

Vocabulary Lists for EAP and Conversation Students

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Abstract

Despite the abundance of research investigating general and academic vocabularies and developing dozens of word lists, few studies have compared academic vocabulary with general service word lists such as conversation vocabulary. Many EAP researchers assume that university students need to know all the words in West's (1953) General Service List (GSL) as a prerequisite to academic words (e.g., Coxhead's, 2000) and teachers at language institutes recommend conversation students to learn words in Coxhead's Academic Word List (AWL) as a follow-up to the GSL. The present study compared the academic and conversation vocabularies by exploring frequency and coverage of words in academic and conversation corpora. The GSL and AWL words were investigated in a conversation corpus and an academic corpus, each containing around 12 million running words. The analysis revealed that 1200 GSL word families were highly frequent in both corpora and 645 GSL word families were highly frequent in the conversation corpus but of low frequency in the academic texts. Also, a new academic word list of 700 word families was developed, which proved to be much more rigorous than Coxhead's AWL. Further analysis indicated that the abovementioned 645 GSL words had a very low coverage of academic texts (0.7%), while they covered 4.05% of the conversation corpus. The new academic word list covered only 1.6% of the conversation corpus, whereas it had a high coverage of the academic texts (9.1%), much higher than that of the AWL (7.5%). The analysis of some other academic corpora revealed identical results.

Keywords: Academic vocabulary, AWL, Conversation vocabulary, Corpus analysis, GSL

Introduction

Vocabulary is the most important component of language learning and language use. McCarthy (1990) suggested that "it is the experience of most teachers that the single biggest component of any language course is vocabulary" (p. viii). The basic task of every language learner is to learn a great number of words in the target language. Vocabulary knowledge can also enhance other skills such as reading and academic success (Coxhead & Boutorwick, 2018; Uchihara & Hardada, 2018). According to Webb and Paribakht (2015) "Comprehension is likely to rise as the number of known words in a text increases" (p. 34). However, the number of words in every language, especially English, is very huge and beyond anybody's learning capacity. An educated English native speaker knows seventeen to twenty thousand word families, one third of English words (Goulden, Nation & Read, 1990; D'Anna, Zechmeister & Hall, 1991). Richards (2001) believes that "this is a much larger number of words that can be taught in a language course" (p. 5). Therefore, the words to be taught to second language learners must be selected prudently.

The interest in vocabulary research and instruction in early 20th century led to vocabulary control movement, which attempted to "use systematic criteria to select the most useful words for language learning" (Schmitt, 2000, p. 16). The most important product of vocabulary control movement was West's (1953) General Service List (GSL) of words, which contained 2000 word

families. The list has been the major source of vocabulary instruction and research since its development. And with the advent of English for Academic Purposes (EAP) in 1970s, there were further vocabulary research to figure out the crucial English words for academic purposes (Campion & Elley, 1971; Ghadessy, 1979; Lynn, 1973; Parninskas, 1972; Xue & Nation, 1984). These studies culminated in Coxhead's (2000) Academic Word List (AWL), a list of 570 academic word families worked out by exploring a 3.5-million-word corpus of academic texts.

Since the creation of the two lists, there have been some studies to evaluate them and figure out their coverage in other general and academic corpora (Chen & Ge, 2007; Cobb & Horst, 2004; Coxhead, 2000; Engels, 1968; Hirish & Nation, 1992; Hyland & Tse, 2007; Khani & Tazik, 2013; Moini & Islamizadeh, 2016; Nation & Hwang, 1995). However, few studies have delved into the two lists to find the GSL and AWL words which are most frequent in general and academic English. Most studies have evaluated the total coverage of the lists in their own corpora but they have not examined the frequency of every GSL and AWL word to find the truly general service and academic words. The present study attempted to investigate the frequency of GSL and AWL word families in some academic and conversation corpora in order to find the words which are highly frequent in academic and conversation English.

Moreover, many EAP practitioners and researchers assume that university students should know GSL words as a prerequisite to academic words (e.g., Coxhead, 2000). These researchers have developed their academic vocabulary on top of West's (1953) GSL. And conversation students at language institutes and English majors are proposed to study AWL words as a follow-up to the GSL words. However, many GSL words seem to be of very low frequency in most academic texts (e.g., *beak*, *chimney*, *deer*, *quarrel*, and *whistle*) and they are not worth to be invested on in EAP courses. And many academic words seem to be of low frequency in conversation English. The present study attempted to compare academic and conversation vocabularies in order to investigate whether university students need to know all GSL words and if conversation students are required to learn AWL words.

The researcher tried to find the GSL words which are highly frequent in and common to both academic and conversation texts, the GSL words which are highly frequent in conversation texts but of low frequency in academic texts and finally the coverage of these word lists in academic and conversation texts. To that end, the following research questions were put forth:

RQ1: Which GSL words are highly frequent in both academic and conversation texts?

RQ2: Which GSL words are exclusively highly frequent in conversation texts but less frequent in academic texts?

RQ3: What is the coverage of exclusively highly frequent conversation words in academic and conversation corpora?

RQ4: What is the coverage of academic words in conversation and academic texts?

Literature Review

West's (1953) General Service List (GSL) has been used since its creation by language teachers, materials developers and researchers as a list of basic words for general purposes such as language courses. However, the list has been criticized for its size (Engels, 1968), its age (Richards, 1974) and for not fully taking the concept of coverage into account (Nelson, 2000). Therefore, some scholars have suggested that the list needs to be revised (Hwang, 1989) and some researchers, working on larger and modern corpora, have developed new word lists for general purposes (Brezina & Gablasova, 2013; Browne, 2104).

Since 1970s, there have been a second group of studies attempting to develop a vocabulary list for academic purposes. Campion and Elley (1971) and Parninskas (1972)

developed their lists of academic words by analyzing corpora including texts from a range of disciplines. Lynn (1973) and Ghadessy (1979) developed their lists of academic vocabulary by gathering the words which university students learning English had written annotations above in their academic texts. Xue and Nations (1984) combined and edited these four word lists to create their University Word List (UWL), which consisted of 840 word families and covered around 8.5% of academic texts. The search for academic vocabulary climaxed with Coxhead's Academic Word List (AWL), which was developed by exploring a 3.5-million-word corpus of academic texts. It consisted of 570 word families and covered around 10% of the corpus. It has widely been used by materials developers, language teachers, researchers and learners (Coxhead, 2016).

