is comprised of two meaning units, the base music, and the suffix -ian; the latter conveys the meaning of an agent that is proficient in whatever is implied in the base. Hence, a musician is "one who is proficient in music."

In the academic arena, students will come across an influx of content specific vocabulary throughout the curriculum. Recognizing frequent roots and affixes that transfer across the disciplines can support students as they make sense and attempt to retain the meanings of this deluge of new words. There is an increasing interest in morphological analysis as a crucial dimension of vocabulary knowledge, especially in reading. Studies show that language learners encounter complex words at early stages of their learning. Nagy & Anderson (1984) demonstrate that 60% of newly encountered words by children are morphological complex words. Students encounter up to 100,000 different words during their academic readings at college level (Graves, 2004). Learners are found to be able to use their morphological knowledge to uncover the meaning of newly encountered words. As learners make the transition from learning English for basic communication to learning academic English, they need to learn the academic words critically to the vocabulary development and, therefore, learning success.

In order to develop the needed vocabulary knowledge, learners should be exposed to various extensive readings, be taught individual words explicitly, and taught strategies to unlock word meaning, and have their word consciousness. The concern of the present study is the component of vocabulary learning strategy related to morphological analysis lesson. The activity includes encouraging students to experiment with words, and explicitly teaching word meanings by

demonstrating and breaking down morphologically complex words into their constituent morphemes.

Despite the recognized potential of morphological analysis for vocabulary learning, this little research has also focused on the relationship to vocabulary size. The link between morphemic analysis and vocabulary size must be empirically established and incorporated in the vocabulary learning strategies taught in the English classroom. Morphemic analysis, then, is not the only strategy teachable to tackle the meanings of new words; it is also a potential learning strategy that seems particularly useful for the enhancing learners' vocabulary size.

This study sought to answer the following three research questions.

1. At which level is the students' English vocabulary knowledge?
2. Can the morphemic analysis instruction enhance students' English vocabulary knowledge?
3. What are the relationships between students' English vocabulary knowledge and their vocabulary size?

II. METODOLOGY

A. Subjects

The subjects in this research were 61 of second-year vocational students majoring in Business Computer at Rajamangala University of Technology Srivijaya, Rattaphum College, Songkhla Province. This research is conducted on the subject through the course *English in Daily life* during the first semester of academic year 2013 (May-September 2013).

B. Instruments

Three research instruments were used to collect the data:

Morphemic Analysis Test

This test was first used as a pre-test to measure students' background knowledge of English vocabulary with affixes before the experiment. The affixes used in the test consisted of 6 selected affixes which were divided into 2 groups. These were *in-*, *dis-*, *mis-* of negative prefixes and *ex-*, *en-*, *sub-* of locative prefixes. The test consists of 30 items. At the end of the experiment, this test was immediately administered to the subjects as the post-test. The purpose of the test was to investigate subjects' vocabulary development.

Vocabulary Levels Test

The test was designed to measure the levels of vocabulary knowledge of the students. The vocabulary levels test was adopted from Nation's (2008) Monolingual Vocabulary Levels Test, Version 2. The test consists of five vocabulary levels—the 1000-, 2000-, 3000-, 5000-word levels and Academic Word List (AWL). Each level contained 30 correct items. The vocabulary definitions in each item were translated into Thai. The aim of the Vocabulary Levels Test is to get an accurate as possible record of what learners know even if the words that they have not yet fully learned.

Treatment of Morphemic Analysis Instruction

The treatment in this study aimed to provide students with the teaching under the morphemic analysis instruction. The treatment was designed as 6 lesson plans covered the activity demonstrating the process of breaking down morphologically complex words into their constituent morphemes. The 2 groups of affixes were contained in the lesson plans.

C. Data Collection and Analysis

In the 1st week of this study, students were administered to the pre-test to investigate students' background knowledge of English vocabulary. The test raw scores were calculated to indicate the mean value and standard deviations. The independent sample t-test was the statistics to find out the students' English vocabulary knowledge. The result of the pre-test was kept to compare with the post-test scores to see the difference of the test performances.

