VOCABULARY LEARNING OPPORTUNITIES PROVIDED IN THE READING MATERIALS WRITTEN FOR ENGLISH NATIONAL EXAMINATION PREPARATION

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ABSTRACT
This research aims to find out vocabulary learning opportunities provided in the reading materials written for English National Examination preparation. Therefore, all the words appearing in the reading materials were analyzed. The analysis was done using AntWordProfiler program. The research, thus, employed a quantitative data since it was a corpus analysis. The results revealed that the collection of the reading materials (through the word repetition) provided a great opportunity to deepen knowledge of first 1,000 most frequent words. However, it did not provide good opportunities to develop the knowledge of second 1,000 most frequent words, academic words and unlisted words well. This is because most of the word families found in the reading materials occurred once and less than five times. In short, the reading materials used to prepare the students for the examination provided opportunities to learn first 1,000 most frequent words and lacked the opportunities for second 1,000 most frequent words, academic words and unlisted words.

KEYWORDS: vocabulary learning opportunities; reading comprehension; word repetition

INTRODUCTION
Second language vocabulary is learned both intentionally and incidentally (Ellis, 1994; Hulstijn, 2003; Milton, 2009; Nation, 2001). Intentional vocabulary learning, also known as explicit instruction (Hunt & Beglar, 2002, p. 260), occurs when learners intend to learn to develop their vocabulary. In contrasts, incidental vocabulary learning occurs when learners focus their attention on doing language activities - say reading - and, as one of the results, acquire some new words, which is not the focus of the learning (Barcroft, 2009, p. 80). In line with this, Huckin and Coady (1999, p. 182) claimed that it is called ‘incidental’ vocabulary learning since ‘vocabulary’ is a by-product of the learning.

Studies have proven that there is a strong link between vocabulary learning and reading comprehension (Matsouka & Hirsh, 2010), compared to listening, speaking and writing. Schmitt (2008, p. 332), even, claimed that reading is perceived to best give opportunities of vocabulary learning, especially in input-poor EFL environments. Moreover, recent studies have linked vocabulary and reading by investigating EFL textbooks in relation to vocabulary knowledge. Gardner (2008), for instance, investigated vocabulary recycling in children’s authentic reading materials. He found out that collections of authentic texts with a common theme, or written by one author, afford readers with more repeated exposures to new words. Another study on vocabulary learning opportunities in an integrated ELT course book was carried out by Matsouka and Hirsh (2010). They analyzed all words appearing in 12 chapters of the book. The study, then, suggested...
that the book provided opportunities to increase knowledge of 1,000 most frequent words in English and develop high frequency words as well as academic words.

More specifically, other studies have explained that it is through repetition of unknown words encountered during reading that enables the learning of vocabulary to occur, especially the incidental one. Webb (2007), for instance, has proven that repetition of words in authentic text enables incidental vocabulary learning to occur. He found that one encounter with unknown words results no retention while 3, 7 and 10 encounters do. Then, he suggested that the more repetition the greater vocabulary gains occurred. His research, thus, claimed that repetition does affect incidental vocabulary learning from reading. In line with this, Brown, Waring, & Donkaewbua (2008) found that new words were acquired from reading graded readers and that words appearing more often in a text are more likely to be learned and result long retention.

This current research, therefore, considered investigating repetition of words in texts (further mentioned as ‘reading materials’) to make sure vocabulary learning (of either first & second 1000 most frequent English words or academic words) occurred. However, since the previous studies had not considered context surrounding the repeated words which is helpful to acquire the words, this research included context in analyzing the repeated words. Context is considered necessary to analyze since it helps readers (students) guess meaning of the repeated words. In other words, in order for the repeated words to be acquired, context is necessarily involved.

Furthermore, the reading materials that this research has investigated are the collection of reading texts and exercises used to teach EFL students preparing for English national examination (Appendix 1). The investigation of the reading materials regarding the vocabulary learning opportunities is necessary. Although vocabulary is indeed a supplementary aspect in the curriculum which is taught along with four English skills, in fact, the students are required to have adequate vocabulary knowledge to successfully pass English national examination in the end of their study (Cahyono & Widiati, 2008, p. 8; Ivone, 2005, p. 196). Moreover, generally, reading is indeed the principal source of the EFL learners’ vocabulary input (Milton, 2009, p. 193). More importantly, using books or reading materials that provide good opportunities of vocabulary learning is advantageous since two learning activities (i.e. learning vocabulary and reading) occur in the meantime (Huckin & Coady, 1999, p. 182).