However, recently there have been some criticisms against a monolithic academic vocabulary list and a trend to search for vocabulary lists for more specific academic disciplines (Chung, 2009; Esfandiari & Moein, 2015; Lei & Liu, 2016; Martinez, Beck & Panza, 2009; Moini & Islamizadeh, 2016; Mudraya, 2006; Munzo, 2015; Ward, 2009; Wang, Liang & Ge, 2008). Moreover, more recently there have been some studies trying to work out the most frequent technical words for some academic disciplines (Coxhead & Demecheleer, 2018; Hsu, 2018; Tongpoon-Patanasorn, 2018). Even, there have been much more specific studies. Abdollahpour and Gholami (2018) explored frequency, functions and structures of lexical bundles in medical abstracts.

Nevertheless, the GSL and AWL are still considered as the major general and academic vocabulary lists and many textbooks, graded readers and other instructional materials are developed based on them. Some studies have tried to evaluate the GSL (Engles, 1968; Hirsh, 1992; Hwang, 1989; Nation, 2004; Sutarsyah, 1993) and the AWL (Cobb & Horst, 2004; Li & Qian, 2010; Martinez et al, 2009; Vongpumivitch, Huang & Chang, 2008) by exploring them in their corpora. Nation and Hwang (1995) investigated the coverage of the GSL in the Lancaster-Oslo-Bergen (LOB) Corpus and indicated that the list covered 82.3% of the corpus. Coxhead (2000) explored the GSL words in her academic corpus and came up with a coverage of 76% for the list. The GSL covered 72.48% of a corpus of linguistic research articles in a study by Moini and Islamizadeh (2016). Hirish and Nation (1992) indicated that the GSL list covered 90-92% of a corpus of fiction texts. Also, some studies have investigated the coverage of the AWL in new corpora. Chen and Ge (2007) explored AWL in a medical corpus of articles and indicated that the list covered 10.07% of their 190-thousand-word corpus. The AWL covered 10.06% of a 3.3 million-word corpus in a study by Hyland and Tse (2007). Other studies have come up with identical coverage for the AWL in their corpora (Cobb & Horst, 2004; Khani & Tazik, 2013; Li & Qian, 2010; Vongpumivitch, et al, 2008).

Despite all these studies, which tried to develop or evaluate general service and academic vocabulary lists, there is a paucity of research attempting to work out general English words which are common in academic texts and compare academic and general English vocabularies.

Method

Employed Corpora

The corpora which were explored in the present research included a corpus of conversation English, a general academic corpus and several more specific academic corpora. Table 1 displays the information about the corpora and their size. The corpora were of sufficient size and included texts of various relevant genres and fields to let most frequent words appear in the corpora.

Table 1. *The Size of the Corpora Employed in the Study*

Corpus	Size
Conversation corpus	11,711,325
General academic corpus	12,202,487
Social sciences	3,736,103
Basic sciences	3,723,537
Medicine	3,639,318
Technology	3,723,063

The conversation corpus consisted of over 11.7 million running words and was composed of movie scripts downloaded from movie script websites on the internet. The websites included Daily Script (www.dailyscript.com), Simply Scripts (www.simplyscripts.com) and Screenplays for You (<https://sfy.ru>). The websites provide movie scripts in different genres produced by various movie directors. The conversation corpus was composed of 518 movie scripts, mainly produced since 1980s to the recent time and were of different genres ranging from action to romance. Every movie script consisted of 200,000 to 250,000 running words. The downloaded movie scripts were in HTML, PDF, TEXT, and WORD formats. However, the scripts in PDF and WORD formats were converted into TEXT format, as the employed software worked only with TEXT and HTML formats.

The general academic corpus was composed of academic texts across a range of academic disciplines, amounting to over 12 million running words. The academic corpus included the following sub-corpora: law, economy, education, philosophy, politics, psychology, and sociology (Social Sciences); math, physics, and chemistry (Basic Sciences); computer, electronics, mechanics, chemical engineering, and metallurgy (Technology); biology and medicine (Medical Sciences); and finally, agriculture, and geography (Earth Sciences). The sub-corpora were of almost the same size, each containing around 650, 000 tokens. The corpora included journal articles published in scholarly journals available on the internet. First, the journals for each academic sub-discipline were identified and then journal articles were downloaded from the sights. The articles in other formats were converted into TXT in order to be processed by the employed software programs (i.e., TextStat and TextAnalys). The references, appendices and information about the authors in the articles were deleted from the articles to include only article main scripts.

The specific academic corpora included social sciences, basic sciences, medicine, and technology corpora. These corpora were intended to further check the coverage of the AWL words, the newly developed academic words list (called Academic Vocabulary) and the GSL words which were of low frequency in academic texts. The size of these corpora was over 3.5 million running words. The sub-corpora included journal articles in the related fields which were downloaded from scholarly journals available on the internet. The journal articles in other formats were converted to TEXT format in order to be analysable by the employed software. And the references, appendices and information about the authors were deleted.

Text Analysis Software

To analyze the corpora some text analysis programs were employed. The first software program was TextStat 1.5, which analyzes a corpus of any size and lists the words in the corpus alongside information regarding their frequency and ratio. The words are listed in the first column and the frequency and ratio of each word are presented in the second and third columns.

The analysis output is available in MS Word and the researcher can save the file for further study. The other employed text analysis software was TextAnalys. The software adds up the frequencies of the member words of a word family to calculate the aggregate frequency of a word family. Also, it adds up the frequencies of the word families in a word list to calculate the total frequency of a word list in a corpus. Moreover, the software lists all the words outside a specified list according to their frequency and the researcher can identify high frequency words which are absent in the list. It lists the word families in the order of their aggregate frequency (i.e., the sum of the frequencies of the word members) and the more frequent and less frequent word families are easily distinguished. Table 2 displays an example output file of the TextAnalys software. The software was useful in finding GSL and AWL word families which were highly frequent or of less frequency in the corpora. The conversation and academic corpora were analyzed through the software and the frequency of the GSL and AWL words were worked out in the two corpora. Then the frequencies of the members of each word family were added up to figure out high frequency and low frequency GSL and AWL words.

