Materials Coherence in General and ESP Textbooks in PNU: A Vocabulary Level Analysis

Razieh Rabbani Yekta [*]

Assistant Professor of TEFL, Department of Linguistics and Foreign Languages, Payame Noor University, Iran

Bahare Keshti Arast

M.A Student in TEFL, Department of Foreign Languages, Islamic Azad University, Khorasgan Branch, Isfahan, Iran

Abstract

The present study is the analysis of General English, semi-ESP and ESP textbooks taught at Payame Noor University (PNU) for Psychology major. The purpose is to determine whether the lexical content of the semi-ESP book is appropriate in terms of the frequency range of the words to be used as the link between General English and ESP courses. The expected pattern of word frequency is that a high percentage of low frequency words will be indicated in the ESP textbook whereas high frequency words will be found mostly in General English; a high percentage of AWL words must also be observed in the semi-ESP textbook. To check the actual pattern in the textbooks against the expectations, the Lexical Frequency Profiles (LFPs) of all the reading texts of the textbooks were obtained by means of VocabProfile program. The analysis of Chi-square test revealed that in all three books, the largest percentage of words are from the first and second 1000 frequency ranges, while the expectation of a larger percentage of AWL words in Semi-ESP book was not met. In other frequency ranges, also, there were not any significant differences between the percentages of the words.

Keywords: ESP textbook, general English, lexical frequency profile, semi-ESP textbook

INTRODUCTION

In Iran's tertiary education system, there are three levels of English courses: English for General Purposes (EGP), English for Specific Purposes (ESP), and "semi-ESP" courses, which are meant to supply transition between the EGP and ESP courses. For the English curriculum to be coherent, therefore, the textbooks used in each level should be developed in a way to make the aforementioned transition smooth and easy for the students. When it comes to vocabulary coverage, this issue becomes more serious because vocabulary knowledge development, as one of the main behavioral objectives of the English textbooks, has been stated by both the students and teachers as one of the main problem in language learning. According to Nation (2001) even for gaining a

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reasonable comprehension and reasonable success at guessing from context "learners would need at least a 95 percent coverage of the running words in the input" (p. 114).

Unfortunately, research conducted in the area of materials evaluation (see for example: Chuju & Gunge, 2003) suggested that there is often "a large gap in vocabulary level between the EGP teaching materials and the ESP course books" used in language curricula. The neglected area, in fact, is the integration and consistency of vocabulary levels in these textbooks. The questions are whether the vocabulary coverage of semi-ESP textbook is suitable enough for the students to progress easily to the next stage; and whether semi-ESP textbooks can bridge the gap between EGP and ESP.

The researchers in the present project try to study such a potential gap in psychology major's language course materials including General English (Alimohammadi & khalili, 2008), English in Psychology I (Zare & Kordestani, 2010a), English in Psychology II (Zare & Kordestani, 2010b) for Payame Noor students from a frequency-based lexical analysis approach. These books are selected because of the common dissatisfaction among psychology students both at the undergraduate and graduate levels of the quality of their books and their low perception of their vocabulary knowledge. These negative attitudes have been explicitly observed in the results of their final exams when ESP courses are often introduced as the courses with the highest percentage of failure.

The research questions addressed in this study are as follows:

- Is there any significant difference between EGP, semi ESP and ESP textbooks regarding the extent to which they have made use of words from different frequency ranges?
- Does vocabulary coverage of the semi-ESP textbooks bridge the gap between EGP and ESP?

REVIEW OF THE LITERATURE

The role of vocabulary in ESP

Jiangwen and Binbin (2005) expressed that most of the second language learners know that the vocabulary learning is a significant component in the course of their learning. They also mentioned that a good mastery of vocabulary is essential for ESL/EFL learners, especially for those who learn for specific purposes or expect to operate at an advanced learning in English. "It is wise to direct vocabulary learning to more specialized areas when learners have mastered the 2000-3000 words of general usefulness in English" (Nation, 2001: 187).

