

**Háskóli Íslands
Hugvísindasvið
Enskudeild**

Explicit Teaching of Academic Vocabulary in EFL

Preparing Icelandic students for education at university level

Ritgerð til MA-prófs í Enskukennslu

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September 2013

Acknowledgements

I would like to express my sincerest gratitude to the many people who helped me in the process of writing this thesis. Firstly, I would like to thank my supervisor, Birna Arnbjörnsdóttir, for her most valuable guidance and motivation. I would like to thank my father, Pétur Knútsson, for his meticulous proofreading and council and Ásrún Jóhannsdóttir for her input and advice. I would especially like to thank Sólrún Inga Ólafsdóttir for her significant role in the study. Without her co-operation this would not have been possible. I would also like to thank Bryndís Sigurjónsdóttir for her support and Þorvaldur Friðriksson for his co-operation. Finally I would like to express my thanks all the students who took part in the study.

Abstract

The focus of this study was to develop a program to teach academic vocabulary to upper-secondary students of English in Iceland, and to evaluate the success of the material used. The academic words targeted were chosen from the Academic Word List (Coxhead, 2000). Knowledge of the lexis was measured before and after instruction and the increase in knowledge of a study group that received explicit instruction was then compared to control groups that did not. While a pre-test revealed a lack of receptive knowledge of academic vocabulary among the students, it reported an even greater lack of productive knowledge. The students in the two control groups did not receive instruction of the target vocabulary although one group was exposed to the lexis through reading material. Neither control group displayed gain in knowledge of the target vocabulary while the students who underwent the treatment showed significant improvement, both in receptive- and productive knowledge of the target words. The study also showed that while words within each sublist of the AWL are equally frequent in academic texts, they have a lower frequency in general language. Therefore, some words on the AWL are more important to teach than others and these can be predicted by their frequency in general.

Keywords: academic vocabulary, explicit vocabulary teaching, incidental vocabulary learning, receptive vs. productive vocabulary.

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1. Introduction

It is not uncommon for foreigners to complement Icelanders on their English. Most Icelanders can fluently engage in informal conversations and seem comfortable with the language. In general, Icelanders are exposed to ample amounts of English, especially through the media (Birna Arnbjörnsdóttir, 2011), and Ásrún Jóhannsdóttir's (2009) research indicates that due to this, Icelandic children's competence has already surpassed the curriculum objectives for their initial year of instruction by the time they start learning English. The exposure of English in Iceland far exceeds that of a foreign language. Nevertheless, it cannot be categorised as a second language, as the amount and type of input does not correspond to that of a second language situation where learners live in a society where the second language is spoken. In contrast with L2 situations, while most Icelanders are exposed to written and spoken English in large amounts they only spend a fraction of that time speaking or writing English themselves (Birna Arnbjörnsdóttir, 2011). Furthermore, what characterizes the English exposure in Iceland is that it is both colloquial and contextual (Birna Arnbjörnsdóttir, 2007). This is very different from the decontextualized academic language used in higher education and can be problematic as at least 90% of the textbooks used at the University of Iceland are in English and the general use of English is increasing (Birna Arnbjörnsdóttir & Hafdís Ingvarsdóttir, 2010a).

Having taught English at upper-secondary level in Iceland for several years, I have often been puzzled by the gap between the English proficiency of the strongest and weakest students. In any given class, there will be students who seem to breeze through the material, others who learn with some effort and yet others who struggle greatly and even fail to fulfil the minimal requirements of the course in question. I have often

encountered diligent students who apply themselves to their studies and do well in most subjects but struggle with English. I have often wondered how this group of students will manage with the reading material at university level and to what extent their lack of English proficiency would impede their studies.

Studies performed in Iceland (Birna Arnbjörnsdóttir & Hafdís Ingvarsdóttir, 2010a; Robert Berman, 2010) have established that a third or more of Icelandic university students have problems dealing with and understanding their reading material because it is in English. Several studies indicate that the problem is similar in other Scandinavian countries (Hellekjær, 2007; Trosborg, 1998; Albrechtsen, Haastrup, & Henriksen, 2008). Recently, a Norwegian study of students at university level, revealed that around 33% of the participants were struggling with the texts and an additional 44% were having substantial difficulties, although less severe (Hellekjær, 2009). Icelandic and Norwegian societies are in a similar situation in terms of exposure to English and common proficiency of the language. Hellekjær argues that while Norwegians display good general oral proficiency in English, that does not mean that they have the language proficiency necessary for academic studies at university level.

One of the problems may be that Icelanders tend to overestimate their English proficiency. Anna Jeeves (2008) found that skilled L1 readers of Icelandic were far more likely to overestimate their reading ability in English than less competent readers. Birna Arnbjörnsdóttir & Hafdís Ingvarsdóttir's (2010a) study found a clear discrepancy between university students' evaluation of their own English competence on the one hand and the increase they experienced in work-load and challenges they faced due to the language on the other. Icelandic students overrate their English proficiency and one consequence is that they are not as well prepared to deal with reading material at

University level as they think they are (Birna Arnbjörnsdóttir & Hafdís Ingvarsdóttir 2010b, p. 192).

Perhaps Icelanders are misled as they assume that their colloquial English skills suffice for all purposes (Birna Arnbjörnsdóttir & Hafdís Ingvarsdóttir, 2010; Berman, 2010).

University students and faculty generally report that they struggle with their studies because they do not have the skills to master academic texts in English and it is possible that the lack of English proficiency is a factor in student drop-out rate (Birna Arnbjörnsdóttir, 2007; Birna Arnbjörnsdóttir & Hafdís Ingvarsdóttir, 2010). The problem is therefore an urgent one, as insufficient English proficiency is likely to severely impact the quality of education at Icelandic universities.

