

A STUDY ON THE VOCABULARY LEVEL OF THE THIRD YEAR NATURAL SCIENCE AND SOCIAL SCIENCE STUDENTS OF SMAN 10 PEKANBARU

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Abstract: *This research is a descriptive-quantitative research design which is aimed to find out the Vocabulary Level of the third year Natural Science and Social Science Students of SMAN 10 Pekanbaru. The subjects of this study were the third year Natural Science and Social Science Students of SMAN 10 Pekanbaru. 244 students taking part in this study were given The New Vocabulary Level Test (NVLT) by Webb et al., (2017). The findings of this study revealed that the student vocabulary level as follows the mean score result, the study shows that the Natural science students have reached the requirement for the 1000 and 2000 vocabulary level of Depdiknas RI (2004). It requires that the categories middle level readers (high school) must acquire 1500-3000 family words. Even though for the 3000 vocabulary level, they have not reached the threshold yet. While for the Social Science students, they reach half of the 1000 vocabulary level. While most of them got scores in 12 or 1200 vocabulary words and 9 or 900 vocabulary in the 2000 and 3000 vocabulary level. Based on this study, the students should be focused to learn high frequency vocabulary. As Webb (2017) stated that the high frequency vocabulary will give a bigger impact for the students. Since the high frequency vocabulary accounts for a large percentage of English, it provides a foundation for further lexical and language development for the students.*

Key Words: *Vocabulary, Vocabulary Level Test, Natural science students and Social Science students.*

STUDI TENTANG *VOCABULARY LEVEL* DARI SISWA TAHUN KETIGA JURUSAN ILMU ALAM DAN ILMU PENGETAHUAN SOSIAL SMAN 10 PEKANBARU

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Abstrak: Penelitian ini adalah penelitian deskriptif-kuantitatif yang bertujuan untuk mengetahui Tingkat Kosakata siswa IPA dan IPA tahun ketiga SMAN 10 Pekanbaru. Subjek penelitian ini adalah siswa kelas 3 IPA dan IPA SMAN 10 Pekanbaru. Sebanyak 244 siswa yang mengambil bagian dalam studi ini diberi The New Vocabulary Level Test (NVLT) oleh Webb et al., (2017). Temuan penelitian ini mengungkapkan bahwa tingkat kosa kata siswa sebagai berikut hasil skor rata-rata, studi ini menunjukkan bahwa siswa IPA telah mencapai persyaratan untuk tingkat kosakata 1000 dan 2000 Depdiknas RI (2004). Ini menetapkan bahwa kategori pembaca tingkat menengah (sekolah menengah) harus memperoleh 1500-3000 kata keluarga. Meskipun untuk level kosakata 3000, mereka belum mencapai standar yang ditetapkan. Sementara untuk siswa IPS, mereka mencapai setengah dari 1.000 tingkat kosakata. Sementara sebagian besar dari mereka mendapat skor dalam 12 atau 1.200 kosakata dan 9 atau 900 kosakata di level kosakata 2000 dan 3000. Berdasarkan temuan tersebut, siswa diharapkan belajar *High frequency vocabulary* terlebih dahulu. Sebagaimana Webb (2017) menyatakan bahwa *High frequency vocabulary* akan memberikan dampak yang lebih besar bagi siswa. Karena kosakata frekuensi tinggi menyumbang persentase besar bahasa Inggris, itu menyediakan dasar untuk pengembangan leksikal dan bahasa lebih lanjut untuk siswa.

Kata Kunci: Kosakata, Tes Tingkat Kosakata, siswa IPA dan IPA.

INTRODUCTION

Liu (2016) stated that vocabulary knowledge has always been crucial for language learners in reading comprehension since a learner must know most of the words in a running text to comprehend a certain text. As in Schmitt (2001) stated that vocabulary is an essential building block of language. This means that vocabulary is one of the matters that should be acquired in order to improve the language skill. But if the students have inadequate vocabulary, it will affect their performance in language use both in speaking and writing.

So it is important to make sure whether the students understand the vocabulary or not. As in Nurweni (2017) stated that someone said one of the requirements to mention that the students understand a vocabulary is the students know the meaning and some other meanings associated with the vocabulary.

