# Effect of English Vocabulary on English Reading Performance in the Wenzhou-Kean University 

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#### Abstract

English reading has become a mandatory topic for college students in English exams. The purpose of the study was to find out the relationship between vocabulary and English reading performance to find ways of improving English reading performance. The research adopted qualitative methods. One hundred respondents were taken for three weeks, which the participants included students of different majors from four years. The study adopted a questionnaire survey combined with interviews. There were 25 interviewers in the research. It was found out that there was a relationship between vocabulary and English reading performance. According to the survey and interview data, an amount of students believed that having a larger vocabulary would help them achieve better scores in English reading. Thus, the findings of the study can be summarized as a strong association between English reading performance and vocabulary size. Also, it was positive.


## Subject Areas

Linguistics

## Keywords

Vocabulary, English Reading Performance

## 1. Introduction

English is a popular language globally, and it plays a vital role in daily life and even international communication. In China, many places begin to learn English from elementary school, and English runs through the entire learning life of students. In China's test-oriented education, English reading is an inevitable test for students. From the beginning of the students' exposure to English, they must learn how to improve their English reading scores. In English reading, many
students do not understand English because their vocabulary is too small, and their final English reading scores are deficient. Therefore, we find that English vocabulary is the most critical factor affecting English reading performance.

### 1.1. Statement of the Problem

This study aims to determine the impact of English vocabulary on English reading performance.

1) What is the students' level of English vocabulary?
2) What is the students' level of English reading performance?
3) What are some purposes of teaching pedagogies?

### 1.2. Objectives of the Study

This study aims:

1) To describe the students' level of English vocabulary;
2) To determine the students' level of English reading performance;
3) To identify the purposes of teaching pedagogies.

### 1.3. Importance of the Study

English reading is the prerequisite and basis for developing other English skills, and English reading accounts for a large proportion of the entire English test. Whether it is listening or writing, English reading is required. English reading can improve the sense of the English language, improve writing and other aspects of English. Therefore, English reading is the top priority of English learning. The most intuitive way to judge English reading ability is the English reading score. If the English reading score is high, it proves that the English reading ability is strong.

On the contrary, the ability to read English is poor. Since English reading is so essential, how to improve the performance of English reading has also become a requirement for students. If students want to learn English well, they must practice English reading well. English reading is mainly composed of vocabulary and phrases, so English vocabulary is also crucial in improving reading ability. When you have a specific vocabulary, English reading is very smooth. Then it becomes necessary to research to study whether English vocabulary has an impact on English reading performance.

### 1.4. Definition of Terms

Vocabulary. The body of words used in a particular language.
Reading Performance. Measures the capacity to understand, use and reflect on written texts to achieve goals.

## 2. Literature Review

### 2.1. The Importance of English Vocabulary

Vocabulary is the main factor in English reading, and vocabulary will directly
affect English reading. When your vocabulary reaches a certain level, you will have a certain sensitivity to the vocabulary in English reading. Even if you don't know those rare words, you can guess the meaning of the rare words according to the connection between the rare words and other words. In this way, you can read the outline of the whole article. Therefore, having a large number of words is very important for English reading. Vocabulary is one indicator of a learner's background knowledge. If a learner understands a word, he or she probably has an understanding of the concepts related to the word (Fisher, 2016) [1]. Researchers have found that vocabulary knowledge is an important factor in the learning process of successful students (Martino \& Hoffman, 2002) [2]. For example, Espin and Foegen (1996) [3] found vocabulary knowledge to be a significant predictor of content area performance, and Farley and Elmore (1992) [4] found vocabulary knowledge to be a stronger predictor of reading comprehension than most other variables, including cognitive ability. The word association performance and the collocation performance on each of the items shared the same stimulus word. Obtaining the correlation coefficient as large as .87 between word association knowledge and collocation knowledge was hardly surprising. In addition, vocabulary size was moderately related to morphological knowledge ( $\mathrm{r}=.56, \mathrm{p}<.01$ ) and to collocation ( $\mathrm{r}=.52, \mathrm{p}<.01$ ). Likewise, collocation was found to have a medium correlation size ( $\mathrm{r}=.56, \mathrm{p}<.01$ ) with morphological knowledge, Qian, D. D. (2002) [5].