The immediate post-test was administered after the treatment. The post-test used at this stage was the same as the pre-test. At the end of the treatment, the researcher measured students in order to see whether they had any improvement of their English vocabulary development. To answer if the morphemic analysis instruction can increase the learners' ability of English vocabulary development, the pre-test and post-test were estimated by using the pair sample t-test. By the end of the post-test, students were asked to complete the vocabulary levels test as well. Pearson's Correlation was calculating to investigate the correlations between students' vocabulary size and vocabulary knowledge of high and low vocabulary achievers.

III. FINDINGS AND DISCUSSION

This study aimed to find out at which level the English vocabulary knowledge of learner is, whether the morphemic analysis instruction can improve the students' English vocabulary and what the relationships between students' English vocabulary knowledge and their vocabulary size are. The details were described as follows

1. Students' Background knowledge of English Vocabulary

The first research question was put forward for investigating students' English vocabulary background knowledge. To answer the question, the *Morphemic Analysis Test* was used as a pre-test to administrate students. The total score is 30 points. Below are the means, percentage and vocabulary level as taken by subjects.

Table 1: The total pre-test scored obtained by the subjects

N	\bar{x} (Total = 30)	%	Level
61	15.74	52.47	low

It was found that the overall mean score of the *Morphemic Analysis Test* is 15.74 out of 30 which indicates that the students have a low level of English vocabulary knowledge.

2. Effectiveness of Morphemic Analysis Instruction in Developing students' English vocabulary knowledge

The second research question was put forward to see whether the Morphemic Analysis Instruction can help learners improve their English vocabulary knowledge. To answer the question the Morphemic Analysis Test was used to administer to students. The score from the pre-test and the post-test were analyzed and compared, and it was found that this methodology could considerably enhance students' English vocabulary knowledge as shown in Table 2.

Table 2 : Comparison of Pre-test and Post-test Score

N	Pre-test		Post-test		T	sig
	\bar{x}	%	\bar{x}	%		
61	15.74	52.47	16.29	54.30	-2.26	0.02*

*significant at 0.05

In Table 2, the subjects gained mean scores of 15.74 in the pre-test and 16.29 in the post-test. The T-value shows that there was statistically significant difference at 0.05-level. This means that students had an improvement in English vocabulary knowledge due to the fact that they were given the treatment of Morphemic Analysis Instruction in the English class. So it can be assume that the Morphemic Analysis Instruction is a crucial strategy that can help learners improve their English vocabulary knowledge.

In addition, the statistical analysis was performed when comparing the pre-test and post-test mean scores of each target morphemes. The results are shown as follows.

Table 3: Comparison of Pre-test and Post-test Score in each target morphemes

Target morpheme	Pre-test	Post-test	t	sig
	\bar{x}	\bar{x}		
<i>in-</i>	2.18	2.57	6.23	0.00**
<i>dis-</i>	2.67	2.69	1.00	0.32
<i>mis-</i>	2.62	2.64	1.00	0.31
<i>ex-</i>	2.84	2.87	1.42	0.15
<i>en-</i>	2.90	2.98	2.31	0.02
<i>sub-</i>	2.52	2.56	1.42	0.15

*significant at 0.01

The data in Table 3 shows that the mean post-test scores increase in all target morphemes, especially the morpheme *in-*. The T-value shows that there was statistically significant difference at 0.01-level. This means students obviously understand and be able to break and form words with morpheme *in-*.

Regarding the results in Table 2 and 3, the students well perform in doing the test and realize how words forming. They can build up new word and break down morphologically complex words into the constituent morphemes. So it can be concluded that the Morphemic Analysis Instruction is a proper way to aware students learning vocabulary.

3. Relationship between Students' Vocabulary Knowledge and Vocabulary Size

The third research question was put forward to see what the relationships between students' English vocabulary knowledge and their vocabulary size. To answer the question the Vocabulary Levels Test was used to administer to students. The mean scores of Vocabulary Levels Test in each word level were presented in Table 4.

Table 4: Students' Vocabulary Levels Test Mean Scores

World Levels	\bar{x} (Total= 30)	%	S.D.
1000	25.94	86.5	4.26
2000	22.09	73.6	6.65
3000	20.39	68.0	6.69
5000	17.06	56.9	8.63
AWL	19.41	64.7	8.38

As can be seen in Table 4, the students gained high vocabulary mean score at the 1000-word test. The lowest mean score of the word levels test was at the 5000-word test. This mean that the students gained high scores on vocabulary items they frequently encountered.

