The Impact of EFL Students' Vocabulary Breadth of Knowledge on Literal Reading Comprehension.

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Abstract
Second language reading is a challenging task for foreign language learners. The amount of vocabulary students store in their brains will assist them in understanding reading, especially when students' first language is a non-alphabetic language. The purpose of this study was to investigate whether EFL students' vocabulary breadth knowledge influences their literal reading comprehension. To accomplish this study, the mixed methods design was used. All the participants in this study were given a set of tests which included Vocabulary Levels Test and Reading Comprehension Tests. Individual interviews were conducted after the quantitative phase and were used as supportive data. The bivariate of regression analysis tools were used to interpret the correlations between vocabulary breadth knowledge within literal reading comprehension. The quantitative results indicated that vocabulary breadth of knowledge was positively and significantly correlated to literal reading comprehension. The qualitative findings showed that the majority of participants agreed breadth of vocabulary knowledge played a greater role in their literal reading comprehension process. The interview results determined the participants relied more on breadth of vocabulary knowledge than others, for example syntactic knowledge, during literal reading. Moreover, the interviewees who had better language proficiency tended to utilize more literacy skills in interpreting the content of reading passages than did lower language proficiency learners. Ultimately, the researcher hopes that the findings shown in this study will provide insight into the connection between EFL learners' vocabulary knowledge and reading comprehension.

Introduction

Success in reading comprehension is usually seen as fundamental to the academic success of foreign language learners. Second language proficiency often assumes vocabulary and grammar as knowledge and reading as the ability to understand the text (Koda, 2005). Research consistently reveals that vocabulary knowledge heavily relates to reading comprehension moreso than other factors such as grammar knowledge (Koda 1989; Qian, 1999). Laufer (1997) has written, "No text comprehension is possible, either in one's native language or in a foreign language, without understanding the text's vocabulary" (p. 20). Hence, without understanding the meaning of words, second language readers may have a hard time developing comprehension. Consequently, vocabulary seems to be an important factor in reading comprehension (Richard & Rodgers, 2001).

The primary role words play in language is to convey meaning (Balota, 1990). Moreover, Laufer (1997) indicated that the larger the vocabulary that learners have, the fewer the number of words that will appear to be "deceptively transparent" to the learner (p.31). Deceptively transparent vocabulary usually means the word that readers think they know, but they do not know. In other words, vocabulary itself seems to provide some clues that readers can interpret correctly but actually does not. For example, the word 'shortcoming' looks as if it is composed of 'short' and 'coming' and is misinterpreted as 'short visit'. Another word, 'outline' sometimes was misunderstood as 'out of the line'. These words are called deceptively transparent. (Laufer, 1989). Deceptive transparency could be a serious problem in second language reading. Most researchers believe second language learners have difficulty understanding reading texts because of the limited breadth of their vocabulary (Laufer, 1998; Richard & Rodgers 2001; Schmitt, 2000). Therefore, researchers (Nation, 2001; Schmitt 2000; Schmitt,

Schmitt & Clapnam, 2001) started measuring how big a vocabulary is necessary for second language readers to achieve certain levels of reading comprehension.

To achieve reading comprehension, readers must concurrently process different levels of the text. "Reading the line" refers to a basic literal comprehension by using fundamental knowledge of a given language to understand the surface concept that the writers try to convey to readers. "Reading between the lines" involves background knowledge to comprehend the text. The highest level of reading comprehension, according to Gray (1960), is "reading beyond the line", which requires readers to make judgments and evaluate the writing context. A good reader should be able to read the lines, as well as between the lines simultaneously (Gray, 1960).

Laufer (1997) indicated that it is not possible to achieve comprehension, either for native speakers or second language learners, without understanding the vocabulary in the reading text. Laufer further claimed that second language reading comprehension is affected by vocabulary alone. The breadth of vocabulary knowledge usually is represented as vocabulary size, which refers to the numbers of the words that second language learners know, rather than emphasizing on how well learners know given words. How much vocabulary do second language learners need to know to understand what they are reading? Hirsh and Nation (1992) indicate that learners might need around 5,000 words to read a novel that had been written for English speakers. Put differently, for second language learners to achieve fluency in English, they need to gain at least 5,000 words, preferably 10,000 words (Nation, 2003). The stronger the vocabulary knowledge the EFL student has, the better reading comprehension the reader will achieve (Mecartty, 2000). Nation (2001) explained that in order to understand 95% of reading content, readers have to know at least 4000 word families, including 2000 high-frequency words, 570 general academic words, at least 1000 technical words, and proper low-frequency word families. Nation believes students' reading comprehension will improve when their known words increase.