My impetus for studying explicit teaching of English academic vocabulary in upper-secondary school came from listening to Catherine Snow's lecture on *The Word Generation Program* in the Boston public schools. Snow and her colleagues found that vocabulary was a major obstacle in literacy development, especially the "all-purpose academic words that no one seemed to be teaching but are critical for academic text comprehension" (Snow, 2011). Snow found that the lack of understanding of these words severely impaired academic literacy. The approach taken in the *Word Generation Program* was to add explicit academic vocabulary teaching to pre-existing material without replacing it, at the rate of five new words each week (Snow, 2011).

Literacy in a second or foreign language is certainly a complicated phenomenon. One of the factors often associated with reading competence is lexical knowledge. Vocabulary size has proved to be a good indicator of reading competence (Matsuoka & Hirsh, 2010; Nation, 2001; Quian, 2002, 2004 ; Nassaji, 2003). It is possible that there is a gap between the lexical knowledge of university students with excellent reading

abilities and those struggling to understand the curriculum. Bridging this gap would therefore be a worthy project. This is, of course, not a simple task as many factors are involved. However, one plausible approach would be to determine what vocabulary is important for university students to know, examine whether that vocabulary is indeed lacking, and devise a method to teach the target vocabulary at upper-secondary level of education.

The focus of this study is whether explicit teaching of academic vocabulary benefits Icelandic students at the upper-secondary level. I conducted a preliminary study during the spring term of 2012, to identify the appropriate academic vocabulary to teach, and followed with the main study at the beginning and end of the autumn term that same year, among students of English 303 (the third English course at upper-secondary level) in two schools.

The study had two main goals. The first was to devise a diverse and engaging program to explicitly teach the target vocabulary, combining established methods of vocabulary education. The second was to evaluate the success of the method by measuring the students' knowledge of the words before and after receiving explicit instruction and comparing their progress to two control groups. Neither of the control groups received formal instruction of the target vocabulary but one encountered the words through working with reading material.

In chapter two, theories on the nature of vocabulary knowledge and its connection to literacy will be reviewed followed by a discussion of academic literacy and vocabulary and a description of principles of vocabulary teaching and learning. This chapter will also review methods to test lexical knowledge. In chapter 3, I will describe the pre-study and outline how I chose the target vocabulary, teaching methods, and testing methods used in the study. In the subsequent chapter will describe the

methodology of the study itself. Test results and data analysis will be presented in Chapter 5 where I will also consider the affect the treatment had on reading comprehension and compare the progress of the students who handed in their homework and those who did not. In Chapter 6 I will discuss the implications of the results to the research questions with reference to the theories presented in the literature review. I will conclude with a discussion of the relevance of the study for English education in Iceland and propose a curriculum to systematically include academic vocabulary.

2. Literature Review

In this chapter I will discuss the theoretical framework of the study. I will begin by exploring various aspects of vocabulary knowledge and acquisition. Next I will discuss the connection between lexis and literacy and how much vocabulary is needed to deal adequately with various types of texts. Furthermore, I will describe academic literacy and the vocabulary most frequently used in academic texts. This will be followed with a section about vocabulary acquisition and established methods of teaching vocabulary. The chapter concludes with a review of vocabulary testing methods.

2.1 The Nature of Vocabulary Knowledge

One does not either know a word, or not. Rather, one can have various degrees of knowledge of a word and know some aspects of it and not others (Nation, 2001, p. 23). For instance, knowing what a word means, in its most common context, does not equal knowing it in all possible contexts. Knowing how a word sounds does not correspond to knowing how to spell it or how it is appropriately used. The following sections will describe different aspects of vocabulary knowledge.

2.1.1 Size and depth of vocabulary knowledge.

Many have defined lexical knowledge as “the number of words in the mental lexicon” (Albrechtsen, Haastrup & Henriksen, 2008, p. 26). Vocabulary is also believed to have two primary dimensions: depth and breadth.

“Breadth of vocabulary knowledge refers to the size of vocabulary or the number of words the meaning of which one has at least some superficial knowledge” (Quian, 2002, p. 515). The size of lexis needed for various types of language use varies according to the task. For instance, one needs a vocabulary of around 3000 word families to understand a basic conversation, 5000 word families to read a novel, and at least 9000 words to cope with more advanced texts (Nation, 2001, 2006). This will be further discussed in chapter 2.6. When vocabulary size is measured, the focus is usually on the link between the meaning and form of the word, mainly because this link is the first aspect that must be acquired and it is the easiest to test (Schmitt, 2010).

“Depth of vocabulary knowledge relates to how well one knows a word” (Quian, 2002, p. 515). It is a complex phenomenon, as Nassaji (2006) and Schmitt (2010) have shown. Depth is acquired over time as knowledge of a word increases with every time it is encountered or used (Nation, 2001; Schmitt, 2010). Thus depth of lexis increases as the learner builds a network of knowledge that includes “knowledge of a word’s different sense relations, paradigmatic as well as syntagmatic, to other words” (Haastrup & Henriksen, 2000, p. 221).

Paul Nation (2001) has analyzed what is involved in knowing a word by breaking vocabulary knowledge down into isolated components, defining it in terms of form, meaning and use. As can be seen in by Nation’s definitions in table 1, knowing a word is by no means a simple task. In order to be able to use a word proficiently, one must acquire numerous aspects of knowledge. Some of these aspects are relatively easy to include in intentional learning, such as spoken and written form and most common meaning-form link. Other aspects, such as collocations and associations, must be built over time by extensive exposure to the L2 (Schmitt, 2010, p. 16).

Table 1. What is involved in knowing a word

Form	Spoken	R	What does the word sound like?
		P	How is the word pronounced?
	Written	R	What does the word look like?
		P	How is the word written and spelled?
	Word parts	R	What parts are recognizable in this word?
		P	What word parts are needed to express this meaning?
Meaning	Form and meaning	R	What meaning does this word form signal?
		P	What word form can be used to express this meaning?
	Concept and referents	R	What is included in the concept?
		P	What items can the concepts refer to?
	Associations	R	What other words does this make us think of?
		P	What other words could we use instead of this one?
Use	Grammatical functions	R	In what patterns does the word occur?
		P	In what patterns must we use this word?
	Collocations	R	What words or types of words occur with this one?
		P	What words or types of words must we use with this one?
	Constraints on use (register, frequency ...)	R	Where, when and how often would we expect to meet this word?
		P	Where, when and how often can we use this word?