The important factor underlying all attempts to teach academic English, however, was the fact that university students who require reading English texts in their fields of study have to expand their vocabulary knowledge in a much more efficient way than ordinary ESL/EFL learners (Cobb, 2007, as cited in Behrouzi & Taherian, 2012).

According to Fang Wu (2014), effective ESP vocabulary teaching plays a crucial role in successfully implementing ESP programs. Nonetheless, ESP vocabulary teaching has been a neglected area in ESP research during previous decades. Results of the study by Alber- Dewolf (1984) also indicated that ESP vocabulary learning should be prioritized when curriculum specialists are designing ESP instructional materials.

Vocabulary Level Assessment Techniques

As literature on corpus linguistics indicated, there are different ways for assessing the vocabulary levels of the texts. In 2004, for example, Chujo identified the EGP vocabulary by comparing the vocabulary levels of English texts and materials against the British National Corpus (BNC) which reflects the present day English usage. After that, Chuo and Hasegawa (cited in Chuju and Gunge, 2003) created a BNC High Frequency Word List for defining the comprehension coverage level for the targeted textbook vocabulary. The researchers, starting from the top of the list, compared the BNC HFWL to the English language materials and determined the number of the words which would be required for achieving 95 percent 'coverage' of the targeted texts.

In another technique, the degree of match between textbooks materials at different levels of proficiency and the vocabulary of the targeted text was calculated (see: Chujo & Takefuta, 1993). Sutarsyah, Kennedy and Nation (1994), also, calculated the percentage of the match between topic-related content words in the specialized corpora and the words existing in ESP materials.

Graduation of Vocabulary from EGP to Semi ESP to ESP

Not much research has already been conducted on ESP curricular coherence in terms of vocabulary knowledge development. In 2003, however, Chuju and Gunge designed a study to compare the vocabulary of representative texts and materials used by students in junior and senior high school (JSH), and EGP, semi-ESP, and ESP classes. As a first step, the vocabulary levels of the ESP articles were compared to those of the other English-language educational materials. Next, the degree to which EGP and semi-ESP textbooks cover the vocabulary presented within three selected ESP articles was measured. Finally, a supplemental word list was created that connects more closely the EGP and semi-ESP textbook vocabulary as a whole to that of the ESP articles.

The result of the study confirmed the existence of a large gap in vocabulary level between the EGP materials and the ESP articles used at the College of Industrial Technology. The study also revealed that the texts used in the semi-ESP classes that were intended to act as the bridge between different levels were not efficient in this regard. The solution proposed by Chuju and Gunge was the creation of a specialized ESP vocabulary list to act as the supplementary materials in semi-ESP classes for reducing the existing gap in vocabulary level between EGP teaching materials and ESP (2003).

METHODOLOGY

Regarding the paucity of research on the issue of curriculum coherence, present project tries to study the integration and consistency of vocabulary levels in psychology EGP, semi-ESP, and ESP textbooks from a corpus linguistic approach.

Instruments

An instrument which was used for performing the lexical analysis in this research is *VocabProfile (VP)* computer program (Laufer & Nation, 1995). This program "deconstructs any text or corpus into its lexical components" by their frequency zones (Cobb, 2003) through the following procedure: It takes a given text as the raw input (the text may be typed, pasted or scanned into the program), it checks the lexis of that given text against its accompanying frequency-based word lists, and finally, as output, it generates a lexical frequency profile (LFP) of that text on the basis of *word types*, *word tokens*, and *word families* contained in that text. The LFP generated as such, therefore, is a description of the lexical coverage of a text in terms of four frequency zones which are based on the four existing word lists in the program:

- The first 1,000 most frequent words in General English (GE),
- The second 1,000 most frequent words in GE (i.e. from 1,001 to 2,000),
- The Academic Word List (AWL),
- The words not included in any of the above lists (off-list); in the present study, they are addressed as the 'technical' words.

