On the importance of semi-technical vocabulary in ESP materials development

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ABSTRACT

This study is aimed at investigating the differential amount of importance which materials developers should attach to semi-technical, technical, and core vocabulary in ESP books. To do so, two major authentic introductory books prepared for the students of political science have been examined carefully in terms of their proportion of semi-technical, technical and core vocabulary. In order to examine the utility of books currently taught in the Iranian universities, two preparatory ESP books developed for the Persian students of political science were, also, scrutinized in terms of their proportion of semi-technical, technical, and core vocabulary. Put in another way, an attempt was made to investigate the degree of representativeness of ESP books in terms of the abovementioned types of vocabulary. After the word counts the authentic and ESP books were compared with each other. Results showed that the 40,000 words counted in the two authentic books were comprised of: 63% core vocabulary, 22% semi-technical vocabulary, and 15% technical vocabulary. The 40,000 words counted in the two preparatory ESP books were comprised of 56% core vocabulary, 33% semi-technical vocabulary, and 11% technical vocabulary. Results obtained from the frequency counts in this study lend support to the idea that technical vocabulary by virtue of its small proportion should not assume much import— if not ignored in its entirety. Notwithstanding, materials developers are suggested to place a higher priority on semi-technical, as this type of vocabulary is more frequent and *variable*.

Introduction

During the last decade or so the importance of vocabulary has been recognized by ELT researchers and teachers. This interest in the nature of vocabulary and the important role it plays in language learning and teaching is manifest in the host of research conducted in the area of vocabulary. For instance, Richards and Renandya (2002, p.255) have gone so far as to suggest that "vocabulary is a core component of language proficiency and provides much of the basis for how well learners speak, listen, read, and write." The area of English for Specific Purposes, which according to Hutchinson & Waters (1987) is not different from other forms of language teaching, has also emphasized the role of vocabulary in language learning. So, ESP researchers and practitioners have started to pay more attention to this component of language. In ESP, however, by virtue of its very specificity, research agenda differs to some extent. For example, in many ESP courses the amount of time available to practitioners and students is so limited; incidentally, ESP sponsors expect to receive feedback on students' improvements, hence the need to focus on *particular types* of vocabulary which encompasses those types identified in the process of 'needs analysis'. This being so, researchers tend to focus on the choice of vocabulary to be made by materials developers and practitioners. The choice of vocabulary to focus on, as Nation & Meara (2001) suggest, is a function of two major considerations, namely the needs of learners and the usefulness of the vocabulary items. Jordan (1996), too, argues that the question of *which* vocabulary to teach/learn is a crucial one, which should be addressed prior to any consideration vis-à-vis *how* to teach/learn vocabulary *effectively*.

In the ESP literature a distinction has been drawn amongst core vocabulary, technical vocabulary, and semi-technical vocabulary. The distinction, though not clear-cut and agreed-upon as such, is an important one. This perceived importance could be attributed to the fact that the distinction has the potential to yield, so to speak, compartmentalized categories into which typical vocabulary items fall. This is particularly important in addressing the question of *which* vocabulary to teach.

Generally speaking, *core vocabulary*, otherwise known as 'common core', refers to the 2000-3000 words that provide the basis of about 80 percent of the vocabulary likely to be encountered (Jordan, 1996). Core vocabulary, Henry Widdowson (1983, p.92) suggests, "[…] has a long history. In the extensive work carried out on word counts, which culminated in West's *General Service List of English Words* (West 1953), it was found that certain lexical items of high aggregate frequency also occurred across a wide range of texts […] 'common core' items are not schematically bound, and in consequence are subject to a wide range of interpretation". *Technical vocabulary* is largely of interest and use to people working in a specialized field. Nevertheless, as Dudley-Evans & St John (1996, p.80) suggest, "[…] the teaching of technical vocabulary is not the responsibility of EAP teachers and that priority should be given to the teaching of 'semi-technical' or 'core vocabulary'". Our major concern in ESP courses, as Dudley-Evans & St John (1996) state, is the so-called *semi-technical vocabulary*, which, of course, has opened up an *interesting* avenue of research. Interesting in the sense that semi-technical vocabulary by definition refers to "[…] a whole range