R= receptive, P=productive

(Nation, 2001, p. 27)

Note that all of Nation's aspects are labelled as either receptive or productive.

These concepts will be further discussed in the next section.

2.1.2 Receptive and productive vocabulary.

Receptive vocabulary refers to the words that are understood when they are read in a text or heard and their meaning is retrieved. Productive vocabulary, on the other hand, consists of words that can be recalled and used correctly to communicate in writing or speaking (Nation, 2001). As can be seen by Nation's analysis in Table 1, each aspect of vocabulary knowledge has a receptive and a productive part. Receptive vocabulary is commonly learnt before productive vocabulary and people usually know more words receptively than they do productively (Nation, 2001). For instance, one can be quite competent in reading a text or understanding spoken language and yet have difficulty writing or speaking.

These terms are often used interchangeably with the terms *active* and *passive* vocabulary (Nation, 2001; Laufer, 1998). "Passive vocabulary consists of items which can only be activated by external stimuli" (Nation, 2001, p. 25), meaning that they can be understood when encountered but would not be used in speech or writing. Active vocabulary is then the vocabulary we use unprompted by external stimuli.

Although the terms are often used interchangeably, they are not quite identical. According to Laufer, Elder, Hill and Congdon (2004), receptive knowledge can be both passive and active and so can productive knowledge. They propose four types of vocabulary knowledge: passive-receptive, active-receptive, passive-productive and active-productive knowledge. These represent different degrees of vocabulary strength, which is not equivalent to vocabulary depth. In their study, the receptive-productive dimension is divided into four parts, each representing a level of vocabulary strength. The study found that "active recall", i.e. being able produce a word, given its context and first letter, demonstrates the highest strength of knowledge. "Passive recall", i.e.

demonstrating understanding of a word, given in a sentence, by choosing which of several possibilities completes a sentence, implies lesser strength of knowledge. The lowest level of strength is exhibited by “active” or “passive recognition”, two different ways of choosing between given meanings which display equal strength of knowledge.

According to this, vocabulary strength is an incremental process where words are acquired passively and receptively before the knowledge becomes active and productive, which is the strongest form of knowledge. Therefore learners generally know more words receptively than they do productively (Laufer et al, 2004; Schmitt, 2010).

One of the causes of the gap between receptive and productive vocabulary knowledge may be the way in which words are taught. Reading activities have traditionally been a popular method for teaching vocabulary (Waring & Nation, 2004). They will, however, only produce receptive vocabulary knowledge (Wesche & Paribakht, 2007) as they do not involve production of the words learned. Many teachers will agree that receptive activities are often easier to design and grade and are therefore more popular. Productive activities such as writing assignments are time consuming and teachers often feel they do not have time to assign as many of those as they would prefer.

2.2 The Nature of Vocabulary Acquisition

As we have seen, the nature of vocabulary knowledge is complex. The nature of vocabulary learning is by no means simpler. Vocabulary “acquisition is not a tidy linear affair, with only incremental advancement and no backsliding” (Schmitt, 2010, p. 23). Learning the meaning of a new word does by no means secure retention of that knowledge. In fact, if new words are not repeated within a certain time frame, they will

be forgotten and the next time they are encountered it will be as if it were for the first time (Henriksen, 1995).

Words are learnt incrementally (Quian, 2002; Schmitt, 2000, 2010). Each time a word is encountered in a new context, if it is recognized, the depth of knowledge of the word is increased. Therefore, the sooner in the learning process a word is learned, the more likely it is to have more depth than more recently learned vocabulary. In addition the larger a vocabulary the learner has, the greater depth of knowledge he/she is likely to have (Quian, 2002). The depth of knowledge a learner has of a word will grow as the learning progresses (Laufer, 1998). It therefore seems rational that increasing vocabulary breadth is an important step and that depth will be developed as the learner progresses. Many see the process as beginning with increasing vocabulary breadth by learning new words and then developing depth as the initial knowledge is built on and strengthened, for instance through extensive reading. (Nation, 1990; Nation & Waring, 1997).

2.3 Literacy and Vocabulary

Numerous studies have established that there is a substantial connection between reading comprehension and vocabulary knowledge (Matsuoka & Hirsh, 2010; Nation, 2001; Quian, 2002; Schmitt, 2010). Vocabulary knowledge has furthermore been found to predict successful reading better than any other language factor, even better than general reading ability. It has also been observed that “the greatest lexical obstacle to good reading is an insufficient number of words in the learner’s lexicon” (Laufer, 1997, p. 31). Likewise, Nassaji (2003) found that lexical-semantic knowledge is what best distinguishes between skilled and less skilled readers.

Equally important for reading comprehension, is the reader's response time in identifying and processing vocabulary. Being able to recognize words with speed and efficiency is one of the characteristics of good readers (Nagy, Anderson, Schommer, Scott & Stallman, 1989). Reading "begins with the accurate, swift, and automatic visual recognition of vocabulary, independent of the content in which it occurs" (Day & Bamford, 1998 p. 12). Day and Bamford further suggest that the automatic recognition of words is what allows lexical access, which makes it the basis of fluent reading (p. 14). Hellekjær (2007) points out that due to the limitations of the human memory, speed of recognition is imperative to fluent reading. Disrupting the process of reading by having to look up unknown words will result in the reader forgetting what has been read. This is in agreement with Stanovich's (1980) findings, that strong readers possess the ability for the rapid and context-free recognition of words.

