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What is the relationship between the lexical profile of test items and performance on a standardized English proficiency test?

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ABSTRACT

Lexical profiling research has indicated the vocabulary sizes that may be necessary to comprehend different spoken and written text types. These figures are based on studies of lexical coverage that have indicated that comprehension is likely to rise as the number of known words in a text increases (e.g., Laufer, 1989). This study examined the lexical profiles of passages included in an English L2 proficiency test used for university admission purposes. A total of 87 reading comprehension, listening comprehension, and cloze passages from CanTEST were analyzed to determine the vocabulary size needed to reach 95% and 98% lexical coverage. The results indicated that there was large variation between the lexical profiles of the texts. At the 1000 word frequency level, there were differences ranging from 15.22% to 20.05% coverage between the most and least lexical demanding passages in the three parts of the test. The correlations between the lexical profiles of the texts at the different word frequency levels and performance on the corresponding test items were calculated to determine the relationship between these two variables. The results indicated that there was either no correlation or a small correlation in all comparisons.

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1. Introduction

Developing adequate reading and listening comprehension skills is essential for English for Specific/Academic Purposes students (ESP/EAP). Often it is a lack of vocabulary knowledge that determines whether or not spoken and written text is understood (e.g., Hu & Nation, 2000; Van Zeeland & Schmitt, 2013). Lexical profiling studies, revealing the percentage of vocabulary at different word frequency levels within a text, could inform ESP/EAP pedagogy. For example, research on the lexical profile of spoken discourse in the Wellington Corpus of Spoken English has shown that about 90% of words are from the most frequent 2000 word families, 5% are from 2nd most frequent 1000 word families, and the remaining 5% consist of increasingly smaller percentages of words at the lower 1000 word frequency levels (Nation, 2006). This information is useful as it indicates the lexical difficulty of different discourse types, and the relative value of English vocabulary at different

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frequency levels; higher frequency words have greater value to learners because they are encountered and used much more often than lower frequency words.

A related line of research has shown that lexical coverage (the percentage of known words in a text) affects both reading (Hu & Nation, 2000; Laufer, 1989; Schmitt, Jiang, & Grabe, 2011) and listening comprehension (Bonk, 2000; Van Zeeland & Schmitt, 2013). These studies have indicated that as the lexical coverage increases above 90%, comprehension is likely to increase. This is intuitively logical; language is unlikely to be understood if the words that are being used to convey meaning are unknown. It is also supported by research that has revealed that vocabulary size is positively correlated with comprehension (Laufer & Ravenhorst-Kalovski, 2010; Qian, 1999; Stæhr, 2009); the greater the vocabulary size, the higher the comprehension test score.

Together, these studies provide some indication of when text is likely to be understood. However, one limitation of the lexical profiling studies is that they provide a mean coverage figure that does not account for variation among individual texts. Similarly, a limitation of research investigating the lexical coverage necessary for adequate comprehension is that it has examined only comprehension of a relatively small number of carefully controlled texts. Because there are a large number of factors that affect comprehension, and the lexical profiles of text have considerable variation (Webb, 2010), further research examining how the lexical demands of text affects comprehension is needed. The present study aimed to fill this gap in the research by investigating the relationship between the lexical profile of test passages and performance on a standardized English proficiency test. Specifically, it examined (a) the lexical profile of 38 reading comprehension, 37 listening comprehension, and 12 cloze passages from CanTEST (CanTEST is an English proficiency test commonly used for university admission purposes in Canada), and (b) the correlation between the scores of over 6000 test takers and the lexical profile at different word frequency levels for these texts. This research may help to inform English for academic purposes (EAP) pedagogy by identifying target vocabulary sizes that indicate whether university test items might be understood. Teachers could evaluate their students' vocabulary knowledge against these figures to get a more accurate indication of how they might perform on English language tests designed for university admission purposes, and then use this information to better prepare their students.

1.1. Background

Research has shown that there is typically a large positive correlation between vocabulary size and comprehension (Laufer, 1992; Laufer & Ravenhorst-Kalovski, 2010; Qian, 1999; Stæhr, 2009). Laufer (1992) reported correlations ranging from .50 to .75, Qian (1999) found a correlation of .78, and Laufer and Ravenhorst-Kalovski (2010) found a correlation of .80 between vocabulary size and reading comprehension. Schmitt et al. (2011) reported a medium size correlation of .41, but suggest that the association between the two variables was smaller due to the relatively large proportion of participants that read texts at higher levels of cumulative coverage. In one study examining the relationship between vocabulary size and listening comprehension, Stæhr (2009) found a large correlation of .70. Together, these studies suggest that vocabulary knowledge may often have a large impact on reading and listening comprehension. The explanation for this is that as vocabulary knowledge develops, fewer words within spoken and written text are unknown and in turn there are fewer comprehension gaps and a greater precision in understanding. In other words, when learners have a greater lexical coverage, a text is more easily understood.

Several studies have investigated the effects of lexical coverage on comprehension of written text (Hu & Nation, 2000; Laufer, 1989; Schmitt et al., 2011). Laufer (1989) found that language learners had poor comprehension of an L2 academic text when they knew only 90% of the words in the text, but reasonable understanding of that text at 95% coverage. Hu and Nation (2000) compared comprehension of a relatively easy L2 text at four levels of coverage: 80%, 90%, 95%, and 100%. They found that comprehension was poor when only 80% or 90% of the words were known, comprehension improved at 95% coverage, and at 100% coverage the majority of the learners had adequate comprehension (operationalized as a score of 70/124 or higher on a comprehension. In the most comprehensive study of how coverage affects L2 reading comprehension, Schmitt et al. (2011) found that as coverage increased in 1% intervals from 90 to 100%, comprehension also increased, and there was a relatively linear relationship between the two variables. They concluded that there is unlikely to be a lexical coverage threshold that ensured comprehension, but that 98% coverage may often provide an acceptable level of comprehension (operationalized as a score of 60% or higher on a comprehension test).

Few studies have examined how the percentage of known words in a text affects listening comprehension. Bonk (2000) examined second language learners' listening comprehension of four passages that were each at a different level of lexical coverage. He found that the level of listening comprehension increased as coverage increased above 80%. The results indicated that it was possible to have adequate comprehension at 80–89% coverage, but that this was uncommon. However, when coverage was above 90%, comprehension was often at an acceptable level. He suggested that learners can have acceptable listening comprehension at less than 95% coverage for short texts. Schmitt (2008) analyzed Bonk's results and found that at 95% coverage most of the participants had an acceptable level of listening comprehension. Van Zeeland and Schmitt (2013) compared comprehension scores from four passages each at a different level of coverage: 90%, 95%, 98%, and 100%. They found that although 98% coverage provided a high degree of comprehension and significantly superior comprehension to lower coverage rates, 95% may be sufficient for L2 listening comprehension of informal narratives.

Laufer and Ravenhorst-Kalovski (2010) and Stæhr (2009) took a slightly different approach in their studies of coverage. They measured (a) the vocabulary sizes of L2 learners, (b) performance on a reading comprehension test, and (c) the lexical profile of the comprehension test. They analyzed the comprehension test results in relation to the other two factors. Laufer Download English Version:

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