Based on the points above, this research has focused the investigation on reading materials that High School teachers used to teach students reading preparing for English national examination. This was especially a deep-investigation of repetition of words found in the reading materials that makes vocabulary learning (of first & second 1000 most frequent English words and academic words) through reading possible. The repeated words would, then, explain what vocabulary opportunities that the reading materials provided, i.e. whether the reading materials provided opportunities of deepening knowledge of first & second 1000 most frequent English words and or academic words.
Thus, the problem of the research is formulated as ‘What vocabulary learning opportunities are provided in the reading materials written for English national examination preparation?’

**METHODOLOGY**

The current research provides an in-depth investigation of a collection of reading materials that a High School teacher used in teaching students reading preparing for English national examination. The investigation was on repetition of words appearing in the reading passages and exercises following the passages. This follows the findings of several studies which found that repetition of words in reading promotes vocabulary learning (Matsouka & Hirsh, 2010; Webb, 2007). The word repetition being investigated aims to reveal vocabulary learning opportunities of first & second 1000 most frequent English words and academic words provided in the reading materials. This was to reveal if the reading materials was sufficient for the students to deepen knowledge of first & second 1000 most frequent English words and academic words in order to face English national examination. The research, thus, employed a quantitative method. Indeed, quantitative data were needed to reveal that some words in the reading materials occurred at least 5 times, thus, a corpus analysis was employed. To answer the research problem regarding opportunities of vocabulary learning in the reading materials (i.e. reading passages and exercises), the current research required data of words from the reading passages and exercises to further count the repetitions of the words (i.e. once, 5 times or more, 10 times or more and 15 times or more). This was done by using Ant Word Profiler program (Anthony, 2012). Ant Word Profiler is a program developed by Anthony as a more modern version of Nation’s Range program (Heatley, Nation, & Coxhead, 2002). This is the program used by the current research to do the corpus analysis

**RESULTS**

The total number of running words in the reading materials taken as the data is 27,070 tokens. The words were investigated to see what vocabulary learning opportunities provided. The first investigation was regarding the word repetition. To see if the word repetition found in the reading materials did promote vocabulary learning opportunities, words that belong to the first & second 1,000 most frequent words list, Academic words list and unlisted words (i.e. words that do not belong to either first & second 1,000 most frequent words or 570 academic words lists) were analyzed.

The analysis was on the words that occurred once, at least 5 times, 10 times or more and 15 times or more. One occurrence would be considered giving no opportunities of learning, while 5 and more occurrences would. Twice, 3 and 4 times were not included in the analysis since previous studies found that they were considered giving very few opportunities of learning (Huckin & Coady, 1999; Matsouka & Hirsh, 2010; Webb, 2007).

The analyses of the word repetition was generally to see if there were opportunities to deepen knowledge of the first & second 1,000 words, know better 570 academic words, and learn new
words, especially less frequent ones. Results of the word analysis of all the reading materials for each of the opportunities are shown in the statistics of word analysis below (Table 1).

Table 1. Statistics of Word Analysis of All Reading Materials

<table>
<thead>
<tr>
<th>LEVEL FILE</th>
<th>TOKEN</th>
<th>TOKEN%</th>
<th>GROUP</th>
<th>GROUP%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1_gsl_1st_1000.txt</td>
<td>20027</td>
<td>73.98</td>
<td>872</td>
<td>27.50</td>
</tr>
<tr>
<td>2_gsl_2nd_1000.txt</td>
<td>2021</td>
<td>7.47</td>
<td>513</td>
<td>16.18</td>
</tr>
<tr>
<td>3_awl_570.txt</td>
<td>1191</td>
<td>4.40</td>
<td>257</td>
<td>8.10</td>
</tr>
<tr>
<td>-</td>
<td>3831</td>
<td>14.15</td>
<td>1529</td>
<td>48.22</td>
</tr>
<tr>
<td>TOTAL:</td>
<td>27070</td>
<td>3171</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1 indicates that there were 20,027 tokens or 872 word families of first 1,000 most frequent words in the reading materials. The second 1,000 most frequent words were 2,021 tokens or 513 word families. Moreover, there were also academic words found, i.e. 1,191 tokens or 257 groups or families. Opportunities of learning words of each list were not known yet, however. Therefore, the analysis of the word repetition for each list is given in detail.

Word Repetition in the First 1,000 Most Frequent Words

There were 20,027 tokens that belonged to the first 1,000 most frequent words list found in the reading materials. Table 2 shows the word repetition which occurred in the reading materials. The word repetition was put according to the occurrence of ‘once’ ‘5 times or more’ ’10 times or more’ and ’15 times or more’ (Table 2).