of items which are neither highly technical and specific to a certain field of knowledge nor obviously general in the sense of being everyday words which are not used in a distinctive way in specialized texts"(Baker, 1988, p.91). In fact, the current premium put on the role of semi-technical vocabulary in ESP courses is a function of the fact that comprehending specialized texts—no matter what the field may be—is not merely a matter of knowing the relevant terminology (Baker, 1988), for, according to Hutchinson & Waters (1980), "The language used in technical education is not, except for a few examples of terminology, subject specific nor even specific to technical communication. Everyday language is used."(Cited in Widdowson, 1983, p. 93). Thus, Semi-technical vocabulary in tandem with core vocabulary plays a significant role in understanding specialized texts. Semi-technical vocabulary, by its very nature, has appeared to be rather –to use Baker's (1988, p.91) terms—'elusive and confusing' for many practitioners. This confusion might stem from the fact that semi-technical vocabulary, in a way, belongs to both technical and core vocabulary. This article, as the below schematic diagram illustrates, suggests that semi-technical vocabulary is the category which shares the characteristics of both technical and core vocabulary.
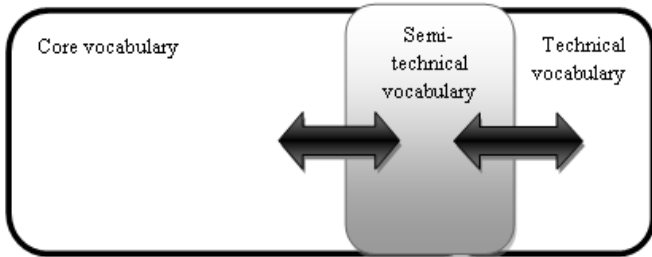

Figure 1: A proposed model illustrative of the distinction (or the relationship) amongst three categories of vocabulary ©

The double-headed arrows are indicative of the relative overlap amongst these three categories of vocabulary. Be saying so it is meant that there seems to be continuum of core, semi-technical, and technical vocabulary, and, that one hardly can draw a clear-cut line of distinction amongst these three categories. Conceiving of semi-technical vocabulary in this way highlights the consequentiality of this category even further.

Dudley-Evans & St John (1996) identify two general areas of semi-technical vocabulary which undergird the present study. The first area which they propose to be given priority consists of the general vocabulary that has a high frequency in a specific field such as *factor, method, function, occur, cycle, evaluative, relevant, important, interesting, advise, agree, confirm*, etc. The other area consists of general English words that have a specific meaning in certain disciplines such as *rule, force, run, lead,* etc. used in political science. This second category, Dudley-Evans & St John (1996) suggest, would be regarded as an aspect of technical vocabulary.

Having in mind the abovementioned points on the importance of semi-technical vocabulary, and based on Dudley-Evans & St John's categorization, the following research questions were addressed in this study:

1- What is the proportion of core, semi-technical, and technical vocabulary in two major authentic introductory books developed for international students of political science?

2- Are the preparatory ESP books developed for Iranian students of ESP representative of the two authentic Books in terms of the three major categories of vocabulary or not?

Method:

In order to answer the first question two major authentic introductory books for students of political science (recommended by a university professor in political science) were selected. Drawing on the works of Baker (1988), Dudley-Evans & St John (1996), and Chung & Nation (2004), the following table is proposed as a fairly comprehensive criterion for distinguishing amongst technical, semi-technical, and core vocabulary.

Technical vocabulary	Semi-technical vocabulary	Core vocabulary
-Technical vocabulary is subject related; - occurs in a specialist domain; - and is part of a system of subject knowledge	-General vocabulary that has a higher frequency in a specific field	-The 2000-3000 words that provide the basis of about 80 percent of the vocabulary likely to be encountered
-Technical terms should either only occur in a specialist area or occur with much greater frequency in that area than other areas	---	---
-General English words that have a specific meaning in certain disciplines	---	---

Table 1: Vocabulary categories and their characteristics ©

To obtain the proportion of core, technical, and semi-technical vocabulary a corpus of 40,000 words counted was built. And the counted words were categorized according to the above table.

To answer the second research question two major books developed for ESP students majoring in political science were selected. These two books, in essence, are aimed at preparing ESP students for reading and comprehending authentic books. Given the fact that in ESP courses, vocabulary plays a significant role, as far as reading comprehension is concerned, the researchers' preliminary hunch was that if these two ESP books are representative of the two authentic books in terms of the proportion of the three aforementioned types of vocabulary, they can, to a very large extent, prepare learners for a, so to speak, real-life experience with English language, i.e. reading and comprehending an authentic textbook. After doing the word counts the two books were compared to see whether there exists any significant difference between the two kinds of books or not.