Nation and Coady (1988) acknowledged the relationship between vocabulary and reading. The researchers stated that vocabulary knowledge is the most

identifiable subcomponent of reading ability. Perfetti's (1985) verbal efficiency theory declared that becoming efficient in processing lower level reading skills, such as vocabulary knowledge and word recognition, will facilitate readers in the processing of higher level reading skills in order to help them attain reading comprehension. Perfetti stated that recognition of word accuracy is not sufficient to enable fluent reading comprehension. The language learners must be able to process from a lexical level toward high level reading automatically to achieve comprehension. According to the threshold hypothesis, the readers need to know a certain amount of vocabulary to be able to use higher level processing strategies to comprehend the text (Laufer, 1997). In other words, learners know a certain amount of surface meaning of words and then gain further understanding of the text. Nation (2001) indicated that if a learner has crossed the threshold, then adequate comprehension may be possible for the reader. On the other hand, if a second language reader cannot cross the threshold of vocabulary, then the reader may not acquire comprehension sufficiently. Based on these two theoretical perspectives, it can be projected that the second language learners with large vocabulary sizes will process a reading text more efficiently and then, according to the verbal efficiency theory, the readers' abilities to understand word meanings will help them to achieve a higher level of reading comprehension.

Purpose of study

The study was conducted using instruments that measured how EFL students' vocabulary breadth of knowledge affects their literal reading comprehension. To accomplish this purpose, a mixed method design (Creswell & Plano, 2007) was used. The mixed method approach involved collecting quantitative data, as well as qualitative data. The main reason for collecting the qualitative data is to help explain and strengthen the quantitative results. The primary data are the quantitative data, and the qualitative data were designed to help explain the quantitative results in order to make the research more sufficient.

Research Question

1. What correlation, if any, is there between EFL students' vocabulary and their literal reading comprehension?

2. What are the EFL students' perspectives on vocabulary breadth of knowledge, and how do these affect their literal reading comprehension?

Methodology

Seliger and Shohamy (1989) stated that tests are generally used to collect data about the subject's ability or knowledge in second language areas such as vocabulary, grammar, reading comprehension or general language proficiency. In order to assess the second language students' language knowledge and to best answer the research questions, this study employed the Vocabulary Levels Test and the Reading Comprehension Test for a quantitative method analysis.

The original Vocabulary Levels Test (hereafter, VLT) was designed by Paul Nation (1983, 1990) in order to measure language learners' vocabulary sizes. In 2001, Schmitt, Schmitt, and Clapham (2001) developed two new versions of VLT to present valid evidence for the tests. This study adopted Version 1 of the VLT (Schmitt, 2000) to examine the participants' general vocabulary sizes and academic vocabularies. To examine EFL students' vocabulary knowledge correlation with reading comprehension, the researcher used the selected reading tests. The passages were applied to vocabulary software called Range, designed by Nation (2003). According to the instruction manual (Nation, 2005), Range will analyze and check the text content and scope, word frequency, and range of the passages. The Range must be run to ensure that the reading passage is suited for the participants. The participants were varied in their levels of vocabulary according to the VLT; the passage needed to be favorable for participants at varying levels.

In this study, the researcher targeted students who had learned English as a foreign language in Taiwan for at least three years. Interviewees were randomly selected from the pool of participants in order to question students for deeper insight regarding the qualitative research questions. The qualitative data were collected through individual open-ended interviews with randomly selected

students. The Atlas ti. 5.0 software was used to assist the researcher in analyzing the qualitative data. The open-coding and code-manager functions were the two major tools of Atlas ti. that were used in the present study.

Results / Conclusion

The research question investigated to what extent the EFL students' vocabulary breadth of knowledge related to their literal reading comprehension. To answer the research question, the researcher used a multiple regression analysis to compute the data. The regression model explained the correlation among the variables, and indicated the variance of one variable from another. The VLT was considered as independent variables; literal reading comprehension was seen as a dependent variable. According to Tables1.1, statistically significant differences were found between VLT (p=.000 <.01) and literal reading comprehension. Tables 1.1 showed a 25% (R^2 = .247) variance in literal reading comprehension.

Table   1.1

Model Summary of Bivariate Regression of VLT on Literal Reading Comprehension (n=138)

Variables	R	R^2	Adjusted R square	Sig.
VLT	.497	.247	.242	.000

Note. Dependent variable: literal reading comprehension. Independent variable (predictor): Vocabulary Levels Test (VLT)

The qualitative research question emphasized the students' perspective of how vocabulary knowledge and syntactic knowledge affected their reading comprehension.