After the completion of Morphemic Analysis Test, the pre-test and post-test scoring process was done to separate the subject into two groups of High Vocabulary Achievers and Low Vocabulary Achievers by using the 33% technique. There were 21 high vocabulary achievers and 21 high vocabulary achievers. The two groups were required to do the Vocabulary Level Test in order to further investigate the relationships between the students' vocabulary knowledge and vocabulary size, to see what vocabulary learners know even if the words that they have not yet fully learned. The different performances on the Vocabulary Levels Test of two groups obviously discriminated correlations between vocabulary knowledge and their vocabulary size as shown in Table 4.

Table 4: Relationships between Vocabulary Knowledge and Vocabulary Size

Vocabulary Size	Correlations	
	High Vocabulary Achievers (n=21)	Low Vocabulary Achievers (n=21)
1000	0.448**	0.129
2000	0.272	0.054
3000	0.313	0.004
5000	-0.015	0.005
AWL	-0.126	0.080
Total	0.226	0.030

**Correlation is significant at 0.01

Table 4 depicts correlations between vocabulary knowledge and vocabulary size of high and low vocabulary achievers. It was found a moderate correlation at the knowledge of 1000 word levels at the 0.01 level (r=0.448, p<0.01) of high

vocabulary achievers while no correlation between the two variables in the low vocabulary achievers was found.

IV. CONCLUSION

Base on the result, it was found that overall pre-test mean score of the *Morphemic Analysis Test* is 15.74 out of 30 which indicates that the students 'English vocabulary knowledge was at a low level. Students may not have enough knowledge of morphemes elements. After being provided with the treatment of the Morphemic Analysis Instruction, the students gained an improvement in their post-test performances. The post-test mean score was 16.29 higher than that of the pre-test. The T-value shows that there was statistically significant difference at 0.05-level. This means that students had an improvement in English vocabulary knowledge due to the fact that they were given the treatment of Morphemic Analysis Instruction in the English class. So it can be assume that the Morphemic Analysis Instruction is a crucial strategy that can help learners improve their English vocabulary knowledge and seems particularly useful for the enhancing learners' vocabulary size.

REFERENCES

- [1] Bear, D.R., Invernizzi, M., Tempelton, S., and Johnston, F. (2008). *Words Their Way: Word Study for phonics, vocabulary, and spelling instruction* (4th edition). Upper Saddle River, NJ: Pearson Prentice Hall.
- [2] Ellis, N. (1997). Vocabulary acquisition: word structure, collocation, word-class and meaning. In N. Schmitt & M. McCarthy (Eds.), *Vocabulary: Description, acquisition and pedagogy* (122-139). Cambridge, UK: Cambridge University Press.

- [3] Graves, M.F. (2004). Teaching prefixes: as good as it gets. In J.F. Baumann & E.J. Kame'enui (Eds.), *Vocabulary instruction: Research to practice* (81-99). New York: Guilford.
- [4] Nagy, W.E. & Anderson, R.C. (1984). How many words are there in printed English? *Reading Research Quarterly*, 19, 304-330.
- [5] Nation, I.S.P. (1993.) Vocabulary size, growth and use. In R. Schreuder, & B. Weltens (Eds). *The bilingual lexicon* (115-134). Amsterdam: John Benjamins.
- [6] Nation, P. (2008) *Teaching Vocabulary: Strategies and techniques*. USA: Heinle & Cengage Learning



AREE TEHLAH

A lecture at Rajamangala University of Technology Srivijaya, Rattaphum Colledge, Songkhla Province.

Bachelor of Arts in English, Prince of Songkla University 2009

Master of Arts in Teaching English as an International Language, Prince of Songkla University 2012

List of Publication and Proceedings

- Tehlah, A. & Karavi, P. (2012). Effectiveness of explicit affixation instruction on English vocabulary development [Abstract]. Proceedings of the 4th International Conference on Humanities and Social Sciences, Thailand: Prince of Songkla University (p.2).
- Tehlah, A. (2012). *THE USE OF ESI TO IMPROVE STUDENTS ENGLISH PRONUNCIATION OF WORD STRESS*, Proceeding the 1st Mae Fah Lunag University International Conference 2012, 29-30 November and 1 December, 2012 (p.150)