Table 2. *An Example Output File of the TextAnalys Software*

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the:156838 --> 156838
this:12453 , these:8426 --> 20879
study:3738 , studies:4241 , studying:339 , studied:429 --> 8747
do:2855 , does:1328 , did:924 , doing, 341, done:358 --> 5806
.
.
beak:0 , beaks:0 --> 0
cottage:0 , cottages:0 --> 0
Total : 192270
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cognitive:4239
american:3124

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Selection Criteria: Frequency, Range and Coverage

The present study employed some specific criteria for selecting words to be included in the intended vocabulary lists, which included frequency, range and coverage. The first criterion was frequency. Richards and Schmidt (2010) define frequency as “the number of occurrences of a linguistic item in a text or corpus”. Range refers to “a measure of the distribution of linguistic items throughout a sample, which are generally expressed as a measure of the number of texts or samples in which a linguistic item occurs” (Richards & Schmidt, 2010, p. 479). The coverage of a word list in a corpus is the percentage of the tokens of the corpus which is accounted by the word list. It is calculated by dividing the aggregate frequency of the words in a list by the total number of the tokens in a corpus.

The frequency criterion was set on 100 times of occurrence. The word families which occurred 100 times or more in the employed corpora were selected to be included in the intended lists. Regarding the range of GSL words, the words were supposed to occur in both conversation and academic corpora with a frequency of 100 times or more to be included in the list of GSL words common to conversation and EAP English. The coverage of the word lists over the conversation and academic corpora was calculated by dividing the total frequency of the word

members of the word lists by the total number of tokens in the corpora. The coverage of the lists is presented as percentages of the running words covered by a word list.

Results

Results of Corpus Analysis

To compare academic and conversation vocabularies and find high frequency words in conversational English and university texts, the researcher investigated the GSL and AWL word families in the academic and conversation corpora.

First, to find the GSL words which are highly frequent in and common to conversation and academic English, the researcher worked out the frequency of the GSL word families in the two corpora. The frequencies of the members of each word family were added up to reveal the aggregate frequency of each word family. The word families which had a total frequency of 100 or above in each corpus were identified and considered as the common core vocabulary for conversation and academic English. There were 1196 GSL word families which met the criterion and occurred 100 or more times in each corpus. Six GSL word families had a frequency of 99 in the academic corpus and a frequency of over 100 times in the conversation corpus, but in order to have a round number of words common to conversation and academic English, these word families were included in the list. Therefore, 1200 GSL word families were considered as common core vocabulary for the two areas of language uses, that is, conversation and academic English. The shared vocabulary included structure words such as *to*, *of*, *with*, *however* and general English words commonly employed in most language use situations such as *accept*, *damage*, *large*, *prevent*. Thus, the answer to the first research question (Which GSL words are highly frequent in both conversation and academic texts?) is 1200 GSL word families are highly frequent in and common to academic and conversation English. The base words of these word families are presented in Appendix A.

In order to find the answer to the second research question and work out the words which are commonly used in conversational English but are of less frequency in academic English, the GSL words were investigated in the two corpora. The GSL word families whose total frequency was below 100 times in the general academic corpus were identified and recorded. Eight hundred and six GSL word families occurred less than 100 times in the academic corpus. Then the frequency of these word families was figured out in the conversation corpus. The majority of these words had a frequency of 100 or above in the conversation corpus. In fact, 645 GSL word families occurred 100 times or more in the conversation corpus but less than 100 times in the general academic corpus. These word families were considered as exclusively conversation vocabulary. The base words of these word families are presented in Appendix B. They mainly include words which are used in specific language use areas such as romance and household. Table 3 displays some examples of the GSL words which were highly frequent in the conversation corpus but of low frequency in the academic corpus. As it is evident, most of them are not expected to occur frequently in academic texts. The words *kitchen*, *bottle*, *pocket*, *shirt* and *knife* are commonly used in conversation but less commonly used in academic texts. To sum up, 1200 GSL word families were highly frequent in and common to conversation and academic English, 645 GSL word families occurred frequently in conversation English but were of less frequency in academic texts and 155 GSL word families were of less frequency in both academic and conversational English. Therefore, the answer to the second research question (Which GSL words are highly frequent in conversation texts but less frequent in academic texts?) was the 645 GSL word families which occurred 100 times or more in the conversation corpus but was of less frequency in the academic corpus. They were considered as exclusively conversation vocabulary.

Table 3. *Frequency of some GSL Words in Conversation and Academic Corpora*

Word	Conversation corpus	Academic corpus
Kiss	3712	32
Kitchen	3370	32
Desk	3623	27
Shoulder	2759	82
Tear	2278	47
Pocket	1779	82
Bottle	1667	50
Lady	1663	52
Shirt	1567	3
Knife	1363	53

Subsequently, to compute the coverage of exclusively conversation vocabulary in academic and conversation English and answer the third research question (What is the coverage of exclusively highly frequent conversation words in academic and conversation corpora?), the researcher investigated the words in the two corpora. The exclusively conversation vocabulary covered 4.05% of the running words in the conversation corpus, while it covered only 0.7% of the academic corpus. That is, out of every 100 words in the conversation corpus around 4 four words were from the list of exclusively conversation vocabulary and in the academic corpus out of every 100 words, less than one word was from the list of exclusively conversation vocabulary. Then the coverage of the word list was worked out in some more specific academic corpora. Table 4 displays the coverage of the list in the additional academic corpora. As the table shows, the exclusively conversation vocabulary covered .44% to 1.95% of the more specific corpora. On the average, it covered less than one percent (i.e., .98%) of the more specific corpora.