Masyhur (2019) stated that mostly reading texts in Indonesian schools use authentic materials such as newspapers, articles, novels, which contain many vocabularies. Authentic materials are the materials from the students' environment. Prasetyanto (2014) stated that Indonesia textbooks include most such texts as narration, description, report, recount, procedure and exposition. As in Aziez (2011) the research shows that Senior High School national examination text belongs to the same 4000 word level (the number required to 95% comprehension of the text). The 4000 word level covers only 95.96% of the running word in Senior High School national examination.

If the students do not know the meaning it will affect the students understanding and comprehension which relates to their academic achievement at school. As in Nation (2001) assures that if more than five percent of the running words are unknown, then it is likely that there is no longer meaning-focused learning because so much attention has to be given to the language features. Tan & Goh (2017) mentioned that if students do not know the meaning of vocabulary, it will affect their understanding and comprehension which relates to their academic achievement at school or university. By this means, it is important to know the profile of students' capacity in order to determine at which extent of vocabulary that students need to learn.

The best way to ensure that the students reach the goals of language class is by measuring what vocabulary level students need to achieve and already achieve. There are several ways to measure the students' vocabulary. But Meara (1994) assures that one of the standardized tests to measure vocabulary is Vocabulary Level Test. As in Nation (2001) Vocabulary level test is a means to determine the extent to which test takers could recognize the form meaning connections of words at word frequency level. Based on the explanation above the writer decided to do a research titled "A study on the vocabulary level of the third year natural science and social science students of SMAN 10 Pekanbaru"

RESEARCH METHODOLOGY

This is descriptive by using quantitative approach research. The purpose of the study is to find out the students' Vocabulary Level. The Subject of the study is 244 students from third year Natural Science and Social Science of SMAN 10 Pekanbaru.

Since the type of research design is a descriptive quantitative approach, the researcher decided to provide specific information about two majors that exist in SMAN 10 Pekanbaru.

The data collecting through a test. The instrument adapted from The New Vocabulary Level Test (NVLT) by Webb et al., (2017). The results of this research are calculated by using Microsoft Excel 2007 and SPSS 23 for windows was used with Nation and Webb (2017) VLT scoring system.

RESEARCH FINDINGS

Students Vocabulary Level

In order to find out the vocabulary level, students' correct answers are calculated using SPSS with Nation and Web Scoring system. Based on the result, the vocabulary Level of the third year Natural Science and Social Science students of SMAN 10 presented as follows;

Table 1. Mastery Score for each Level according to NVLT

Class	1000 Level	2000 Level	3000 Level
Natural Science	42	14	0
Social Science	12	4	2

Table 2. Level of Natural Science Students

Score	1000 VL	2000 VL	3000 VL
100-1000 (1-10)	0 student	14 students	43 students
1100-2000 (11-20)	9 students	31 students	52 students
2100-3000 (21-30)	118 students	82 students	32 students

Table 3. Vocabulary Level of Social Science Students

Score	1000 VL	2000 VL	3000 VL
100-1000 (1-10)	22 student	67 students	84 students
1100-2000 (11-20)	38 students	27 students	22 students
2100-3000 (21-30)	57 students	23 students	11 students

Mean Score

Table 4. Mean Score of Natural Science Students' Vocabulary Level

	1000 Level	2000 Level	3000 Level
Mean	2666.1	2128.3	1455.1
N	127	127	127
Minimum	1100	200	200
Maximum	3000	3000	2600

Table 5. Mean Score of Social Science Students' Vocabulary Level

	1000 Level	2000 Level	3000 Level
Mean	1923.1	1201.1	911.1
N	117	117	117
Minimum	200	100	100
Maximum	3000	3000	3000

Table 5 shows the mean score of the Natural Science that starts from 2666.1, 2128.3 and 1455.1. As can be seen from the table, the score gets lower as the vocabulary frequency decreases. This pattern is also the same as the Social Science students' vocabulary level mean score.

DISCUSSION

The result of the vocabulary level test of the third year Natural Science and Social Science students shows that there difference of score according to the frequency level. According to Webb (2017) the score to master each level should be 29/30 questions or 2900 out of 3000 family words. But according to the result, there are only a few students who reach those scores. The Natural science students who reach the score mastery for each level consist of 42 students for 1000 Level, 14 students for 2000 Level and none of the students reach mastery level at 3000 Vocabulary Level. For the Social Science students who reach mastery score are as follows; there are 12 students for 1000 level, there are 4 students for 2000 level and 2 students 3000 level.

