English Vocabulary Size of Saudi Post-Secondary School Students: A Case Study of Jazan University
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Abstract: English instructors at Jazan University continuously claim that students who join university often suffer from extremely poor English. Students find it difficult to communicate with their teachers. This study assumes that the main problem can be attributed to little vocabulary size. Nation and Beglar’s (2007) “Vocabulary Size Test” is used to investigate the students’ vocabulary size in first and second 1000 most frequent words in English. 525 preliminary year students from three different colleges participated in the study. Results revealed remarkably low achievement in the test with the majority of students. The study suggests that the adoption of vocabulary-rich syllabuses will enhance overall proficiency in English and hence better chances of success at university.

Keywords: Vocabulary Size, Vocabulary Acquisition, Vocabulary Testing

I. Introduction
Vocabulary learning had been peripheral compared to other aspects of language until recent times (McCarthy, 1990; Meara, and Jones, 1988). It is well-established that the grammar-translation method focuses on the syntax of the sentence. The common thinking at time was that when the students learned the grammar of the sentences, they would be able to slot in vocabulary and thereby generate language. The advent of the Audio-lingual method, based on habit-formation, was much the same regarding vocabulary. Main focus was placed mainly on structures. Since then, subsequent research has often attempted to account for second language acquisition (“SLA”) by looking at grammatical features in such areas as the developmental sequence (Cancino, Rosansky, & Schumann, 1978; Pienemann, 1989), the role of input (Loschky, 1994; Shook, 1994; White, Spada, Lightbown, & Ranta, 1991), and instruction (Dulay, & Burt, 1973; Ellis, 1992; Sharwood Smith, 1981; VanPatten, & Cadierno, 1993).
Beginning from the last two decades of the twentieth century, the situation has largely been reversed. Theoretically, it appears likely that language acquisition begins with word learning rather than grammar, with words gradually "grammaticalized" through experience on a largely associative basis (Krashen, 1989). Practically, studies throughout the 1980s and 1990s showed that vocabulary skill and knowledge are the precondition for most other language abilities and, in addition, the main source of variance in the final state of such abilities. It now seems clear that vocabulary acquisition does not happen by itself to any satisfactory degree, particularly as needed for first language literacy or a second language generally.

One of the major aspects of vocabulary learning that have found considerable research is the number of words that a student needed to know (Nation, 2001; Laufer, 1992). In order to estimate the number of words a learner knows, it is important to define what a word is and, what it means to know a word. Considerable amount of research has primarily been focused on first language acquisition. However, there are obvious implications for SLA as well. It is widely accepted that languages cannot be perfectly learnt without adequate practice. In most of the Arab countries, English language is only restricted to classroom contexts. This basically leads to a general weakness in language proficiency. The situation is clear in the Arab world. Rababah (2005), for example, stated that the weakness in English language is prevalent in almost all Arab counties. He attributed this to various factors like the lack of pertinent information on the part of school graduates when they join the university, school and English language department curricula, teaching methodology, lack of the target language environment, and the learners' lack of motivation.
Khan (2011) asserts that teaching of English as a foreign language is always difficult especially when it comes to the places where English serves a very limited purpose. Teaching of English language in the Gulf region in general and...
Saudi Arabia in particular catches attention of many researchers and scholars especially when the issue is particularly related to the classroom situations.

Instructors of EFL at Jazan University have continuously claimed that their students’ English is very weak when they newly join different colleges. Noticeably, students find it difficult to understand their teachers when they speak in English and in most cases they express their need for some teaching in Arabic.

In attempt to find reasons for the problem, this research project assumes that the basic problem lies in their little vocabulary knowledge. It seeks to answer questions such as: How many words do students know when they join university? Can their proficiency level be shown from their vocabulary level?