Textbooks

The textbooks analyzed in this study are: General English (Alimohammadi & khalili, 2008), English in Psychology I (Zare & Kordestani, 2010a), English in Psychology II (Zare & Kordestani, 2010b) published by Payame Noor. The General English book has 10 chapters; English in Psychology I has 15 chapters. Each chapter starts with a list of general words and key words followed by a text and a list of reading and vocabulary exercises including matching, fill in the blanks and multiple choice comprehension questions. English in Psychology II has the same structure with the only difference that it contains 17 chapters.

Procedure

At first, to obtain the measure of words frequency in each textbook, all the 'reading passages' as well as the exercises and lists of the words in the concerned books were submitted to the VP computer program, lesson by lesson. Before submission, however, the texts were undergone some modifications as to the deletion of all the proper nouns and numbers within the texts. The software, therefore, calculated the word lists' coverage over the targeted texts and exercises. In this way, after analysis, 3 Lexical Frequency Profiles (LFPs) were obtained for the 3 textbooks, the first containing 10 profiles, the second with 15 LFPs and the last with 17 for General English, English in Psychology I and English in Psychology II textbooks, respectively.

To answer the first research question, chi-square method in SPSS program was applied on the data so that the textbooks as well as the lessons were compared and contrasted.

As to the second research question, the percentage obtained for English in Psychology I textbook of AWL words was compared with the other two books to see whether the lexical coverage of this textbook was sufficient in order for the book to act as a semi-ESP course book.

RESULTS

The results of the frequency analysis for 3 textbooks are presented in table 1 below.

Table 1. Results of the vocabulary profiling for different textbooks compared with Chi-square test

	General English Book	English in Psychology (I)	English in Psychology (II)	Chi-square Test	
				X2	P
K1 (1st 1000)	68.5	72.3	60.4	1.28	0.7
K2 (2nd 1000)	16.2	14.1	11.5	0.53	0.88
AWL	1.2	0.8	6.2	7.3	0.02
Off-list	8.1	6.2	13.5	1.25	0.33

As it is clear, the difference between these three textbooks is not significant in the first two frequency ranges and also in the last one. Only at AWL level, chi-square analysis shows a significant difference ($P<0.05$) with English in Psychology I containing the lowest percentage of the AWL words and English in Psychology II having the highest percentage of AWL words. These results do not live up to expectations. If English in Psychology I was going to act as the bridge between General English and English in Psychology II, it would contain a higher level of AWL words. On the other hand, analysis for English in Psychology II shows that this textbook has the highest percentage of the off-list words among the three books. Although this result lives up to the expectations of a technical book, when it is compared with the LFP reported for the General English book, it can be observed that the graduation of the vocabulary levels expected from general to semi-, to technical is not considered in these textbooks.

DISCUSSION AND CONCLUSION

In this study, the expected pattern of frequency in this series of books is that a high percentage of low frequency words will be indicated in the technical course whereas high frequency words will be found mostly in General English; a high percentage of AWL words must also be observed in the textbook with a more semi-technical nature. The analysis of Chi-square test in the previous section revealed that in all three books, the largest percentage of words are from the first and second 1000 frequency range, while the expectation of a larger percentage of AWL words in English in Psychology I was not met, with only 0/8% of the words measured to be from the AWL. In other frequency

ranges, also, there was not any significant difference between the percentages of the words. This shows that the three textbooks in this study cannot help the students have a gradual progress along the vocabulary development continuum in ESP from common core to semi technical to technical. The answer to the first research question is, therefore, no.

As to the second research question, the result of vocabulary profiling showed that semi-technical textbook in this study was insufficient in terms of the percentage of AWL words. If this book is going to act as a bridge between General English and a more technical book, it should contain a much higher percentage of AWL words.

The results of this study can help the materials developers in PNU to focus more on the vocabulary coverage of the books in different levels of proficiency to choose those materials which while maintain the coherence of the language curriculum in non-English majors can help the students' progress smoothly from general to Semi-ESP to ESP levels based on the increase in their size of vocabulary and also the enhancement of the vocabulary knowledge in general.

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