### 2.2. The Analysis of English Reading Performance

English reading performance is mainly reflected by English reading test scores. English tests here include CET4 \& amp; CET6, IELTS and TOEFL. English reading performance is good, and English test scores will be high. When it comes to assessing the reading performance of university students in Taiwan, a large number of studies would adopt either Test of English as a Foreign Language (TOEFL) or General English Proficiency Test (GEPT), which is a locally well-constructed English proficiency test (Ma \& Lin, 2015) [6].

### 2.3. Factors Affecting Vocabulary

For non-native speakers, many factors will affect the breadth and depth of English vocabulary, including major, grade, education, cultural knowledge background and so on. Major, grade and education will affect the breadth of English vocabulary, that is, the amount of vocabulary; cultural background will affect the depth of English vocabulary, that is, the understanding of English vocabulary. We found that the language that they speak affects their vocabulary to a lesser extent than the geographic area (rural vs. urban) in which they are raised. Given the biological and environmental risk factors that many South African children are exposed to concerning language development, it is important to determine which factors affect them most at which stage of their preschool lives, so as to allow for a more solid language base before they enter school. Language sociali-
zation and input in the home and community are especially important to investigate, given that schooling has been found to have a negligible effect on vocabulary size by the end of second grade (see Biemiller, 2006 for a discussion). Less than optimal language input at home can thus not necessarily be made up for in the school context (Southwood, F., White, M. J., Brookes, H., Pascoe, M., Ndhambi, M., Yalala, S., ... \& Alcock, K., 2021) [7].

### 2.4. The Relationship between Vocabulary and English Reading

There must be an inseparable relationship between vocabulary and English reading. Studies have proved that the vocabulary should be large enough to be able to read comprehension well for learners and teachers an important question is: how large a receptive vocabulary do we need to read authentic texts? In order to answer this question we first have to determine how many words in a text we need to know in order to obtain adequate comprehension of that text. An early study by Laufer (1989) indicated that a lexical coverage of $95 \%$ would be sufficient for adequate reading comprehension, whereas more recent research suggests that the learner needs to know around $98 \%$ of the word tokens 1 in the text (Hu and Nation 2000). Although this kind of coverage may not make comprehension easy, it provides the learner with a lexical basis for potentially inferring the meaning of the unknown words in the text.

Based on the aforementioned lexical coverage figures, studies have provided different vocabulary size thresholds for adequate comprehension of various kinds of texts (e.g. Laufer 1992; Hirsh and Nation 1992; Nation 2006). A recent study by Nation (2006), based on data from the British National Corpus, suggests that a vocabulary of as much as $8000-9000$ word families 2 is needed to read a range of authentic texts. As pointed out by Schmitt (2008), this kind of vocabulary size is what L2 learners need to be striving for if they wish to read a wide variety of texts without serious hindrance by unknown vocabulary (Staehr, L. S., 2008) [8].


Figure 1. Schematic diagram of the conceptual framework.

## 3. Conceptual Framwork

As shown in Figure 1, yellow to orange indicate factors to effects. Through the integration and analysis of the process, the degree of influence of the main factors on the results was explored. In order to understand the influencing factors of students' English reading performance, I will focus on the background of students' English level and their vocabulary. I will collect their vocabulary level English reading performance through questionnaire.

## 4. Research Methodology

### 4.1. Research Design

Based on the research questions, this study is a qualitative study to determine the impact of English vocabulary on English reading performance. Research design is governed by the notion of fitness for purpose. The purposes of the research determine the methodology and design of the research (2002). The purpose of our research is to understand a problem, so we need a research scheme to collect and analyze data. Research design is a plan to promote the management of data collection system. In this study, survey questions are usually asked with words such as what, how and describe. According to the survey results and research data, we can analyze the relationship between English vocabulary and English reading performance.

### 4.2. Research Instrument

Our research will be based on a questionnaire which created by the researchers of 10-15 questions. Also, we will interview some students to get some views that we didn't think of. We will investigate the background of college students. And English vocabulary level. The vocabulary of college students is determined by the English grade examination. After that, we will conduct a grade analysis of English reading performance through the reading comprehension score of the grade examination. Finally, I will sort out and analyze my survey data to solve my research problems. To ensure the reliability of the study, we not only collected data from other studies but also collated and merged the data.