**II. Literature Review**

As stated above, research in vocabulary learning has only been recently innovated. There are a few research centres which are specialized in researching vocabulary learning and acquisition. Regarding researchers, we can also assume that only few researchers have fully devoted their projects to this area. Many of the questions they asked, and the results they found are still relevant today. These questions included how many words a student needed to know, how these words should be sequenced, and what the student needed to know about these words (Nation and Waring, 1997).

One of the basic arguments was whether it would be possible to increase a learner’s vocabulary by the direct teaching of words and their meaning. If estimates of native speakers’ vocabulary were large, explicit instruction would not be a good choice, and early research seemed to indicate that this was the case. Nation and Waring, (ibid) assert that adult native speakers of English have a vocabulary of around 20,000 word families though they pointed out that this figure is rough and there is a large variation between individuals.

In their later research, Nation (2001) and Read, (2000) questioned whether native speakers actually knew these words. By designing tests based on the frequencies of the words, the researchers determined that native speakers' vocabulary averages 17,200 words. This number suggests that the learning burden is not as insurmountable as previously suggested.

Similar results were found in other languages as well. Hazenberg&Hulstijn, (1996) found that native Dutch speakers had a vocabulary of 18,807 words but they also looked at the vocabulary of non-native students writing a Dutch university entrance exam and concluded that these students needed a minimum of 10,000 base words for entry into university.

If this is the case for native language, then we need to question whether it is important for EFL students to know similar numbers of word families in order to succeed at university. Laufer (1989) found that a recognition vocabulary of at least 3,000 words was a threshold for being able to read unsimplified texts.

Research on vocabulary size gives the overall picture of learners’ ability to communicate and understand a written text. It is also important to see which words are actually needed and in what sequence should they be learnt. Earlier at the beginnings of the last century, a few researchers (Ogden, 1930; Richards, 1943; Thorndike, &Lorge, 1938; West, 1953) ranked vocabulary, using criterion based on frequency and coverage. Ogden's 850 basic words and West's 2000 word general service list basically tried to provide a way to assist the learners in acquiring a sufficient vocabulary to overcome what Coady (1993) would later refer to as “the paradox of learning words through context”, whereby students must have a command of enough words to read in the first place. It is highly probable that when learners are equipped with the 2,000 high-frequency words, they will be able to manage about 81 percent of the running words in a text (Nation, 2001). Students who have mastered this list are better prepared to handle the demands of reading.

All frequency-based approaches to vocabulary learning concentrate upon the assumption that frequency is strongly related to the probability that a word will be known. i.e. if a word is highly frequent, then it has high chances to be encountered and learnt. Anderson and Freebody (1981) report that this hypothesis is supported by evidence from a number of L1 areas. Hazenberg and Hulstijn (1996) have studied the extent to which word frequency can be used to predict word knowledge. One might expect that the most frequent words are known by all students, whereas more infrequent words are known only by particular individuals, depending on variables such as hobbies, work and experiences. They concluded that the relationship between word frequency and word knowledge appears to depend on vocabulary size. When individuals have a relatively large vocabulary there is no significant relationship. But when individuals have a relatively small vocabulary, word frequency can be used as a criterion to predict word knowledge. It has thus been established that the further you move on from the high-frequency vocabulary, the less significant frequency becomes in an absolute sense. The selection of lower-frequency words depends increasingly on the learners’ specific needs and interests. This stresses once more the importance of the 3,000 word family (which corresponds more or less with the 5,000 most frequent words) as a learning objective for any language learner. Beyond the 5,000-word level, Meara (1996) argues that vocabulary size is less important than the way in which the vocabulary is organised in the learner’s mind. The hypothesis is that those with a more developed vocabulary...
knowledge have a more complex and highly structured network of associations among the words they know. To conclude this discussion, research on vocabulary acquisition has continuously stressed the idea that more frequent words in any given syllabus are likely to be known by students. The current study uses a test that is based on frequency counts. This gives us ideas about how syllabuses are built and how vocabulary is taught at Saudi schools.