Table 2. Repetition of Word Families in the First 1,000 Most Frequent Words

<table>
<thead>
<tr>
<th>Occurrence</th>
<th>Number of Word Families</th>
<th>Percentage of the Total Number of First 1,000 Most Frequent Words (872 word families)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once</td>
<td>94</td>
<td>10.78%</td>
</tr>
<tr>
<td>5 times or more</td>
<td>209</td>
<td>23.97%</td>
</tr>
<tr>
<td>10 times or more</td>
<td>115</td>
<td>13.19%</td>
</tr>
</tbody>
</table>
The table shows that 872 first 1,000 word families appeared in the reading materials. Of the 872 word families, 227 (26.03%) occurred 15 times or more, 115 (13.19%) occurred 10 times or more and 209 (23.97%) occurred 5 times or more. However, 94 (10.78%) word families occurred only once in the reading materials. Words that occurred 15 times or more are such as rule, ask, and build. Those that occurred at least 10 times are such as develop, wear, and purpose. Moreover, words that occurred at least 5 times are such as district, spend, and result. Meanwhile, words that occurred only once are such as adopt, fellow, and depend.

**Word Repetition in the Second 1,000 Most Frequent Words**

There were 2,021 tokens that belonged to the second 1,000 most frequent words list found in the reading materials. Table 3 shows the word repetition occurred in the reading materials along with the percentage of the occurrence. The word repetition was put according to the occurrence of ‘once’ ‘5 times or more’ ‘10 times or more’ and ‘15 times or more’. Meanwhile, the percentage was the number of word families occurring in each category divided by the 513 word families found (Table 3).

<table>
<thead>
<tr>
<th>Occurrence</th>
<th>Number of Word Families</th>
<th>Percentage of the Total Number of Second 1,000 Most Frequent Words (513 word families)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once</td>
<td>161</td>
<td>31.39%</td>
</tr>
<tr>
<td>5 times or more</td>
<td>93</td>
<td>18.13%</td>
</tr>
<tr>
<td>10 times or more</td>
<td>23</td>
<td>4.48%</td>
</tr>
<tr>
<td>15 times or more</td>
<td>16</td>
<td>3.12%</td>
</tr>
</tbody>
</table>

The table indicates that of the 513 second 1,000 word families that appeared in the reading materials, less than one-third word families occurred at least 5, 10 and 15 times. They are namely 93 (18.13%) occurred 5 times or more, 23 (4.48%) occurred 10 times or more and only 16 (3.12%) occurred at least 15 times. In contrast to that, 161 (31.39%), which is almost one-third of the total 513 word families occurred only once. The rests, i.e. 220 (42.88%) word families, occurred more than once but less than 5 times.
Words that occurred only once are such as abroad, deserve and conquer. Those that occurred at least 5 times are such as invent, feather and explode. Then, those that occurred 10 times or more are such as argue, govern, and disease. Meanwhile, words that occurred 15 times or more are such as accident, educate and inform.

**Word Repetition in the Academic Words**

There were 1,191 tokens that belonged to the Academic words list found in the reading materials. Table 4 shows the word repetition occurred in the reading materials along with the percentage of the occurrence. The word repetition was put according to the occurrence of ‘once’ ‘5 times or more’ ‘10 times or more’ and ‘15 times or more’ (Table 4).

<table>
<thead>
<tr>
<th>Occurrence</th>
<th>Number of Word Families</th>
<th>Percentage of the Total Number of Academic Words (257 word families)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once</td>
<td>82</td>
<td>31.91%</td>
</tr>
<tr>
<td>5 times or more</td>
<td>52</td>
<td>20.23%</td>
</tr>
<tr>
<td>10 times or more</td>
<td>8</td>
<td>3.11%</td>
</tr>
<tr>
<td>15 times or more</td>
<td>8</td>
<td>3.11%</td>
</tr>
</tbody>
</table>

The table indicates that of the 257 word families of academic words that appeared in the reading materials, very few word families occurred at least 5, 10 and 15 times. They are namely 52 (20.23%) occurred 5 times or more (e.g. require, expert, research), 8 (3.11%) occurred 10 times or more (e.g. occur, conclude, injure) and only 8 word families (3.11%) occurred 15 times or more (e.g. create, final, area). In contrast, almost one-third, i.e. 82 (31.91%), of the 257 academic words found occurred only once (e.g. abandon, imply, approximate). The rests, i.e. 107 (41.63%) word families, occurred less than 5 times.