### 4.3. Respondents and Sampling

For my sample, I will focus on college students. Select university students of different ages and backgrounds for research. Because the test standards for college students are determined, the English vocabulary can be better determined. Based on the questionnaire, we set each question as an extended response. This will facilitate the participants to rate their English level in terms of degree.

### 4.4. Data Analysis

Through the questionnaire and consulting the previous research data, this paper analyzes the relationship between College Students' English vocabulary and English reading performance. Firstly, we investigate the background of College Stu-
dents' English vocabulary. For most responses, as they progress through the grades, their vocabulary becomes larger. Many students memorize words by reciting them instead of associating them. Secondly, we analyze college students' English reading performance. Most of the students with poor English reading scores have low vocabulary, and the rare words in English reading will affect their reading. In the process of reading, they will rely on dictionaries or translation software. Finally, we investigate the relationship between English vocabulary and English reading performance. There is a positive correlation between English vocabulary and English reading performance. Students with high English vocabulary will also perform better in English reading.

### 4.5. Establishing Quality

A high level of validity and reliability instills confidence not just in the data gathering process, but also in the successful application and use of the results in management decisions. Credibility, transferability, reliability, and verifiability are four design assessments that are advised to increase the quality, validity, and reliability of case studies. Member checking approaches will be employed in this study to ensure credibility by presenting findings and conclusions to respondents and taking their replies into consideration during the study authoring process.

### 4.6. Limitations of the Study

Through the course of this study, we will find some limitations in some aspects of the survey. This study only focuses on the influence of students' English vocabulary on English performance. There are many other factors that affect English reading performance, such as the frequency of doing exercises. In addition, most of the participants in this study are students of Wenzhou Kean University, so there may be some limitations on the research results.

### 4.7. Ethical Considerations

Ethical considerations take precedence in any research, and this is something that is kept in mind throughout this study. Every participant in this study will be informed of the study's objective in such a way that responses will never be insulted. The ethical considerations will apply to all replies from the surveys and interviews reported. The participants' privacy and identities will be protected, and their opinions will be respected. Before answering the survey questionnaire, all participants will be asked for their permission.

## 5. Results and Discussion

### 5.1. Questionnaires

Based on the questionnaire we performed SPSS analysis and we summarized the questions in the questionnaire for correlation. The following is an analysis of the correlation (Table 1).

Table 1. Correlations.


## Continued

| 10) What level is your accuracy | Pearson <br> Correlation | 0.056 | 0.745" | 0.808** | 0.698** | 0.759** | 0.777** | $0.826^{* *}$ | 1 | 0.783" | $0.778^{* *}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| for doing a set of reading | Sig. (2-tailed) | 0.565 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |  | 0.000 | 0.000 |
| questions? | N | 109 | 109 | 109 | 109 | 109 | 109 | 109 | 109 | 109 | 109 |
| 11) What extent do you think | Pearson <br> Correlation | -0.001 | 0.855" | 0.802** | 0.770** | 0.816** | 0.831" | 0.858** | 0.783" | 1 | $0.783^{* *}$ |
| that English reading affect your whole | Sig. <br> (2-tailed) | 0.994 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |  | 0.000 |
| English grades? | N | 109 | 109 | 109 | 109 | 109 | 109 | 109 | 109 | 109 | 109 |
| 12) What extent do you think vocabulary have | Pearson Correlation | 0.117 | $0.77{ }^{\prime \prime}$ | 0.782** | 0.757** | $0.781^{* *}$ | 0.785" | 0.813** | 0.778" | $0.783 * *$ | 1 |
| a impact on English reading | Sig. <br> (2-tailed) | 0.227 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |  |
| sions? | N | 109 | 109 | 109 | 109 | 109 | 109 | 109 | 109 | 109 | 109 |

The first is the correlation between question four English vocabulary level and question five English proficiency level. SPSS analysis of the data revealed that Pearson correlation index is 0.804 , which is greater than 0.7 correlation is extremely high. Therefore, there is a great correlation between English vocabulary and English proficiency level. And if you want to improve your English proficiency level you can start with vocabulary.