III. Methods

A. Subjects
The participants of the study were randomly selected from three colleges: Medical and Engineering and Business Administration by applying Random Systematic Method. The sample size was 525 students taken from a pool of fresh students who admitted to the foundation program for the academic year 2011/2012. The sample represents two categories of students. The first category is medical-allied students (82) who join college with high scores in high secondary school certificate. The second one is engineering (208) which is next to medical. Engineering students are accepted with lower scores. The third portion (235) represents students who were admitted with the lowest scores. Medical sample is the least in number because their number, in general, is less than the two other colleges. It is believed that medical students are apt to have a profound grasp of vocabulary knowledge necessary to assimilate their courses and ensure their continuity in the studies although their levels also greatly vary from one to another. Placement tests often place classify them from elementary to intermediate levels.

B. Instrument
The vocabulary size test (Nation and Beglar, 2007) is used in this project. As described by the Authors, the test was developed to provide a reliable, accurate, and comprehensive measure of learner’s vocabulary size from the 1st 1000 to the 14th 1000 word families in English. The test uses multiple-choice format and “puts the tested word in a short non-defining context” (Nation and Beglar, ibid:10) (see appendix 1). The test items were taken from different sets of frequency lists basically based on the 10 million token spoken section of the British National Corpus (BNC). It samples from the most frequent 14,000 word families of English. All the items are designed to ‘measure receptive knowledge of vocabulary’ (Nation and Beglar, ibid: 11). The learners are given the word form and have to access the meaning of the word. Three distracters are given alongside with the correct answer. All the 14 levels of the test, according to Nation and Beglar (2007), are a way of organizing the items in the test so that the test begins with the items more likely to be known. It is not necessary to make learners sit all fourteen levels when the test is used with elementary or intermediate learners (Nation and Beglar, 2007). As stated in (3.1) above, the students’ level ranges between elementary to lower intermediate. When they join college, they are taught a pre-intermediate general English course. Only the first two 1000 levels were tested because, according to Nation and Beglar, the first and second 1000 sample only uses words from the first 1000 of West’s (1953) General Service List. It is assumed, here, that any National Syllabus includes, at least, the first 1000 words from that list at the levels that precede university education.

C. Procedure
The test is photocopied and given to class teachers. They distributed it to their students in normal English classes at the second week in first semester when students are still at the beginning of their university life. The 20-item-test is given 20 minutes to complete. In order to discourage students not to attempt to cheat, the instruction given was that the purpose of the test is only diagnostic and no marks or semester weight will be given to this test. All students completed the test in the given time and no one needed extra time.

D. Statistical Analysis
After receiving the exam papers from class teachers, they were scored. A mark was given to each level. So each individual subject is given two scores. The first score is out of 10 for the first 1000 level and the second one is also out of 10 for the second 1000 level. An SPSS (Statistical Package for Social Sciences) file was prepared to include two dependent variables. The first variable is the score in 1st 1000 level and the second is the score in the 2nd 1000 level. The only independent variable needed was college of student. Data was then entred in the programme. Basic statistical tests were then performed which include frequencies, central tendency (mean, median, mode), dispersion (standard deviations), reliability analysis and t-tests.

IV. Results and Discussion
The main research question of this study concerns the number of words (receptive vocabulary) that students might know by the end of secondary school. As described above, the vocabulary size test contains ten items at each 1000 word level. According to Nation and Beglar (2007), each item in the test represents 100 word families. If a test-taker got every item correct, then it is assumed that that person knows the word family the item represents. So if the subject achieves an average of 5 out of 10 then we can place him as knowing roughly 500 words in the tested level. The test has been validated in many occasions. It also appears to be reliable according to our results (alpha = .71)
although in other studies reliability alpha is higher (Nation and Beglar, 2007)

From the first glance at the data, it is noticeable that there are large differences between students’ scores in the two levels (SD = 2.3 in 1st 1000 and 2. in 2nd 1000). Variation in answers can be attributed to differences in proficiency levels as the sample contains some medical students whose achievement in high secondary certificate is high and positions are highly competitive. On the contrary, business administration students are weaker in achievement and generally admit with lower scores in high school certificate.