Table 4. *Coverage of the Exclusively Conversation Vocabulary in Academic Corpora*

Word List	Basic Sciences	Social Sciences	Biology	Medicine	Technology
Exclusively Conversation Vocabulary	0.44%	1.95%	1.12%	0.87%	0.54%

Finally, to answer the fourth research question (What is the coverage of academic words in conversation and academic texts?), the researcher investigated the academic words in the conversation and academic corpora. First, as Coxhead's AWL has been criticized for being biased against some disciplines such as biology and medicine and favoring certain academic fields such as economy and law, a new academic vocabulary list (to be called Academic Vocabulary) was developed. The AWL word families were investigated in the academic corpus to find the AWL words which were less frequently used in academic texts and were erroneously placed in the AWL list. Research has revealed that AWL is not a truly general academic word list and some AWL words are included in the list due to the large size of sub-corpora belonging to specific fields. Moreover, the academic corpus was analyzed to find the words which were highly

frequent in the academic texts but were absent in the AWL list due to the absence or small size of the sub-corpora belonging to specific academic disciplines such as biology. The investigation of the AWL words in the academic corpus revealed that 70 AWL word families were less frequent in the corpus (i.e., they occurred less than 100 times in the general academic corpus) and they were excluded from the new academic word list.

Furthermore, the analysis of the academic corpus revealed 292 general academic words which were highly frequent in the corpus and occurred more than 100 times in the general academic corpus but were absent in Coxhead's (2000) list. The second criterion to select the word families to be added to the new academic word list was range, i.e., the occurrence of the words with a frequency of ten times or more in at least 15 out of the 19 sub-corpora in the general academic corpora. There were 198 word families which occurred more than 100 times in the corpus and in at least 15 sub-corpora. Two words occurred in less than 15 sub-corpora but were added to the list in order to have a round number of words in the list. In addition, the words were checked in technical dictionaries to verify that they were not technical words of any specific academic discipline. Therefore, the new academic vocabulary list included 700 academic words. Table 5 displays some example words from the excluded 70 AWL words and some instances of the added 200 academic words. As the list indicates, the excluded AWL words are mainly technical words of law and economy and they were included in the AWL due to the large size of law and economy sub-corpora in Coxhead's corpus. The list of added academic words reveals that some academic words are absent in the AWL due to underrepresentation of some academic disciplines such as technology and medicine. The base words of the newly developed Academic Vocabulary including 700 academic word families (i.e., the 500 high frequency AWL word families and 200 newly identified academic word families) are presented in Appendix C.

Table 5. *Example Words from the Excluded AWL Words and Added Academic Words*

Excluded AWL words	Added academic words
amendment	absorb
clause	accomplish
currency	blend
deduce	deposit
estate	fluid
integrity	infect
levy	launch
ordination	pollute
subordination	resist
subsidy	verify

Then the coverage of the newly developed academic vocabulary list (i.e., Academic Vocabulary) and Coxhead's AWL in the conversation and academic corpora was calculated. Table 6 displays the coverage of the two word lists over the conversation and academic corpora. As the table indicates, the Academic Vocabulary covered only 1.6% of the running words in the conversation corpus but 9.1% of the academic corpus. Coxhead's AWL, too, had a low coverage of 1.2% in the conversation corpus but high coverage of 7.5% in the academic corpus.

Table 6. *Coverage of the Academic Word Lists in Conversation and Academic Corpora*

Word Lists	Conversation Corpus	Academic Corpus
Academic Vocabulary	1.6%	9.1%
Coxhead's AWL	1.2%	7.5%

Then the coverage of the two lists were checked in the more specific academic corpora, whose information is presented in Table 7. On the average, the Academic Vocabulary covered 12.76% of the more specific academic corpora and the AWL covered 9.84% of the corpora. The Academic Vocabulary had a higher coverage than the AWL on the average and in each academic discipline and this suggests that it is a better choice to be employed in the development of academic materials and to be presented to university students.

Table 7. *Coverage of the Academic Word Lists in the more Specific Academic Corpora*

Word Lists	Basic Sciences	Social Sciences	Biology	Medicine	Technology
Academic Vocabulary	11.7%	10%	14.2%	13.8%	14.0%
Coxhead's AWL	8.3%	8.9%	10.4%	9.4%	11.9%

Discussion

The analysis of the word lists and corpora indicated that there are around 1200 GSL word families which are commonly used in both academic and conversation English. In fact, the results indicated that the two areas of language use share 60% of their most frequent words (i.e., 1200 words out the most frequent 2000 words). Moreover, the study prepared a list of GSL words which occur frequently in academic texts and EAP students commonly encounter them in their educational texts. University students will need to learn these words as a prerequisite to academic words as they need to know their meanings to be able to read their academic texts. This finding is in line with studies which revealed that around half of GSL words are highly frequent in non-fiction and scientific texts. Nation and Hwang (1995) compared the GSL with the list of words extracted from two more modern corpora, namely the Brown Corpus and the LOB Corpus, and revealed that the two lists shared 1331 word families. In a study by Engels (1968), the second 1000 GSL words covered only 4.7% of non-fiction texts.

The second finding of the present study was that there were around 800 GSL word families which are of low frequency in academic texts and university students are not expected to encounter them frequently in their academic texts. In fact, it was shown that not all GSL words are commonly used in academic texts and EAP students do not need to learn all GSL words. Also, the results revealed that there are 645 GSL word families which are highly frequent in conversation English but of low frequency in academic texts. Therefore, according to the findings, 1845 GSL words are highly frequent in conversation texts, while only 1200 GSL words are commonly used in academic texts. The above-mentioned list of 645 GSL words covered 4.05% of the tokens in the conversation corpus but only 1.6% of the academic corpus. The list had low coverage in more specific academic corpora too. The findings are in line with the studies

which revealed that the second half of the GSL word families do not occur frequently in scientific and non-fiction texts (Engels, 1968; Moini & Islamizadeh, 2016; Nation, 2004; Nation & Hwang, 1995). In Moini & Islamizadeh's study, 1342 GSL word families did not have the required frequency to be included in their list of academic words for linguistics. Nation (2004) indicated that the GSL covered 89.6% of the running words in a spoken corpus, while it covered only 75.5% of an academic corpus.