Nassaji (2003) makes a distinction between higher- and lower-level text processing skills, the lower being

basic low-level processing abilities involved in decoding print and encoding visual configurations to high-level skills of syntax, semantics, and discourse, and to still higher-order knowledge of text representation and the integration of ideas with the reader's global knowledge (p. 261).

Stanovich (1982, as cited in Nassaji, 2003) argued that a lack of low-level text processing skills (such as word recognition) is often compensated for by higher-level sources of knowledge with the result that the higher-level cognition skills are exhausted on basic word comprehension, diminishing deep comprehension of the text. Laufer (1997) agrees and maintains that because the mind does not have unlimited ability for processing, the context and content of the text will be amiss if the reader's vocabulary knowledge is not

strong enough and he/she has to exert effort in understanding lexical items. When sight vocabulary covers 95% of the text, there is “less cognitive capacity involved in lower-level processing” (p. 31). “Threshold vocabulary” or “sight vocabulary” is the vocabulary the reader has automatic recognition of, which is needed for understanding. Partial knowledge is not enough because “higher level processing strategies” (p. 23) cannot be utilized with inadequate threshold vocabulary. This would imply that vocabulary that is known productively and thus with more strength, will facilitate reading comprehension to a further extent than vocabulary knowledge that is receptive only. This would imply that receptive vocabulary knowledge does not facilitate text comprehension to the same extent as productive vocabulary. This is a valid reason to place more emphasis on productive methods of vocabulary learning.

2.4 Inferencing

Skills in inferencing are greatly affected by size and depth of vocabulary (Quian, 2002; Albrechtsen et al., 2008). “The procedures of lexical inferencing involve making informed guesses as to the meaning of a word in the light of all available linguistic cues in combination with the learner’s general knowledge of the world, her awareness of the context and her relevant linguistic knowledge” (Haastrup, 1991, p. 13). It is furthermore very important to learning vocabulary and understanding text (Albrechtsen et al., 2008).

Second language learners frequently use lexical inferencing to deal with unfamiliar words, even if they have a dictionary (Wesche & Paribakht, 2007). According a study performed by Paribakht & Wesche, (1998), readers ignore 50% of the unknown vocabulary they encounter while reading but out of the words they do deal with in some way, 80% of readers use inferencing as a favoured strategy and it has been found to be among the main cognitive reading comprehension processes (Nassaji, 2003). It seems

logical to conclude that successful inferencing skills are beneficial for dealing with unknown words in a text, resulting in a higher level of literacy.

It is important to note that inferencing can often lead to the wrong interpretation of a word (Paribakht & Wesche, 1997). Even though students learn guessing strategies it will not secure correct assumptions and several factors can cause a misinterpretation of words and phrases (Laufer, 1997). One of those is that words can be “deceptively transparent” and therefore students believe they understand them when they in fact do not. Furthermore, even when inferencing is successful, it may not result in retention of the inferred words (Laufer, 1998; Wesche & Paribakht, 2007).

Many studies have shown that vocabulary size is important to successful inferencing skills (Albrechtsen et al., 2008). A high ratio of known words will facilitate the inferencing of unknown words and depth of lexical knowledge is likely to result in more successful guessing (Quian, 2002, p. 517). The size of a learner’s lexical base will thus determine the extent to which that information can be applied to the contextual clues given in a text (Nassaji, 2006).

Nassaji (2006) studied the relationship between depth of word knowledge, inferencing strategies and degree of success in guessing word meaning. He found that students that were stronger in terms of vocabulary depth are more likely to use lexical inferencing strategies of certain types and with better results than those with less depth of vocabulary knowledge. He also found that possession of deeper lexical knowledge facilitates inferencing due to better access to the needed information. Although inferencing strategy use is important, depth of lexical knowledge has more impact on the level of inferencing success (Nassaji, 2006). This is in accordance with Laufer’s (1997) findings that a large vocabulary of considerable strength is the best way to facilitate successful inferencing. As the ability to infer the meaning of unknown words also

depends largely on how many of the other words a student knows, explicit teaching of words that are frequent or relevant for the students can facilitate the students' further learning (Schmitt, 2000).

2.5 Vocabulary Size and Text Coverage

The connection between reading comprehension and vocabulary knowledge has been established, but how much lexis is needed to understand texts? Laufer (1997) found that a vocabulary of 3,000 word families is enough to understand 95% of the words in a text and that this amount is required for minimal comprehension and unassisted reading. Furthermore, 95% coverage is a lexical threshold below which readers cannot be expected to be able to utilize their L1 reading strategies. However, to read with pleasure and ease and to be able to accurately infer the meaning of new words from context, one needs a vocabulary of 5,000 word families, which would provide 98% lexical coverage (Laufer, 1997; Waring & Nation, 2004). Hu and Nation (2000) agree, maintaining that 98-99% coverage is needed for adequate comprehension; and according to Nation (2006) non-native speakers of English need a receptive vocabulary of 8,000 to 9,000 word families to cope successfully with more advanced texts, as the vocabulary size needed to read normal texts is smaller than what is needed to understand more technical texts like texts from science or newspapers (Waring & Nation, 2004).

Raising the percentage of the readers' lexical coverage is therefore very important as it affects the learner's reading abilities as well as raising the probability of retention of new words. Consequently it is important for English teaching programs to ensure the knowledge of the 3,000 most frequent word families so that extensive reading can help the learners acquire further vocabulary incidentally (Coady, 1997).

2.6 Academic Literacy

The language used in academic literature is fundamentally different from texts of fiction. Therefore meeting the requirements for understanding fiction does not constitute having the necessary competence to deal with academic texts. Academic language is “characterized by complex syntax, academic vocabulary, and a complex discourse style” (Krashen & Brown, 2007, p. 1), a description that would not apply to general texts, such as fiction. Furthermore, the very nature of academic studies requires students to display deep understanding of the reading material and attention to detail. Readers have less tolerance for encountering words they do not know when the content of the text is important (Waring & Nation, 2004). This would apply to academic texts in a learning situation.