The second was a correlation study between questions four and eight, English vocabulary and the level of time needed to read a 500 -word English text. According to the SPSS analysis of the study data, the Pearson correlation index is 0.782 , which is greater than 0.7 , so there is a great correlation between English vocabulary and English reading time level. And there is a positive correlation between the two. Therefore, when people want to improve their English reading speed, people can choose to improve their English vocabulary.

The SPSS correlation analysis based on the data of question two and question four year level and vocabulary level yielded a Pearson correlation coefficient of 0.056 between the two. Thus, the correlation between vocabulary level and vocabulary level was not strong.

SPSS analysis was conducted based on the data of English vocabulary levels and the degree of frequency of memorized words for questions four and six. A Pearson correlation index of 0.781 was obtained, which is greater than 0.7 , indicating a strong correlation between the two. In addition, we also found that vocabulary level is directly proportional to the frequency of memorizing words. So when students want to improve their vocabulary, the first thing they should improve is the frequency of memorizing words. However, this is also influenced by other factors, such as the number of words memorized at one time.

The SPSS data analysis based on the data of the English vocabulary level and the accuracy level of doing a set of English reading questions in question four and question ten yielded a Pearson correlation coefficient of 0.745 , which is greater than 0.7 , indicating a greater correlation between the two. Therefore, it can be concluded that there is a great correlation between English vocabulary and the accuracy level of English reading.

SPSS analysis based on the data of question four and question twelve on English vocabulary and the extent to which English vocabulary affects English reading performance yielded a Pearson correlation coefficient of 0.774 , which is greater than 0.7 . Thus there is a greater correlation between the two. Therefore, it can be concluded that there is a great correlation between English vocabulary and performance on English reading questions.

SPSS data analysis based on the data on the extent to which English vocabulary levels and English reading affect overall English performance for questions four and eleven yielded a Pearson correlation coefficient of 0.855 , which is greater than 0.7 , indicating a greater correlation between the two. Thus indicating that for the majority of students, they believe that there is a strong correlation between English vocabulary and overall English performance. English vocabulary largely influences the performance on English reading questions and thus the overall performance in English.

SPSS data analysis based on the data of English proficiency level and difficulty in memorizing words for questions five and seven yielded a Pearson correlation coefficient of 0.783 , which is greater than 0.7 . Therefore, the correlation between the two is high. Therefore, it can be concluded that there is a great relationship between the level of English proficiency and the difficulty of memorizing English words. This may indicate that when a person is able to learn English well, he or she also has his or her own methods and techniques for memorizing words.

SPSS analysis based on the data of question four and question nine on English vocabulary and the extent of reliance on dictionaries in doing English reading yielded a Pearson correlation coefficient of 0.865 , which is greater than 0.7 . Thus the correlation between the two is extremely high. There is a great correlation between English vocabulary and the degree of reliance on dictionaries when doing reading.

### 5.2. Interviews

We took an interview approach and summarized the questions from the interview a bit.

### 5.3. How Do You Improve Your Vocabulary?

We interviewed 25 students and those answers were similar and can be summarized in the below aspects. 18 of them told us that they preferred to watch English movies or listen to English songs. They felt that this approach was more interesting and would allow them to learn a lot of authentic expressions to prepare
for their future study abroad. In addition, they felt that learning words in American dramas would be more situational. Five of the remaining students chose to improve their vocabulary by doing English reading questions. The last two students would choose to improve by memorizing words every day through rote memorization.

### 5.4. What Method Do You Usually Use to Memorize Words?

In our interviews, most of the students tended to take the image memory and contextual memory approach. This method can help students use words more appropriately in writing or speaking. However, there are still methods of rote memorization and categorizing words to memorize words. So the interviews revealed that students wanted to be able to memorize words in a more visual way.

### 5.5. What Is the Reason Which You Think You Have Difficulty Reading English?

Of the 25 students we interviewed, 20 of them thought that not having enough vocabulary was an important issue. They thought that the lack of vocabulary led to problems such as not being able to read the text, difficulty in finding synonymic words, and not being able to read the questions. These all have a great impact on the performance of English reading. The remaining 5 students had the following problems: they knew the words but could not read the text, they had a complicated lexical structure and could not read the sentences, and they had insufficient skills.