As shown in table (1), overall mean score in 1st 1000 level is 4.67 and 3.64 in the second 1000 level. Students of medical colleges, in general, scored a little high in both levels (1st 1000 mean = 5.98, SD=1.44 and in 2nd1000 mean = 4.51, SD=1.76) compared to engineering students (1st1000 mean = 5.78, SD=2.41 and 2nd1000 mean = 3.96, SD=2.23). Students of business administration scored the lowest (1st 1000 mean = 3.22, SD = 1.73 and 2nd 1000 mean = 3.05, SD=1.78). When we compare the achievement of the three groups, we can see statistically significant differences (t = .64, sign = 0.00>0.05, DF=524) in the first 1000 level. In the second 1000 level, the difference between the two means is also statistically significant (t=1.99, sign. =0.04<0.05, DF=524).

In general, the result can, thus, be interpreted that the students know an average of 467 words in the first 1000 level and 364 words in the second 100 level. Medical science students know, according to this measure, about 598 words from the first 1000 and 451 words in the second 1000 level. Engineering students, on the other hand, can be said to have 578 words from the first 1000 and 396 words from the second 1000. Vocabulary size of business administration students can be estimated by 322 in first 1000 and 305 in the second one. The sample is selected to represent students who achieved better than others in high secondary school certificate in all subjects. If medical students’ score in 1st 1000 most frequent words goes as high as 5.84, then what implications can we get from this result? Obviously the overall vocabulary stock is too little and far beyond the threshold of 2000 words. We can argue, here, that this causes students not to fully understand their instructors and their written texts.

Nation and Waring (1997) point out that the learners need to know the 3000 most frequent words of the language “These are an immediate high priority” (ibid:11). The rationale behind this 3000 milestone is that we need a vocabulary of about 3000 words which provides coverage of at least 95% of a text before we can efficiently learn from context with unsimplified text (Liu Na and Nation, 1985). In our case, English vocabulary size of Saudi post-secondary students, altogether, can be estimated to be as high as 831 (467 in 1st 1000+364 in 2nd 1000) out of 2000 most frequent words. This number is quite small for a student to proceed at university level where almost all subjects are taught through English as a medium of instruction with the exception of some university requirements like Arabic and Islamic Studies. Students, therefore, often find it extremely difficult to proceed with their studies and it is often the case that about 50% of medical-allied college students fail in subjects like biology and chemistry.

V. Conclusions

This paper does not claim that reasonable understanding of academic texts and lectures cannot occur if learners have not reached the lexical threshold of 2000 or 3000 words, or that the threshold will automatically yield good understanding. In our data only 1st 1000 and 2nd 1000 levels were tested. We can still question whether the Saudi national school syllabus for English is compiled according to frequency lists. Adopting lexically-pregnant syllabuses at schools, however, will probably help in the situation. When students are exposed to such texts, by time they may learn words and enlarge their stock. Some other levels need to be seen. Thus, it is recommended for future research to test, at least, up to the 3000 level.

As for the relationship between vocabulary size and text coverage, there are texts, e.g. graded readers where good percentage of coverage can be reached with a smaller vocabulary than suggested here. Conversely, in some texts with a large amount of technical and jargon vocabulary, like the case here in Jazan University, the above coverage may require the knowledge of more low frequency words than suggested in the paper.

In this study, we discussed the vocabulary size of Saudi students when they join university. We used Nation and Beglar’s (2007) frequency-based vocabulary sized test with only a little sample of students. The test needs to be repeated with larger samples and in different regions in the Kingdom in order to generalize results.

Our data confirmed that Saudi students lack in enough vocabulary stock when they start university. We hope that these results can provide useful insights for researchers, syllabus designers, material writers and language teachers.

References