2.6.1 Academic vocabulary.

The first 2,000 of the most frequent word families of English are often referred to as the General Service List or GSL accounting for 87,4% of texts of fiction that have not been simplified. However, for academic texts it only amounts to 78,1% coverage (Nation & Waring, 1997), as they generally contain a more specific and more formal vocabulary. According to Coxhead (2006) the GSL covers 90% of fictional texts and 75% of academic texts. General texts and academic texts therefore clearly do not share the same vocabulary: the lexis needed for 98%-99% coverage of fictional texts is no longer sufficient in an academic setting.

Academic vocabulary is crucial for text comprehension on an academic level as the lack of understanding of these words will severely impair academic literacy (Snow,

2011). However, these words only account for a small portion of general texts, as we shall see shortly.

How many words then does a learner need to know in order to be able to deal with the academic texts at university level? As the vast majority of reading material in Icelandic universities is in English, this is a very relevant question. To begin with, it is perhaps interesting to consider how many words native speakers of English know by the time they go to university. Combining information from several studies led Schmitt (2010) to estimate that native speakers of English at university levels know somewhere between 16,000 and 20,000 word families. According to Nation and Waring (1997) this number is around 20,000 word families. Although a portion of second language learners achieve a similar vocabulary size, that is not general, and many L2 learners of English fail to acquire the necessary vocabulary size, despite their many years of formal education (Hunt & Beglar, 2005). A vocabulary of less than 5,000 word families is common among adult L2 speakers of English, even among those who have had several years of English education (Nation & Waring, 1997). Hazenberg and Hulstijn (1996) have suggested that for learners of Dutch as a second language, a minimal vocabulary of around 10,000 words is needed for adequate comprehension of texts at university, and Nation (2001) suggests that language users may need 15-20,000 words to read “with minimal disturbance from unknown vocabulary” (p. 20). Although general English vocabulary size has not been studied specifically among Icelandic University students one can assume that many fall short of the amount needed for full comprehension of academic texts, let alone the amount possessed by native speakers of English.

The difference in vocabulary size between native speakers and L2 learners of English at university level has several implications. L2 lexical impairment can be expected to increase the students’ work load, therefore even affecting their ability to

complete their studies. In any case, lack of understanding of reading material is bound to lower the quality of education. This could also partially explain why many of the university students studied by Birna Arnbjörnsdóttir and Hafdís Ingvarsdóttir (2010a) overestimated their own English proficiency. Perhaps they base the estimation of their own reading proficiency on their experience of reading fiction or similar texts, not realizing their competence in that area will not suffice for adequate comprehension of texts of academic nature.

2.6.2 The Academic Word List

Averil Coxhead has devised a list of 570 word families that account for approximately 10% of the vocabulary used in academic texts. This group of words, however, only accounts for 1.4% of fictional vocabulary (Coxhead, 2000) and around 4% in texts from newspapers (Nation, 2008). Learners who are used to reading fiction and newspapers, and not academic texts, may therefore lack knowledge of much of this vocabulary.

The Academic Word List (AWL) is comprised of words from a corpus of 3,500,000 running words of academic texts from a variety of subject areas. The words all occurred over 100 times in the corpus and none of them belong to the GSL (Coxhead, 2000). They do not include subject-specific or technical words and formal words that are “not highly salient in academic texts, as they are supportive of but not central to the topics of the texts in which they occur” (p. 214). They often have to do with methods and procedures used in an academic context, such as research, methods and results (Nation, 2008) and they are “crucial for understanding of all texts of academic nature” (Snow, 2011).

Coxhead's Academic Word List is divided into ten sublists according to their frequency in academic texts. All sublists contain 60 word families, except the last sublist which contains 30 word families. Out of the 10% word coverage the list has in academic texts, 3.6% are covered by the first sublist, 5.4% by the first two combined and 8.3% by the first five combined (Coxhead, 2000, p. 227). All the words in the AWL can be found within the 10,000 most common words of English (Nation & Beglar, 2007).

In contrast to the 10% of the vocabulary of academic text that the list covers, the third thousand of the most common English words cover only 4,3% (Nation, 2008). These thousand words consequently provide less coverage than the first 120 words of the AWL. The time spent on the academic vocabulary therefore has a clear advantage and teaching this vocabulary specifically is certainly very beneficial for students intending on academic studies (Matsuoka & Hirsh, 2010; Nation & Waring 1997; Coxhead, 2006; Quian, 2002; Nation, 2008). According to Coxhead (2000) they are the words which are "most worth studying" (p. 214) for students with academic goals. 10% of words in a text means that there is at least one word in every line (Hirsh & Nation, 1992) and out of those just over twelve words on every page will come from sublist one (Nation, 2001).

2.7 Vocabulary Acquisition

2.7.1 Incidental and intentional learning of vocabulary.

Traditionally, vocabulary learning in instructional settings has been divided into incidental and intentional learning. Intentional vocabulary learning occurs when students work on activities that have the aim of retaining target vocabulary while incidental vocabulary acquisition takes place, unintentionally, as a by-product of other

activities, such as reading or listening (Hulstijn, 2001). Often, incidental learning occurs without the student being aware that he/she will be tested on the retention of the target vocabulary whereas in intentional learning the student is informed of the upcoming test and is consciously focusing on remembering the lexical items in question (Hulstijn, 2001; Laufer & Hulstijn, 2001).

Incidental approaches to teaching vocabulary have been very popular in L2 pedagogy and it has been a common belief that we learn most of our vocabulary through reading (Waring & Nation, 2004). Krashen's hypothesis of comprehensible input has been very influential in retaining this view. Krashen argued that reading text at the appropriate level was the best way to learn new vocabulary. He even went so far as to say that he suspected that "reading is not simply a way to develop vocabulary, spelling, and other important aspects of competence, it is the only way" (Krashen, 1989, p. 455).