**Word Repetition in the Unlisted Words**

Unlisted words are those that do not belong to either first & second 1,000 most frequent words list or 570 academic words list. The words are such as necklace, cruise, palace, magazine, dweller, victim, pedestrian, and announcement. Of the 27,070 tokens analyzed, there were 3,831 tokens which belonged to unlisted words found in the reading materials. The 3,831 tokens found, however, include proper nouns.
This research, however, excludes proper nouns (i.e. the name of a particular person, place or object) from the analysis. Proper nouns of any language are the same, thus, learning of such nouns is not necessary. For instance, the word “Australia” will mean the same for people of any languages, which is a country, a geographical name. Therefore, proper nouns are excluded from the analysis.

Table 5 below shows the word repetition occurred in the reading materials, along with the percentage of the occurrence. The word repetition was put according to the occurrence of ‘once’ ‘5 times or more’ ‘10 times or more’ and ‘15 times or more’. Meanwhile, the percentage was the number of word families occurring in each category divided by the 1019 word families found.

<table>
<thead>
<tr>
<th>Occurrence</th>
<th>Number of Word Families</th>
<th>Percentage of the Total Number of Unlisted Words (1,019 word families)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once</td>
<td>590</td>
<td>57.90%</td>
</tr>
<tr>
<td>5 times or more</td>
<td>72</td>
<td>7.07%</td>
</tr>
<tr>
<td>10 times or more</td>
<td>17</td>
<td>1.67%</td>
</tr>
<tr>
<td>15 times or more</td>
<td>14</td>
<td>1.37%</td>
</tr>
</tbody>
</table>

The table shows that there were 1,019 word families of the unlisted words found in the reading materials. The table also indicates that of the 1,019 word families, only 10% occurred at least 5, 10 and 15 times. They are namely 72 word families (7.07%) occurred 5 times or more (e.g. huge, beach, hind), 17 (1.67%) occurred 10 times or more (e.g. hen, volcano, fox) and 14 word families (1.37%) occurred 15 times or more (e.g. television, princess, underlined). Moreover, the table unexpectedly shows that more than a half of the total 1,019, i.e. 590 (57.90%), occurred only once (e.g. ambulance, awesome, horrific, inconvenient). The rests, i.e. 326 (31.99%) word families, occurred more than once but less than 5 times.

**DISCUSSION**

This section is the discussion of word repetition, i.e. to what extent word repetition in the reading materials give students opportunities to learn words of first & second 1000 most frequent words and academic words and perhaps other (less familiar) words. This is because a repeatedly read word will, indeed, result familiarity (Huckin & Coady, 1999; Nation, 2001; Webb, 2007). Here are the details:
Word Repetition in the First 1000 Most Frequent Words
The data analysis showed that 872 first 1,000 word families appeared in the reading materials. Of the total 872 word families, 227 (26.03%) occurred 15 times or more (e.g. rule, ask, build), 115 (13.19%) occurred 10 times or more (e.g. develop, wear, purpose) and 209 (23.97%) occurred 5 times or more (district, spend, result). In short, 63.19% of the total 872 first 1,000 word families gave opportunities for students to learn. This is as Matsouka and Hirsh (2010) stated that at least 5 encounters with a new word will result in acquisition of the words.

In this case, 209 word families of first 1000 most frequent words were found to occur 5 times or more. This means there was good opportunity for students to learn the 209 word families since they occurred at least 5 times. Moreover, Webb (2007) stated that at least 10 encounters would be suggested for new words to be certainly learned. In fact, 115 word families occurred at least 10 times in the reading materials. This means there was also good opportunities for students to learn the 115 word families. More importantly, there was even a very good opportunity to learn another 227 word families of first 1000 most frequent words list since they occurred 15 times and more. As Webb (2007) further claimed that more than 10 encounters might be needed to optimize vocabulary learning and gain greater results.

However, 94 word families (10.78%) occurred only once in the reading materials (e.g. adopt, fellow, depend). Brown, Waring and Donkaewbua (2008) claimed that a single encounter with an unknown word gives very little opportunity to learn the word. Moreover, Matsouka and Hirsh (2010), even, believed that one encounter with a new word resulted no acquisition. They are indeed logical that if a word occurred only once, then the opportunity to learn the word’s meaning was very little or even not at all. However, since there were only approximately 11% occurred once, then there were still more opportunities to learn first 1000 most frequent words. Hence, the reading materials used to prepare students for their English national examination did give opportunities to learn words of first 1000 most frequent words. In other words, the reading materials gave the opportunities to deepen knowledge of first 1000 most frequent words.