The focus of EAP courses and materials must be general words which are truly common in academic texts. Many researchers have developed their academic vocabulary on top of the GSL or other lists of common general English words (Coxhead, 2000) but the results of the present study revealed that many general English words are not frequently used in academic texts. There also have been some researchers who created their academic word lists without taking a general service list for granted (Mudraya, 2006; Martinez et al, 2009; Valipoori & Nassaji, 2013; Ward, 2009; Yang, 2014). Ward (1999) criticized starting the development of academic word lists with a base general service list and created his engineering word list without such general English vocabulary. The present study revealed that not all GSL words are highly frequent in academic texts and it suggests that only highly frequent general English words must be presented to EAP students as they do not have sufficient time to learn so many general English words which might not have a beneficial return for their great endeavour.

The analysis of the academic word lists in conversation and academic corpora revealed that academic words have a high coverage in academic texts but a low coverage in conversation texts. This indicates that there are some academic words which are frequently used in academic texts but less frequently in non-academic texts. The finding suggests that only EAP students and not students of conversation courses are required to master academic words as these words are not expected to be frequently encountered in everyday conversation. This finding confirms previous studies which indicated that academic words are frequently used in academic texts but are rarely used in other text types. Xue and Nation's (1984) University Word List covered 8.5% of academic texts, while it covered only 1.7% of fiction texts. Coxhead's Academic Word List covered 9% to 12% of academic texts (Chen & Ge, 2007; Coxhead's, 2000; Hyland & Tse, 2007; Khani & Tazik, 2013; Li & Qian, 2010; Valipour & Nassaji, 2013; Wang et al, 2008), but it covered only 1.7% of a corpus of fiction texts (Coxhead, 2000), and 3.9% of tokens in newspaper texts (Coxhead & Nation, 2001). Gardner and Davies' (2013) Academic Vocabulary List (AVL) covered over 13.7% of academic texts in British National Corpus (BNC) and Corpus of Contemporary American English (COCA), while it covered only 3.4% of fiction texts in both corpora. The study by Paribakht and Webb (2016) indicated that AWL coverage in the passages of 12 versions of an English proficiency test used for admission purposes at Canadian universities was consistently present and substantial. Academic words have even been shown to be less frequently used in spoken academic texts. The AWL covered only 2.4% of the running words in a corpus of spoken academic English, consisting of presentations on technical topics given by a group of Swedish students (Hinks, 2003). Thompson (2006) found that 340 AWL word families occurred less than once in every two university lectures at undergraduate and post graduate levels. These studies indicate that academic vocabulary is specific to academic texts and must be focused only in EAP courses and instructional materials.

Conclusions

The results suggest that courses and instructional materials aiming at teaching English for academic purposes must not invest on many GSL words as they are rarely used in academic texts. Instead, they can focus on academic words which can more effectively benefit EAP students.

Moreover, most EAP courses are short and cannot present too many words and university students do not have sufficient time to learn a huge number of words. Unlike what some vocabulary researchers assume, university students do not need to acquire all GSL words. Students must focus their attention on general words that occur most frequently in academic texts. The present study worked out the 1200 GSL words which occur commonly in academic disciplines. Together with the 700 academic word families, it makes a list of 1900 word families which occur most frequently in academic texts. The list is much shorter than the combination of GSL plus AWL (2570 word families) but has a higher coverage of academic texts. These words must be explicitly taught to EAP students as incidental vocabulary learning is slow and unpredictable (Paribakht & Wesche, 1997).

The findings of the present study can be beneficial for language teachers, materials developers and learners. EAP teachers and materials developers can take advantage of the provided list and present them in their EAP textbooks and materials. Students can review the list to learn the general and academic English words that they do not know but are frequently used in academic texts. On the other hand, the results revealed that most academic words occur less frequently in conversation texts. The academic word list covered only 1.8% of the running words in the conversation texts. This suggests that conversation courses must not focus on academic words as they are not commonly used in everyday conversation. Focusing on more everyday conversation words will benefit students in conversation courses more. The results of the present study revealed that the majority of GSL words were highly frequent in conversation texts and all GSL words are suggested to be presented at conversation courses. Even a newer conversation vocabulary can be worked out by analysing conversation texts like movie scripts, recorded everyday conversations and available spoken corpora.

Like all research studies the present research had some limitations, which interested researchers can remove through further research. First, the present study was limited to movie scripts, further research can investigate other conversation texts such as transcribed spoken dialogues. Moreover, researchers can explore and identify most frequent multiword units in academic and conversation English. Interested researchers can also identify most frequent grammatical structures in academic and conversation English. Finally other linguistic features, such as discourse markers, can be investigated in academic and conversation corpora.

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Appendices

Appendix A: Base words of the 1200 word families common to conversation and academic English

bad	amount	a
balance	an	able
ball	ancient	about
band	and	above
bank	angle	absence
bar	animal	accept
bargain	another	accident
base	answer	accord
basin	anxiety	account
bay	any	across
be	apart	act
beam	appear	actual
bean	apply	add
bear	appoint	address
because	approve	admit
become	April	adopt
bed	arch	advance
before	argue	advantage
begin	arise	advertise
behave	arm	advice
behind	army	affair
being	around	afford
believe	arrange	after
belong	arrive	again
below	arrow	against
bend	art	age
beside	article	agent
best	artificial	ago
better	as	agree
between	ask	agriculture
beyond	association	aim
big	at	air
bind	attack	all
birth	attempt	allow
bit	attend	almost
bite	attract	alone
black	august	along
blade	average	already
blind	avoid	also
block	away	although
blood	axe	always
blue	back	among

content	chalk	board
continue	chance	body
control	change	bone
convenience	character	book
cook	charge	border
copper	check	born
copy	chief	both
corner	child	bottom
correct	choose	bound
cost	church	boundary
council	circle	box
count	city	boy
country	class	brain
course	clay	branch
court	clear	break
cover	cliff	bridge
crack	clock	bring
crime	close	broad
critic	cloud	brown
crop	coal	build
cross	coarse	bundle
cultivate	coast	burn
cure	coffee	bus
current	cold	business
curve	collect	but
custom	college	buy
cut	colony	by
damage	combine	calculate
danger	come	call
dark	command	camera
date	commerce	camp
day	committee	can
dead	common	canal
deal	company	cape
decay	compare	capital
December	compete	car
decide	complete	care
declare	complicated	carry
decrease	compose	case
deep	concern	cause
defeat	condition	cave
defend	confidence	cent
degree	confuse	center
delay	connect	century
deliver	conscious	certain
demand	consider	chain
department	contain	chair