This view has been challenged by many researchers in recent years. Direct, intentional instruction of vocabulary has been shown to be beneficial (Laufer, 1998; Jóhannsdóttir, 2008; Milton, 2009) and many believe that focusing the students' attention directly on the target words, as done in intentional learning, gives the best opportunity for its retention (Schmitt, 2000). Nation (2001) maintains that intentional and deliberate approaches to learning vocabulary lead to better retention within a specific time frame than incidental learning does. However, as it is very time consuming, it cannot be the only method used. It is therefore important that students also be able to learn words incidentally (Schmitt, 2000). Nevertheless, incidental learning of vocabulary will be an intimidating task for anyone who does not possess the skills necessary to do so (Laufer, 2003). Furthermore, any acquisition that occurs through incidental exposure is slow and which words will be learnt or how well, cannot be predicted (Paribakht &

Wesche, 1997). Therefore, when the goal is “systematic development of L2 vocabulary, it cannot be left to the students themselves” (p. 177), they need to be guided.

Waring and Nation (2004) examined several studies of incidental vocabulary acquisition through reading and found that in general reading does result in the learning of new vocabulary. However, only 10% of the target words are learnt which is, in comparison to other methods, insubstantial. Research has also shown that incidental learning of lexis, when accompanied by other activities in which students process the target words in some manner, show higher levels of retention than reading alone (Wesche & Paribakht, 1997, 2007; Laufer & Hulstijn, 2001). Wesche & Paribakht discovered that when incidental learning was accompanied by specific learning activities, depth and strength of knowledge increased with every activity while reading only led to passive vocabulary learning. Furthermore, readers often ignore unknown words if they do not need them to understand the text and therefore many words, although met incidentally, are not learnt (Paribakht & Wesche, 1997). There is no guarantee that important words will be learnt incidentally, not even if the texts are chosen specifically with regard to how often the target vocabulary is repeated. Moreover, precise knowledge of the words cannot be guaranteed and at best, the words will be learnt receptively and their use will be limited to understanding in context (Wesche & Paribakht, 2007).

For incidental learning to take place through reading, the material must be at the appropriate level for the student. When students read texts that contain many words they do not understand they will be frustrated and no learning will take place (Waring & Nation, 2004). Although incidental learning has been considered to be the best way to promote vocabulary learning, more recent literature has confirmed that it should not be the primary method used to teach vocabulary. “Rather, incidental learning from reading

seems to be better at enhancing knowledge of words which have already been met” (Schmitt, 2010, p. 31). In order for a vocabulary learning program to be successful, it cannot rely on incidental acquisition through reading alone. Optimal vocabulary growth can only take place when various ways of learning vocabulary are combined, including explicit teaching (Waring & Nation, 2004).

Coming back to the impetus for the study, studies of the first schools that piloted the *Word Generation Program* showed that in the twelve weeks of instruction that students intentionally learned the academic vocabulary, they learned more than the control group did in two years of incidental learning (Snow, 2011).

2.7.2 Explicit and implicit learning of vocabulary.

Additionally, language learning can be explicit or implicit. Explicit learning takes place when input is consciously processed while implicit learning occurs unconsciously with no attention to or conscious processing of input (Hulstijn, 2005). Many researchers agree that it is essential to use explicit methods to ensure the learners’ knowledge of important words such as high frequency words and academic vocabulary because knowledge of these words raises the ratio of known words in a text, thus facilitating further learning of lower frequency words (Hunt & Beglar, 2005; Schmitt 2000; Nation, 2001).

Nation (2001, p. 302) recommends explicit learning of vocabulary for three main reasons: firstly because it is effective with respect to time and effort spent, secondly because it gives the learner control over which aspects of the target words to focus on and thirdly, it can secure learning by allowing the learner to control processing of the new words and the amount of repetitions. Hunt and Beglar (2005) argue that EFL

vocabulary acquisition is most successful when vocabulary is taught both implicitly and explicitly.

The words a learner has to learn are counted in thousands and it would be too time consuming to try to teach all of them explicitly. Lower frequency words must be acquired through massive exposure to the L2 (Nation, 2001). After high frequency vocabulary is learnt it is important for the language learner to develop strategies to independently learn new words of lower frequency. Valuable class time is therefore better spent by focusing on strategies to learn and understand vocabulary than on explicit teaching of low frequency words (Nation & Waring, 1997; Nation, 2001, 2008) often through decontextualized wordlists. It is therefore important to train students in multiple vocabulary learning techniques.

After basic information about a word has been introduced, by explicit and intentional learning, later incidental meetings with lexical items will be more beneficial. Having some basic information allows the student to broaden the knowledge of the word with each new encounter and “repeated exposure will help to consolidate the lexical aspects first learned” (Schmitt, 2000, p.137). Implicit and incidental methods are effective in promoting small but incremental growth of vocabulary (Hunt & Beglar, 2005) and knowledge of lexis that is at least partially known will deepen with each incidental encounter, as words are met in new contexts.

2.7.3 Remembering words.

In order to retain vocabulary, a learner needs to transfer it from the short-term memory, where it can be retained temporarily, to the long-term memory, where it can be stored. Failure to make this transfer will result in the words being forgotten (Henriksen, 1995). Many studies have discussed the optimal conditions for vocabulary

acquisition, most of which have common features. Whether vocabulary learning is incidental or intentional, explicit or implicit, there is a consensus among researchers on certain principles that apply to all learning of lexical knowledge. Repetition and depth of processing are perhaps the elements that are most generally mentioned as deciding factors in facilitating the retention of words in memory. These will be discussed in the next sections.

2.7.4 Frequency and acquisition.

It is logical that the most frequent words of a language are the first to be learnt, as they are the words a learner will be exposed to the most. Each time a word is encountered the relationship between meaning and form is reinforced (Nation, 2001) and every time a word occurs in a new context the knowledge of that word is likely to become deeper and stronger (Wesche & Paribakht, 2007).