Those who reach the high score are expected to have foundation for further lexical and language development (Webb, 2017). Since the most frequent 1000 vocabulary levels make the greatest proportion in English. It will help the students to measure the 1000 vocabulary level before moving to 2000, 3000 and lower frequency level. However, since vocabulary focuses on the individual score of each level. There should be more attention toward the students who haven't reached the 1000 vocabulary level.

As shown on table 4.3 that in the 1000 Vocabulary Level there are 118 Natural science students who reach scores from 21-30 or 2100 until 3000 word family. In table 4.4 there are tables of the students of Social science students' Vocabulary level. There are 57 students who reach scores around 21-30 score or 2100 or 3000 word family. As stated by Webb (2017) that the students who are able to recognize the 1000 Vocabulary level test will understand around 65.85% general spoken and written English. And there are 9 Natural Science students and 38 Social Science students who reach scores 11-20 or 1100 until 2000 word family. The students are assumed to understand half of the 1000 word frequency. None of the Natural Science students who get a score below 11 or 1100 word family. But there are 22 Social Science get score below 11 or 1100 word family

For the 2000 vocabulary level there are 82 Natural Science students and 23 Social Science students who reach scores from 21-30 or 2100 until 3000 word family. It means that they are graded readers and able to recognize 70-90% of English words as stated by Web and Nation (2017). There are 31 Natural Science students and 27 Social Science students who reach 11-20 or 1100 until 2000 word family. And there are 14 Natural science students and 67 Social science students who get scores lower than 10 or 1000 word family.

For the 3000 vocabulary level there are only 32 Natural science and 11 Social Science students who reach scores around 21-30 or 2100 or 3000 word family. So, it means they were already able to recognize 95% spoken discourse type and comprehension of conversation as stated by Van Zeeland and Schmitt in 2013. But there are 52 Natural Science students and 22 students who reach an 11 -20 score. And 43 Natural Science students and 84 Social Science students who reach scores from 1-10 or 100 or 1000 word families.

According to the mean score result, the study shows that the Natural science students have reached the requirement for the 1000 and 2000 vocabulary level of Depdiknas RI (2004). It requires that the categories middle level readers (high school) must acquire 1500-3000 family words. Even though for the 3000 vocabulary level, they have not reached the threshold yet. While for the Social Science students, they reach half of the 1000 vocabulary level. While most of them got scores in 12 or 1200 vocabulary words and 9 or 900 vocabulary in the 2000 and 3000 vocabulary level.

The score of each student reflects their vocabulary level. As mentioned by Nation (2001) stated that if more than five percent of the running words are unknown, then it is likely that there is no longer meaning focused learning because so much attention will be given to the language feature. It will become a problem for the students in understanding a text or listening to the conversation. And it might be affecting the students' performance in understanding the language.

There are several factors that affect students in acquiring the receptive vocabulary such as the amount of reading time (Sedita, 2005), the language exposure toward the students (Lindgren, 2013), motivation (Fung, 2019) and learning strategies (Abbasnejad, 2019).

After all, it is important to note that Vocabulary Level Test is a means to measure receptive vocabulary knowledge indicating the degree to which students are able to understand the meanings of words that they encounter in written text. The limitation of this research is that it does not measure productive vocabulary knowledge. The result of the test does not indicate the degree to which students can use words at different frequency levels.

CONCLUSION AND RECOMMENDATION

Conclusion

The data shows that the vocabulary level of the third year Natural Science students who consist of 127 students are as follows; The student who reached score 21-30 or 2100 until 3000 word families from 1000 vocabulary level is 118 students, for 2000 vocabulary level 82 students and for 3000 vocabulary level is 32 students. Among 117 Social Science students who reach the score 21-30 or 2100 until 3000 word families are as follows; for 1000 vocabulary level there are 57 students, for 2000 vocabulary level there are 23 students and for 3000 vocabulary level there are 11 students.

Regarding the conclusion above, it is advantageous to suggest the students learn from the high frequency vocabulary. Starts from 1000 vocabulary level until the next level, since there are only few students who reach the mastery level of each vocabulary frequency. Webb (2017) stated that the high frequency vocabulary will give a bigger impact for the students. The high frequency vocabulary accounts for a large percentage of English, it provides a foundation for further lexical and language development for the students.

Recommendation

The researcher also suggested continuing this research to find the High School students in different areas in Pekanbaru to find out the vocabulary level of the students in Pekanbaru and the reasons behind it. At the end, this study was expected to give new inspiration for another researcher.

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