fail	eight	depend
fair	either	describe
faith	elastic	desire
fall	elect	destroy
false	electricity	detail
familiar	else	determine
family	employ	develop
fan	empty	die
far	encourage	difference
farm	end	difficult
fashion	engine	dip
fast	English	direct
fat	enjoy	discipline
father	enough	discover
fault	enter	discuss
fear	entire	disease
February	equal	distance
feed	escape	distinguish
feel	especial	district
fellow	essence	disturb
female	even	divide
few	event	do
field	ever	dollar
figure	every	door
fill	exact	dot
film	examination	double
find	example	doubt
fine	excellent	down
finish	except	draw
fire	excess	drive
firm	excite	drop
first	exercise	dry
fish	exist	due
fit	expect	during
five	expense	each
fix	experience	early
flame	experiment	earn
flat	explain	earth
flood	explode	ease
floor	explore	east
flow	express	easy
fly	extend	eat
fold	extra	edge
follow	extreme	educate
food	eye	effect
foot	face	effort
for	fact	egg

in	hall	force
inch	hand	foreign
include	handle	forest
increase	happen	form
indeed	hard	formal
independent	harm	former
industry	harvest	forward
influence	have	four
inform	he	frame
insect	head	free
inside	health	frequency
instead	hear	frequent
instrument	heart	fresh
insure	heat	friend
intend	heavy	from
interest	height	front
interfere	help	fruit
international	here	full
into	high	further
introduce	hill	future
invent	hire	gain
iron	his	game
island	history	gap
it	hold	gas
its	hole	gate
January	home	gather
jaw	hope	gay
join	horizon	general
joint	hospital	get
judge	host	give
July	hot	glass
June	hour	go
just	house	god
keep	how	gold
key	human	good
kill	hundred	govern
kind	hunt	gradual
king	I	grain
know	ice	grass
lack	idea	great
lake	ideal	green
land	if	grind
language	imagine	ground
large	immediate	group
last	important	grow
late	impossible	guide
latter	improve	half

motion	map	law
motor	march	lay
mountain	mark	lead
mouse	market	leaf
mouth	mass	learn
move	master	least
much	match	leave
mud	material	left
multiply	matter	length
must	may	less
my	mean	lesson
name	measure	let
narrow	mechanic	letter
nation	medicine	level
native	meet	library
nature	melt	lie
near	member	life
necessary	memory	light
need	mention	like
neglect	mere	likely
neither	message	limit
net	metal	line
never	middle	liquid
new	might	list
next	mild	literature
night	mile	little
nine	mill	live
nineteen	mind	load
no	mine	local
noise	minister	lock
none	minute	log
nor	miss	long
north	mistake	look
not	mix	loose
note	model	lose
nothing	moderate	loss
notice	modern	lot
November	moment	love
now	money	low
number	month	lung
obey	moon	machine
object	moral	main
observe	more	make
occasion	moreover	male
ocean	morning	man
October	most	manage
of	mother	many

probable	pay	off
problem	people	offer
produce	per	office
profession	perfect	often
profit	perform	oil
progress	perhaps	old
promise	permanent	on
pronounce	permit	once
proof	person	one
proper	photograph	only
property	pick	onto
propose	picture	open
protect	piece	operation
prove	pin	opinion
provide	pipe	opportunity
public	place	opposite
pull	plain	or
pump	plan	order
punish	plant	ordinary
pure	plate	organ
purpose	play	organization
push	please	organize
put	point	origin
qualify	political	other
quality	pool	otherwise
quantity	poor	our
question	popular	out
quick	population	over
race	position	overcome
radio	possess	owe
rain	possible	own
raise	post	pack
rank	poverty	page
rapid	power	pain
rare	practical	pair
rat	practice	paper
rate	prefer	parent
rather	prepare	park
ray	present	part
reach	preserve	particular
read	president	party
ready	press	pass
real	prevent	passage
reason	price	past
receive	print	path
recent	prison	patient
recognize	private	pattern

she	round	recommend
sheet	row	record
shell	rule	red
ship	run	reduce
shock	safe	refer
shoot	sale	reflect
shore	salt	refuse
short	same	regard
should	sample	regular
show	sand	relation
shower	satisfy	relieve
side	save	religion
sign	say	remain
signal	scale	remark
silver	scarce	remember
simple	scatter	repair
since	scene	repeat
single	school	replace
sit	science	report
situation	screen	represent
six	sea	reproduce
size	search	republic
skill	season	request
skin	second	reserve
slide	secret	resist
slight	see	respect
slip	seed	responsible
slope	seem	rest
slow	self	result
small	sell	return
smooth	send	review
so	sense	reward
society	sentence	rice
soft	separate	rich
soil	September	right
solid	serious	ring
solve	serve	rise
some	set	risk
son	settle	river
soon	seven	road
sort	several	rock
sound	severe	rod
south	shall	roll
space	shallow	roof
speak	shape	room
special	share	root
speed	sharp	rough

those	sudden	spend
though	suffer	spin
thought	sugar	spirit
thousand	suggest	split
threaten	suit	spot
three	summer	spread
through	sun	spring
thus	supply	square
tide	support	staff
tie	suppose	stage
tight	sure	stain
time	surface	stand
tin	surprise	standard
tip	surround	star
title	suspect	start
to	sweet	state
tobacco	swim	station
today	system	stay
together	table	steady
too	tail	steam
tool	take	steel
tooth	talk	stem
top	taste	step
total	tax	stiff
touch	teach	still
toward	tell	stock
town	temperature	stone
track	ten	stop
trade	tend	store
train	term	storm
translate	test	story
trap	than	straight
travel	thank	stream
treat	that	street
tree	the	strength
trial	their	stretch
trouble	then	strict
true	there	strike
trust	therefore	string
try	these	strong
tube	they	struggle
turn	thick 2	study
twenty	thin	subject
two	thing	substance
type	think	succeed
under	this	success
understand	thorough	such

wind	waste	union
window	water	universe
winter	wave	university
wire	way	unless
wise	we	until 2
wish	weak	up
with	wealth	upon
within	weapon	upper
without	weather	upward
woman	week	use
wood	weigh	usual
word	well	valley
work	west	value
world	what	various
worth	wheat	very
would	when	vessel
wrap	where	view
write	whether	village
wrong	which	violent
year	while	visit
yellow	white	vote
yes	who	voyage
yet	whole	wage
yield	whose	wait
you	why	walk
young	wide	wall
zero	wild	want
	will	war
	win	wash