Researchers vary in their opinions of how many times a student needs to be exposed to a word incidentally for it to be retained. According to Coxhead (2006) it is difficult to say how many repetitions are needed because vocabulary learning is influenced by so many factors. Nation (2001) maintains that anywhere from five to twenty encounters are needed. However, if the words are not repeated soon enough from the first encounter, they will be forgotten (Nation, 2001; Coxhead, 2006) and the time spent on them will have been wasted because each new encounter will be as if it were the first one. Therefore a successful vocabulary learning program must “provide for repeated encounters with the same words over reasonably short time periods” (Waring & Nation, 2004, p. 18). Repetitions should be frequent at first but followed by longer intervals (Coxhead, 2006; Nation, 2001). The chances of a word being retained

are raised considerably if they are retrieved in an activity after it is first noticed during the reading or input part of learning (Nation, 2001; Wesche & Paribakht, 2007).

One of the main obstacles faced in ensuring a sufficient amount of repetition of target vocabulary often lies in the curricula of EFL courses. The systematic review of previously met vocabulary is often neglected because of the pressure to cover large quantities of material in a certain amount of time (Hunt & Beglar, 2005).

2.7.5 Depth of processing.

Specialists within the field of psychology have maintained that deep processing and high involvement promote successful learning (Laufer & Hulstijn, 2001). Research has shown that this principle is very relevant to vocabulary acquisition (Paribakht & Wesche, 1997; Schmitt, 2000; Nation, 2001; Coxhead, 2006) and that the deeper thought processing a task requires of the student, the more likely she/he is to learn the target vocabulary (Schmitt, 2000; Laufer & Hulstijn, 2001). Studies have shown that student involvement while processing previously unknown lexical items is a determining factor in the retention of new vocabulary (Laufer & Hulstijn, 2001). The more mental activity a student has to apply when working with vocabulary, the more likely he/she is to retain it (Henriksen, 1995).

Therefore, the variety of methods and degree to which a learner applies cognitive processing when working with new words determines how well they are retained (Paribakht & Wesche, 1997). Implicit learning is dependent on repetition because it usually does not involve conscious processing other than attention. Explicit learning, on the other hand, is more conscious and therefore “it is strongly affected by the quality of the mental processing” (Nation, 2001, p. 34). Nation recommends strong explicit

learning with activities that include “depth of processing through the use of images, elaboration, and deliberate inferencing” (p. 35).

Laufer and Hulstijn (2001) propose that incidental vocabulary learning is successful if accompanied by tasks that are constructed to induce student involvement. *Need, search, and evaluation* are the components that result in a high degree of involvement in a task. They represent three dimensions, *need* occurring as a motivational dimension but *search* and *evaluation* as cognitive dimensions. Depending on the nature of the task, *need, search* and *evaluation* can be moderate or strong, the latter being preferable, as it presents a stronger degree of drive on the student’s behalf.

Need is motivational and occurs when the assignment requires the student to use or understand a word that is unfamiliar in the L2 and is necessary to complete a task. Moderate need will arise when it is “imposed by an external agent” but strong “when imposed on the learner by him- or herself” (p. 14) for instance when the students wants to express something but does not know the suitable word to do so. *Search* occurs when the student attempts to find the meaning of a word, such as looking it up in a dictionary or asking someone and *evaluation* occurs when the target word is compared with other words, other forms of the word or its various meanings. This can for instance take place when the student chooses a word to fit into a given context or which of several meanings in a dictionary applies to a given context.

The following table from Laufer and Hulstijn (2001, p. 18) shows the task-induced involvement load of several types of vocabulary exercise. – and + refer to the degree of *need, search* and *evaluation* applied in each task , - being none, + being moderate and ++ being strong.

Table 2.Task-induced involvement load

Task	Status of target words	Need	Search	Evaluation
1. Reading and comprehension questions	Glossed in text but irrelevant to task	-	-	-
2. Reading and comprehension questions	Glossed in text and relevant to task	+	-	-
3. Reading and comprehension questions	Not glossed but relevant to task	+	+	-/+ (depending on word and context)
4. Reading and comprehension questions and filling gaps	Relevant to reading comprehension. Listed with glosses at the end of text	+	-	+
5. Writing original sentences	Listed with glosses	+	-	++
6. Writing a composition	Concepts selected by the teacher (and provided in L1). The L2 learner-writer must look up the L2 form	+	+	++
7. Writing a composition	Concepts selected (and looked up) by L2 learner-writer	++	+	++

Their assumptions are therefore that the retention of incidentally processed words is contingent upon the three components, *need*, *search* and *evaluation*, and that the degree of involvement determines the degree of lexical retention.

2.7.6 Productive knowledge and output.

Each new encounter of a known lexical item brings about its retrieval. When a word is encountered through reading only, the retrieval is receptive and therefore only receptive knowledge is strengthened, as discussed above. However, if the activities following require productive retrieval, by asking the student to produce the word in an exercise, productive knowledge is strengthened (Wesche & Paribakht, 2007). Students

generally have more receptive than productive knowledge but words that are known productively are retained better than receptively known words (Schmitt, 2000), probably because producing output requires more effort on behalf of the student and therefore it causes deeper processing and as a result, better retention (Laufer, 1998). Several studies have supported the view that producing output strengthens the retention of new vocabulary (Paribakht & Wesche, 1998; Nation, 2001; Laufer & Hulstijn, 2001). Furthermore, if students know they will be expected to produce output, they are more likely to pay attention to the input (Willis, 2005).

2.7.7 Noticing and attention.

A crucial step in learning a new word is noticing it (Nation, 2001; Laufer & Hulstijn, 2001). Noticing occurs when the student pays deliberate attention to a word, its form and its meaning and the chances of retaining the new word increase with the amount of attention given to it, for instance by making connections to previously existing knowledge (Laufer & Hulstijn, 2001). When a learner encounters a new word it is important that its form and meaning be given attention right away as the connection between these two is the first step in developing knowledge of lexis (Hulstijn, 2001). Nation (1990, 2001) recommends providing brief, simple and clear explanations of meaning and believes using translation into the L1 can be very effective. It is, however, important to explain to the students that there is not a single corresponding word in the L1 and that all words can have different meanings. Nation believes the priority is to start learning a word in a clear and concise way, prioritising what information to convey about the word to avoid confusion and that depth of knowledge will be developed as the student encounters the word again in different contexts.