Results:

The result of frequency counts is shown in the following table. The four books examined were relatively consistent in terms of the proportion of core, technical, and semi-technical vocabulary, that is different chapters of the books were not ordered according to difficulty level.

	Core vocabulary	Technical vocabulary	Semi-technical vocabulary	Total
ESP books	22365	4664	18780	40,000
Authentic books	25380	5912	12980	40,000

Table 2: Results of the word counts

The following pie chart illustrates the percentage of each category. As the pie chart well illustrates, core vocabulary constitutes a fairly high percentage (63%) of the vocabulary

counted in the two authentic books. Semi-technical vocabulary and technical vocabulary, however, comprise, accordingly, 22% and 15% of the 40,000 words counted in the two authentic books. A key, and of course logical, question might be raised at this juncture: Given the larger proportion of core vocabulary (63%) compared to semi-technical vocabulary (22%), why should we still put premium on semi-technical vocabulary? The answer to this question might be found in table 1. As it was mentioned in the table and elsewhere in the article, core vocabulary, by definition, refers to the 2000-3000 words that provide the basis of about 80 percent of the vocabulary likely to be encountered many of which being the ones language learners already know e.g. *and, as, one, well, above, here, the, or, for, number,* to name but a few. So, given the fact that teaching technical vocabulary is not in the province of ESP practitioners (Dudley-Evans & St John, 1996), it sounds quite rational to place a higher priority on semi-technical vocabulary which constitutes 22% of the total vocabulary.
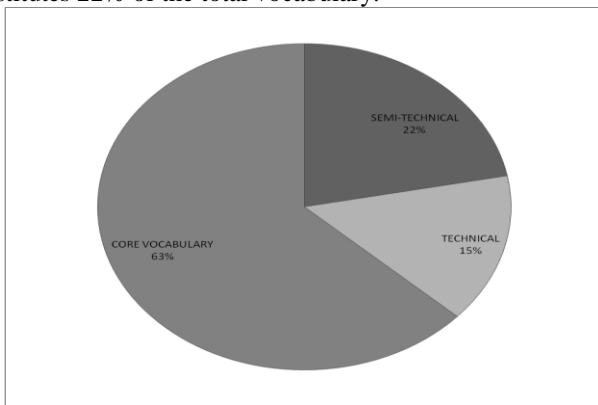

Figure 2: The pie chart illustrative of the percentage of the three categories in the authentic books, words counted=40,000

As it was mentioned earlier, the same process of word count was followed for the two ESP books. The below pie chart illustrates the proportion of three types of vocabulary in the ESP books.
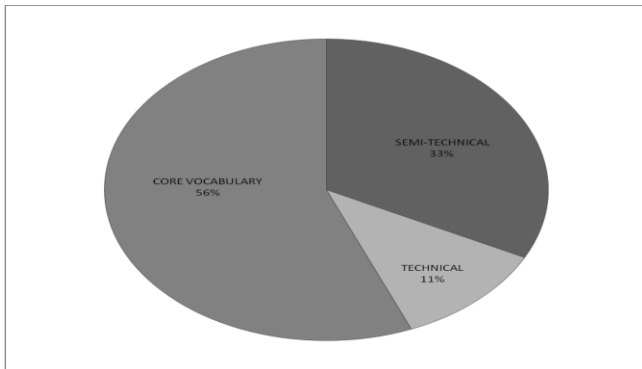

Figure 3: The pie chart illustrative of the percentage of the three categories in the ESP books, words counted=40,000

As it is obvious on the chart, in ESP books the proportion of core vocabulary is smaller compared to the authentic book, yet it has the higher percentage amongst the other two (56%). In an attempt to investigate into the representativeness of the ESP books in terms of the three categories of vocabulary a comparison is in order.
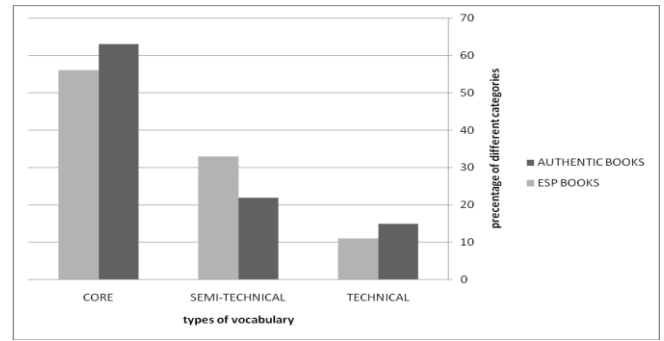

Figure 4: a comparison between ESP books and authentic books in terms of the proportion of three categories of vocabulary.