Appendix B: Base words of 645 word families exclusively highly frequent in conversation English

autumn	amongst	absolutely
avenue	amuse	accuse
awake	anger	admire
awkward	angry	adventure
baby	annoy	afraid
bag	apologize	afternoon
bake	applaud	ahead
barber	apple	airplane
bare	arrest	alike
bargain	ash	alive
barrel	aside	aloud
basket	astonish	altogether
bath	audience	ambition

crowd	carriage	battle
crown	cart	beast
cruel	castle	beat
crush	cat	beauty
cry	catch	beg
cup	cattle	bell
curious	caution	belt
curl	ceremony	beneath
curtain	cheap	berry
cushion	cheat	bicycle
damp	cheese	bill
dance	chest	bird
dare	chicken	bitter
daughter	chimney	blame
deaf	Christmas	bless
dear	clean	blow
debt	clerk	boast
deceive	clever	boat
deed	climb	boil
deer	cloth	bold
delicate	club	borrow
delight	coat	bottle
descend	coin	bow
desert	collar	bowl
deserve	color	brass
desk	comb	brave
despair	comfort	bread
devil	companion	breath
diamond	complain	bribe
dictionary	confess	brick
dig	conquer	bright
dinner	conscience	brother
dirt	conversation	brush
disappoint	cool	bucket
dish	cork	bunch
dismiss	corn	burst
ditch	cottage	bury
dive	cotton	bush
doctor	cough	busy
dog	courage	butter
donkey	cousin	button
dozen	cow	cage
drag	coward	cake
dream	crash	calm
dress	cream	cap
drink	creature	captain
drown	creep	card

heap	forbid	drum
heaven	forget	duck
hesitate	fork	dull
hide	fortune	dust
hit	forty	duty
holiday	fourteen	eager
hollow	freeze	ear
holy	frequent	earnest
honest	Friday	eighteen
honor	fright	eighty
hook	fry	elephant
horse	fun	eleven
hotel	funeral	empire
humble	fur	enemy
hunger	furnish	entertain
hurry	gallon	entrance
hurt	garage	envelope
husband	garden	envy
hut	generous	evening
idle	gentle	evil
ill	girl	excuse
imitate	glory	extraordinary
immense	goat	factory
ink	grace	fade
inquire	grand	faint
instant	grateful	famous
insult	grave	fancy
interrupt	grease	fate
invite	greed	favor
inward	grey	feast
joke	guard	feather
journey	guess	fence
joy	guest	fever
juice	guilty	fierce
jump	gun	fifteen
kick	habit	fifty
kiss	hair	fight
kitchen	hammer	finger
knee	hang	flag
knife	happy	flash
knock	harbor	flavor
knot	hardly	flesh
ladder	haste	float
lady	hat	flour
lamp	hate	flower
laugh	hay	fond
lazy	heal	fool

pretend	noble	lean
pretty	nonsense	leather
pride	noon	leg
priest	nose	lend
prize	nowhere	liberty
procession	nurse	lid
program	nut	lift
prompt	oar	limb
proud	offend	lip
pupil	omit	listen
purple	orange	loaf
puzzle	ought	loan
quarrel	ounce	lonely
quart	pad	lord
quarter	paint	loud
queen	pale	loyal
quiet	pan	luck
rabbit	parcel	lump
rail	paste	lunch
rake	pause	mad
raw	peace	mail
refresh	pearl	manners
regret	peculiar	marry
rejoice	pen	mat
remind	pencil	meal
rent	pet	meanwhile
reply	pig	meat
reputation	pigeon	merchant
rescue	pile	mercy
resign	pinch	milk
restaurant	pink	miserable
retire	plaster	modest
revenge	plenty	Monday
ribbon	pocket	monkey
rid	poet	murder
ride	poison	music
ripe	polish	mystery
rival	polite	nail
roar	postpone	neat
roast	pot	neck
rob	pound	needle
rope	pour	neighbor
rot	powder	nephew
royal	praise	nest
rub	pray	nice
rubber	preach	niece
rude	precious	ninety

sympathy	slave	ruin
tailor	sleep	rush
tall	smell	rust
tap	smile	sacred
tea	smoke	sacrifice
tear	snake	sad
telegraph	snow	saddle
telephone	soap	sail
temper	soldier	sake
temple	sore	salary
tempt	sorrow	Saturday
tender	soul	sauce
tent	soup	saucer
terrible	sour	scent
thief	spade	scrape
thirst	spare	scratch
thirteen	spell	screw
thirty	spill	seat
thorn	spit	secretary
thread	spite	seize
throat	splendid	seventeen
throw	spoil	seventy
thumb	spoon	shade
Thursday	sport	shadow
ticket	stair	shake
tidy	stamp	shame
tire	steal	sheep
toe	steep	shelf
tomorrow	steer	shelter
ton	stick	shield
tongue	stir	shine
tough	stomach	shoe
tour	stove	shop
tower	strange	shoulder
toy	straw	shout
tray	strip	shut
treasure	stripe	sick
tribe	stuff	sight
trick	stupid	silence
trip	suck	silk
trunk	Sunday	sincere
Tuesday	swallow	sing
tune	sweat	sir
twelve	sweep	sister
twist	swell	sixteen
ugly	swing	sixty
umbrella	sword	sky

witness	wax	upright
wonder	wear	upset
wool	weave	urge
worm	Wednesday	vain
worry	weed	veil
worse	welcome	verse
worship	wet	victory
worst	wheel	voice
wound	whip	voyage
wreck	widow	wake
wrist	wife	wander
yard	wine	warm
yesterday	wing	warn
youth	wipe	watch