### 5.6. What Is Your Vocabulary Impairment during Doing English Readings?

The following answers were similar in proportion to the manifestation of vocabulary disorders. First, there are more vocabulary words and images to understand the main idea and details of the text. This makes the questions related to the main idea always produce understanding bias. Second, there are some words that do not affect the understanding of the main idea of the text but affect the understanding of the details. In most cases, this part of the students will lose a lot of marks in the detail questions, because there are many detail questions are synonymous with the words. Third, some students get upset when they encounter vocabulary, causing them to slowly lose interest and confidence in reading.

### 5.7. How Do You Handle the Raw Words You Encounter in Reading?

Encountering vocabulary is a normal phenomenon in reading, but how to solve the problem of vocabulary will be very important. Students in our interviews suggested the following methods. First, according to the context of the early warning machine and guessing the meaning of words, do not give too much attention to words that do not affect the understanding. This made them spend much less time on vocabulary. Second, guessing the meaning of words through
existing experience and knowledge or knowledge of word formation. Many words in English are derived words. We can logically guess the meaning of words. Third, the comprehension process is difficult and slow, by looking up the dictionary and analyzing the grammar to analyze each raw word and difficult sentence. Fourth, wild guesses are less common.

According to the questionnaire data, it can be found that vocabulary is positively correlated with English reading performance. The participants of the questionnaire survey covered the four colleges of Wenzhou Kean University, and most of the students were sophomores and juniors. Through the correlation analysis of the data, it can be concluded that the higher the grade of students, the richer the vocabulary, the better the performance of English reading. Students who have a large vocabulary have faster reading speed and higher accuracy and better English scores.

Through the interview of different students in four grades, it is found that most freshmen do not have the habit of reciting words, reciting words mainly through rote memorization. When doing English reading, rare words will affect their reading speed and grades. They often have no confidence in English reading, and will have a fear of reading. On the contrary, students in higher grades will recite words for tests such as IELTS and TOEFL, and their vocabulary is relatively rich. They recite words not only by rote, but also through entertainment activities such as watching English movies and listening to the news. They are more confident in English reading, and rare words will not affect them too much.

## 6. Summary, Conclusion and Recommendation

The primary goal of this research is to investigate the relationship between English vocabulary and English reading performance. Since reading in English is an inevitable part of the academic process, most students want to find ways to improve their English reading scores. According to a lot of data, we found that English vocabulary is one of the reasons why we cannot ignore it. The analysis of the survey data obtained from this study showed that English vocabulary has an effect on English reading performance. In addition, the larger the vocabulary the better the English reading ability. In addition, students in higher grades tend to be more aware of the importance of vocabulary for reading. They are also more willing to memorize more words in order to improve their English reading performance.

In addition, we also interviewed many students about their views on English vocabulary and what they do to improve their vocabulary. Most students believe that English vocabulary is very important and they do this in many ways, such as memorizing some words every day, learning more new words by doing reading, learning the native language by watching American TV shows, etc. Therefore, we recommend that students who want to improve their English performance take the approach of improving their vocabulary. Most of our participants were
students from Wenzhou Cane University which would lead to a non-randomized experiment.

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## Conflicts of Interest

The authors declare no conflicts of interest.

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## APPENDIX

## Questionnaire

## Effect of English Vocabulary on English Reading Ability

A. Personal Information

1) What's your gender? *

- Male
- Female
- Other

2) What's your year level? *

- Freshman
- Sophomore
- Junior
- Senior

3) What is your faculty? *

- Business
- Liberal Arts
- Science and Engineering
- Architecture and Design
- Other
B. Measurement of Variables

4) The vocabulary level you are *
5) What is your English level? *
6) What frequency level do you memorize words? *
7) What difficulty level do you memorize words? *
8) What time level do you take for reading a 500 -word article? *
9) What level do you rely on electronic or paper dictionaries when doing English reading? *
10) What level is your accuracy for doing a set of English reading questions? *
11) What extent do you think that English reading affect your whole Englsih grades? *
12) What extent do think vocabulary have a impact on Englsh reading comprehensions? *
13) What level do you think taking a cram class influences your English reading performance? *

## Interview Questions

1) How do you improve your vocabulary?
2) What method do you usually use to memorize words?
3) What is the reason which you think you have difficulty reading English?
4) What is your vocabulary impairment during doing English readings?
5) How do you handle the raw words you encounter in reading?