Word Repetition in the Second 1000 Most Frequent Words
The data analysis indicates that of the 513 second 1,000 word families that appeared in the reading materials, almost one-third (31.39%), i.e. 161 word families, occurred only once. The words were such as word families of abroad, deserve and conquer. According to Brown, Waring and Donkaewbua (2008), this gives very little opportunity to learn the words’ meaning.

Although many essential words (e.g. accident, argue, disease, explode) were found to occur at least 5 times, the number of the essential words was a lot fewer than that occurring once. They were namely 93 (18.13%) occurred 5 times or more (e.g. invent, feather, explode), 23 (4.48%) occurred 10 times or more (e.g. argue, govern, disease) and 16 (3.12%) occurred at least 15 times (e.g. accident,
educate, inform). Thus, there was only approximately 25% of the total words. Therefore, there was lack opportunity to learn second 1000 most frequent words.

Pre teaching of second 1000 most frequent words, therefore, is suggested. This is because almost one-third of the total 513 word families, i.e. 161 (31.39%), occurred only once and 220 (42.88%) word families occurred less than 5 times. More importantly, teachers are suggested to give students additional examples or explanations when new words are found. This can make the words were more familiar to the students. This is especially words that occurred less than 5 times, which is not sufficient to be acquired. Nagy (1988) claimed that vocabulary instruction has to make sure that students not only know the meaning of words but also have sufficient practice with the words to ensure they have the access with the meaning quickly during reading.

**Word Repetition in the Academic Words**

The analysis of data in the previous chapter indicates that of the 257 word families of academic words that appeared in the reading materials, very few word families (26.45%) occurred at least 5, 10 and 15 times. They are namely 52 (20.23%) occurred 5 times or more (e.g. require, expert, research), 8 (3.11%) occurred 10 times or more (e.g. occur, conclude, injure) and only 8 word families (3.11%) occurred 15 times or more (e.g. create, final, area). In short, there were 26.45% of the total 257 academic words occurred 5 times or more.

In contrast, 107 (41.63%) word families occurred less than 5 times and almost one-third, i.e. 82 (31.91%), occurred only once (e.g. abandon, imply, approximate). Indeed, one encounter with a new word might result in partial learning of the word meaning (Huckin & Coady, 1999; Nagy & Anderson, 1984). However, in the case of academic words, one encounter resulted in lack of exposure and made very few opportunities of learning.

Teachers, therefore, are suggested to create the exposures by giving the students more ‘practice’ with the academic words found during teaching. Moreover, Matsouka and Hirsh (2010, p. 65) suggested direct pre-teaching of such academic words to provide more exposures to the words. Providing more exposures means giving more repetition of words, which according to Nagy (1988, p. 12) is very necessary and worthwhile.

**Word Repetition in the Unlisted Words**

The data analysis shows that there were 1,019 word families of the unlisted words found in the reading materials. The table also indicates that of the 1,019 word families, only 10% occurred at least 5, 10 and 15 times. They are namely 72 word families (7.07%) occurred 5 times or more (e.g. huge, beach, hind), 17 (1.67%) occurred 10 times or more (e.g. hen, volcano, fox) and 14 word families (1.37%) occurred 15 times or more (e.g. television, princess, underlined). In short, only 10.11% of the 1,019 word families that gives quite good opportunities to be incidentally acquired.
Furthermore, the table unexpectedly shows that more than a half of the total 1,019, i.e. 590 (57.90%), occurred only once (e.g. ambulance, awesome, horrific, inconvenient). The rests, i.e. 326 (31.99%) word families, occurred more less than 5 times. Less than five encounters with words resulted in few opportunities to learn the words in reading (Huckin & Coady, 1999; Matsouka & Hirsh, 2010). Overall, therefore, the reading materials provide very few opportunities for students to incidentally learn unlisted (less familiar) words.

CONCLUSION
The word repetition found in the reading materials had been analyzed to see if there were opportunities to deepen knowledge of the first & second 1,000 words, know better 570 academic words, and learn new words, especially less frequent ones. The results revealed that the collection of the reading materials provided a great opportunity to deepen knowledge of first 1,000 most frequent words considering that although many word families occurred once, significant numbers of essential words occurred at least 5 times. However, it did not provide good opportunities to know second 1,000 most frequent words. Also, the collection of the reading materials did not provide such opportunities to learn academic words and unlisted words well. This is because most of the words occurred once and less than five times. This suggests that the reading materials give very few opportunities to acquire the second 1,000 most frequent words, academic words and unlisted words.

REFERENCES