As shown in Table 1.2, all interviewees said that vocabulary breadth of knowledge consisted of a number of words they know. Six out of the eight interviewees (S1, S2, S3, S4, S6, and S8) reported that vocabulary breadth related to surface meaning of words, and six interviewees (S1, S2, S4, S5, S7, and S8) answered breadth of vocabulary might be related to those are easy to understand and memorize.

Table 1.2

Learners' Perspective of Vocabulary Breadth Knowledge (n=8)

	Frequency	Percentage
Vocabulary Breadth		
Quantity	8	00%
Superficial	6	75%
Easy	6	75%

Furthermore, the researcher asked the interviewees to explicate how vocabulary breadth of knowledge helps them in reading. From the interviewees' points of views, vocabulary breadth knowledge affected the English language learner's reading comprehension. For instance, interviewees who had a certain amount of vocabulary felt reading is easy; moreover, they desired to increase their vocabulary depth of knowledge. Those interviewees who did not have basic vocabulary breadth of knowledge tend to struggle in reading. In other words, they were too busy expanding their vocabulary breadth and did not have any motivation to enhance their vocabulary depth of knowledge or other reading skills. With distinct levels of English proficiency, the students tended to have different attitudes toward vocabulary breadth and depth knowledge when reading. For lower level English proficiency learners (S1, S2, and S3), vocabulary breadth was the main concern when they comprehend the reading. On the other hand, higher level English proficiency learners (S4, S5, S6, S7, and S8), believed that development of depth of vocabulary knowledge improved their English abilities and enabled them to accurately gather information from the article. Through the interview report, interviewees (S3, S4, S7 and S8) agreed vocabulary breadth not only assisted them in comprehending the text, but also provided them with the chances to enhance their other vocabulary knowledge when reading.

In this study, the findings of the quantitative and the qualitative research questions were presented within the mixed method design. In regard to literal reading, the vocabulary breadth of knowledge was found to be positively and significantly correlated to literal reading comprehension. After examining the

relationship between vocabulary breadth of knowledge and literal reading comprehension; the vocabulary breadth of knowledge appeared to offer strong predictive power. The study determined that vocabulary breadth of knowledge was the most powerful predictor of literal reading comprehension. In other words, participants relied less on depth of vocabulary knowledge or other language skills during literal reading. When asking about the importance of vocabulary breadth of knowledge to second language learning, lower English proficiency learners have a tendency to expand their vocabulary size. Higher English proficiency learners place more emphasis on increasing their other language knowledge, for example, vocabulary depth of knowledge. Moir (1996) pointed out that lower language proficiency learners focus on the meaning of words from the text rather than exploring the range of collocations and uses. Unlike lower language proficiency learners, higher level learners tended to use literal skills in determining the unknown vocabulary, and the lower English proficiency learners struggled more in translating each meaning of the words into their native language. Nevertheless, the findings showed that the higher English proficiency learners with larger vocabulary breadth knowledge still experienced difficulty in determining the words. There is no ambit on vocabulary knowledge learning, and students are encouraged to increase both their vocabulary breadth and other vocabulary knowledge by using language tools, such as a dictionary or learning strategies.

The study showed that once students have a certain amount of vocabulary, they tend to dig deeper into more subtle meanings of words. Their motivations for acquiring the knowledge reflected their abilities to comprehend the text. Finally, regarding the strategies of second language learners use when reading, the participants with higher English proficiency focused more on using their literacy skills, prior knowledge or schemata skills, to interpret the content of reading passages. The lower language proficiency learners preferred to understand the meaning of each word in the text before reading. Due to this, these learners slowed down their reading rate, which resulted in unpleasant reading experiences. The traditional method of vocabulary teaching asks students to memorize words; however, it is nearly impossible to teach every single vocabulary word in the

reading material. Instead of encouraging memorization, instructors have to provide students with some other vocabulary learning strategies, such as analyzing word parts (affixes and stems), using context clues, and consulting a reference source (Gu & Jonshon, 1996). Moreover, the holistic reading approach exposed students to more words than the analytic reading approach which would have limited word exposure. In this study, all participants were taught similar reading comprehension strategies by their teachers. However, lower English proficiency participants obviously were not familiar with top-down reading method or higher level reading strategies. The suggested activities for the language classroom involve developing learners' knowledge of word collocations, associations, comprehension, concepts and referents of words and constraints on use of the words. Other strategies may also be used, including question and answering sessions, role playing, and audiovisual resources that offer language learners opportunities to practice their vocabulary knowledge in verbal and in written language.

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