Figure 3 reveals that the differences between the two types of books, at least as far as percentages are concerned, are minimal.

One interesting observation is that the percentages of both core and technical vocabulary in authentic books exceed those in ESP books. The proportion of semi-technical vocabulary, however, is higher in ESP books than in authentic books. This observation, on the face of it, might indicate the misrepresentation of the ESP books, but it takes relatively little logical reasoning to conclude that, in actuality, this is to the best interest of ESP students. This argument is anchored by the notion that semi-technical vocabulary, as it was noted earlier, is the most important constituent part of the whole body of vocabulary which ESP students will want to learn.

The results need to be treated with some caution, of course. It is vitally important to point out that these charts might be, at first sight, misleading, as they are all, in one way or another, indicative of the fact that core vocabulary has the higher proportion amongst the other two types. One ought to hasten to add that, core vocabulary, notwithstanding its higher percentage, has the least *variability* i.e. it comprises *the 2000-3000 words that provide the basis of about 80 percent of the vocabulary likely to be encountered,* the word '*and*' being a case in point. On the other hand, semi-technical vocabulary, in spite of its lower percentage, appears to have the most variability, hence its consequentiality. So, the fact that in ESP books examined the proportion of semi-technical vocabulary is higher than that in the authentic books might be considered as a good measure taken— though inadvertently—by the materials developer to prepare ESP students for what is crucially important for them i.e. semi technical vocabulary. Directing ESP students towards their immediate needs is of paramount importance in any ESP course and something that all course designers and material developers strive for.

Discussion:

The purpose of this article is not to make value judgments about the quality or utility of the books examined. What is argued for in this article is merely anchored in the data collected and the table (of three types of vocabulary) presented earlier in the article. The article recognizes the fact that, in essence, there is no (or should not be a) prescribed statistic for the proportion of the three categories of vocabulary characterized in this article. Indeed, it might be much more pragmatic not to deal with this issue in a deterministic way. After all, obliging materials developers to follow a certain plan with prescribed *number* of vocabulary might be at best not feasible, at worst beyond the realm of possibility. Incidentally, contriving the text such that it includes more vocabulary of certain type, in all probability, distorts the authenticity of text. Nevertheless, materials

developers, having in mind the importance of semi-technical vocabulary, are recommended to enter the materials development arena with a disposition to include texts which allow ESP practitioners to find some more room for maneuver on semi-technical vocabulary, when/if necessary. Table 1 might be beneficial for that matter, as it provides a fairly clear characterization of the categories and makes every effort to keep them as distinct as possible.

The data collected in this study lend support to the utility of the two ESP books developed for the students of political science. For one thing, the total number of semi-technical vocabulary was significant in the ESP books and, of course, very much close to that of authentic books. This will, hopefully, serve two purposes: (a) maximizing ESP students' exposure to semi-technical vocabulary, and (b) highlighting the importance of this category of vocabulary for ESP students. This latter purpose is an important one in that it is in stark contrast to what the laymen *believes to be the case*. The common misconception prevalent amongst ESP students is that in order for one to master a particular specialized language she should, primarily and necessarily, focus on technical vocabulary. This is a myth and reflects a contrast between *objective* and *subjective* needs (Hutchinson & Waters, 1987). By emphasizing the role of semi-technical vocabulary we can, to some extent, dispel this myth. Equipping ESP learners with this knowledge will, for sure, facilitate the process of language leaning.

Conclusion:

In this article an attempt has been made to underscore the importance of semi-technical vocabulary in ESP courses. Today, it is widely acknowledged that vocabulary is one of the most important constituent parts of the language to be learned by ESP learners. However, as ESP courses have moved towards more specificity and have attempted to be increasingly responsive to the *immediate* needs of the learners and sponsors, researches,

too, have tried to fragment vocabulary even further and make it more tractable for ESP practitioners and learners. Given the existing overlap amongst the three categories, which was illustrated in the proposed model, the article proposed a table which might be beneficial in keeping different types of vocabulary as distinct as possible. This clear-cut distinction, if it ever occurs, will render the teaching and learning process way too easier. A propos of the issue of representativeness further research is in order. The present research, of course, at the outset of the study, for the sake of argument, narrowed down the notion of representativeness to the proportion of the three categories of vocabulary. Further research might be directed towards investigating the issue via a more thorough conceptualization of representativeness and authenticity. Another limitation of the present research is its relatively small-sized corpus which could be remedied in further research.

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