Appendix C: Base words of the 700 word families highly frequent in Academic English

abandon	assist	coincide
absorb	assume	collaborate
abstract	assure	collapse
academy	attach	collide
accelerate	attain	column
access	attitude	combust
accommodate	attribute	comment
accompany	author	commerce
accomplish	authority	commission
accumulate	automate	commit
accurate	available	commodity
achieve	award	communicate
acid	aware	community
acknowledge	barrier	compatible
acquire	benefit	compensate
adapt	bias	compile
adequate	blend	complement
adhesive	bomb	complex
adjacent	bond	component
adjust	brief	composite
administrate	budget	compound
affect	bulk	comprehensive
agenda	bureau	comprise
aggregate	cable	compute
aid	capable	concentrate
align	capacity	concept
allocate	capture	conclude
alloy	career	concrete
alter	cast	conduct
alternative	category	confer

analogy	cell	confine
analyze	challenge	confirm
annual	chamber	conflict
anticipate	channel	conform
apparatus	chapter	congress
apparent	chart	consent
append	chemical	consequent
appendix	chip	conserve
appreciate	choice	considerable
approach	circumstance	consist
appropriate	cite	consolidate
approximate	civil	constant
arbitrary	clarify	constitute
architecture	classic	constrain
area	click	construct
array	client	consult
aspect	climate	consume
assemble	cluster	contact
assess	code	contaminate
assign	coherent	context
contract	distort	expand
contrast	distribute	expert
contribute	diverse	explicit
convene	document	exploit
convention	domain	export
convert	domestic	expose
convey	dominate	external
cooperate	draft	extract
coordinate	drain	fabric
core	drama	facilitate
corporate	drill	factor
correlate	drug	faculty
correspond	duration	feature
corrosion	dynamic	federal
couple	economy	fertile
create	edit	fiber
credit	element	file
criteria	elevate	filter
crucial	eliminate	final
crystal	emerge	finance
cube	emit	finite
culture	emphasis	flexible
curriculum	empirical	flight
cycle	enable	fluctuate
data	encounter	fluid
decade	energy	focus
decline	enforce	format

defect	enhance	formula
define	enormous	found
definite	ensure	foundation
demonstrate	entity	fraction
denote	environment	fracture
dense	equate	framework
deposit	equilibrium	frontier
derive	equip	fuel
design	equivalent	function
despite	erode	fund
detect	error	fundamental
deviate	establish	furnace
device	estimate	furthermore
devote	evaluate	generate
dilute	eventual	generation
dimension	evident	globe
diminish	evolve	glossary
discrete	exceed	goal
disperse	exchange	goods
displace	exclude	grade
display	execute	graduate
dispose	exert	grant
dissertation	exhaust	gravitate
dissolve	exhibit	grid
distinct	exit	guarantee
guideline	interact	mesh
handbook	intermediate	meter
hardware	internal	method
harmony	interpret	migrate
hazard	interval	military
hence	intrinsic	minimal
hierarchy	invert	minimum
highlight	invest	minor
homogeneity	investigate	mirror
hybrid	involve	mission
hypothesis	isolate	mitigate
identical	issue	mobile
identify	item	mode
ignorant	job	modify
illustrate	journal	moist
image	justify	molecule
impact	keyword	monitor
implement	label	motive
implicate	labor	mutual
implicit	laboratory	navigate
imply	laser	navy
import	launch	negate

impose	layer	network
impress	layout	neural
incentive	lecture	neutral
incidence	legal	nevertheless
incline	legislate	normal
income	liable	notion
incorporate	license	novel
index	link	nuclear
indicate	locate	objective
individual	logic	obtain
induce	longitude	obvious
infer	loop	occupy
infrastructure	magnetic	occur
inherent	magnitude	offset
inhibit	maintain	online
initial	major	onset
initiate	manipulate	optic
injure	manual	optimal
innovate	margin	option
input	marine	orient
insert	matrix	outcome
insight	mature	output
inspect	maximize	overall
instance	mechanism	overlap
institute	media	panel
instruct	medical	parallel
integral	medium	parameter
integrate	membrane	participate
intelligent	mental	partner
intense	menu	passive
perceive	radical	schedule
percent	random	scheme
period	range	scholar
perspective	ratio	scope
phase	rational	score
phenomenon	react	section
philosophy	recall	sector
physical	recover	secure
planet	refine	sediment
plastic	regime	seek
plot	region	segment
plus	register	select
polar	regress	sequence
policy	regulate	series
pollute	reinforce	session
port	reject	shear
portion	relax	shift

pose	release	significant
positive	relevant	similar
potential	rely	simulate
precede	remote	simultaneous
precise	remove	singular
predict	render	site
preliminary	require	sketch
previous	research	so-called
primary	reservoir	software
prime	reside	solar
principal	residual	sole
principle	resolve	solvent
prior	resonate	somewhat
priority	resource	source
probe	respond	species
proceed	restore	specific
process	restrain	specify
professional	restrict	spectrum
profile	retain	sphere
project	reveal	stable
promote	revenue	statistic
propagate	reverse	status
proportion	revise	stimulate
prospect	revolution	strain
protocol	rigid	strategy
proxy	robust	stratum
psychology	role	stress
publication	rotate	structure
publish	route	style
pulse	routine	submit
purchase	rural	subsequent
pursue	satellite	subset
qualitative	saturate	substantial
quote	scan	substitute
radiate	scenario	successor
sufficient	ultimate	
suit	undergo	
sum	underlie	
summary	undertake	
superior	uniform	
supervise	unique	
supplement	update	
suppress	urban	
survey	utilize	
survive	valid	
suspend	vapor	
sustain	vary	

switch	vehicle
symbol	verify
symmetry	version
symposium	versus
synthesize	vertical
target	via
task	vibrate
team	violate
technical	virtual
technique	visible
technology	vision
temporary	visual
tense	void
terminate	volume
text	web
theme	whereas
theory	x-ray
thereby	zone
thermal	
thesis	
threshold	
thrust	
topic	
trace	
tradition	
traffic	
transact	
transfer	
transform	
transient	
transit	
transmit	
transport	
trend	
truck	
tunnel	
turbine	
turbulent	
twice	
typical	