2.8 Teaching Vocabulary

Using various teaching methods is effective to accommodate the diverse needs of the learners and also facilitates lexical retention (Henriksen, 1995), as described above. Having discussed major principles of vocabulary acquisition, I will now discuss three methods of teaching vocabulary, that were used to explicitly teach the target words in this study to reinforce depth of processing and strengthen retention. These are the use vocabulary cards, activities that call for negotiation of meaning and strategies to enhance memory.

2.8.1 Vocabulary cards.

Various studies have shown that vocabulary cards or flash cards are highly efficient for vocabulary learning and have many advantages (Nation, 2001; Coxhead, 2006). They are superior to glossary lists where form and meaning are listed side by side, requiring no recall from the learner. However, when form and meaning are on opposite sides of a card, recall is practiced with each encounter of the word, therefore strengthening the form-meaning relationship with each time a card is used. Furthermore, by using vocabulary cards one can easily control the amount of repetitions of the target words, for instance by using the cards in various activities (Nation, 2001). The making of the cards themselves also requires effort on the part of the learner and opportunities present themselves for deepening the level of processing by adding more information to the cards.

2.8.2 Negotiating for meaning.

A multitude of studies have shown negotiating for meaning to be efficient for vocabulary retention (Nation, 2001; Laufer & Hulstijn, 2001). Negotiating ensures a certain level of involvement by engaging the students, causing them to give full attention to the target vocabulary and processing it at a deep level. Its main disadvantage is that it is time consuming. However, Nation (2001) and Laufer and Hulstijn (2001) have found that learners who observe others negotiating for meaning can learn as well as those who are performing the negotiation. This knowledge can have pedagogical implications, as negotiation between teacher and class members can take less time yet still be helpful to those who do not participate in the negotiations.

2.8.3 Strategies for memory.

Memory strategies are one of the means frequently used by learners to acquire new vocabulary, and research has supported the validity of such methods. Long-term retention of lexis requires intricate mental processing which is required when creating strategies for memory. This can be time consuming, but important words are worth the time spent (Schmitt, 2000). Also, the learning burden of words differs, partly because of their connection to the students' L1. By connecting new words to something the student is already familiar with, the teacher can reduce the learning burden of the target word (Nation, 2001).

So-called keyword methods are among the most frequently used. The term refers to the forging of a link between word form and meaning, for instance by using visual images or mental links to previously existing information (Henriksen, 1995). It often helps if the association between target word and keyword and mental image is "salient, odd or bizarre" (Hulstijn, 1997, p. 204). Hulstijn also points out that psycholinguistic

studies have shown that using objects or concrete concepts for keywords is preferable, as they are better remembered.

Various studies have shown that the keyword technique “results in faster and more secure learning than other approaches” (Nation, 2001, p. 313) and their effects have been adequately confirmed (Hulstijn, 1997). I would suggest this is in harmony with literature on depth of processing, as considerable depth should be required to produce memory strategies. Schmitt (2000) believes students should learn multiple strategies as they vary in their preference and should be able to choose which methods work best for them. Successful learners have been known to use various strategies, including making links between meaning and imagery (Laufer & Hulstijn, 2001). However the abilities of the learners to produce mental links and the quality of their keywords also affect the success of such methods (Henriksen, 1995).

Hulstijn (1997) maintains that mnemonic methods are compatible with other vocabulary learning techniques and that the two can complement each other. For instance, a well-constructed mnemonic will still require rehearsal and repetition.

Hulstijn (1997) also points out that several studies have shown that teachers and textbooks seldom advocate the keyword method. The method does require a certain amount of creativity and imagination from both students and teachers and in my experience from working with numerous teachers they often find that difficult to do, perhaps because the outcome is somewhat unpredictable. However, I would argue that the creativity required to form a good keyword and forge a mental image is exactly what ensures the depth of thought processing that results in retention of lexis. Furthermore, using mnemonics in a creative manner can “transform the vocabulary learning task from uninspired drudgery into newfound delight” (Hulstijn, 1997, p. 220). Keywords,

therefore, form a large component in the instructional material used in this study. In the next section, methods of testing vocabulary will be discussed.

2.9 Testing Vocabulary

Perhaps the most widely used vocabulary tests are those which measure knowledge of the meaning-form link. One of the reasons is that such tests are very convenient. This type of testing is most befitting in the early stages of L2 vocabulary acquisition, however, as further incremental learning progresses, tests that evaluate degrees of comprehension and provide more detail may give a more accurate description of lexical knowledge (Schmitt, 2010).

According to Schmitt (2010) it is very difficult, if not impossible, to measure all aspects of word-knowledge. He gives three main reasons for this. The first is that despite of strenuous research many aspects of vocabulary knowledge have not been successfully assessed, as acceptable methods have not been established. The second is that the amount of time it would take to measure multiple knowledge aspects of vocabulary is simply too great. The third and final reason has to do with the complexity of vocabulary knowledge and how difficult it is to control for cross-test effects of various types of knowledge. For instance, the answers in one part of a test may influence performance in another (pp. 79-80).

When vocabulary tests are built to evaluate multiple types of knowledge for each test item, time constraints affect the number of items tested, with the result that the test does not contain enough items to evaluate the students' range of lexis. Such tests of depth can be practical when researching a small number of words specifically and in detail, whereas size tests are more suited to evaluate the extent of the student's vocabulary (Laufer et al, 2004).

Schmitt (2010) further argues that the problems mentioned above have caused researchers to attempt evaluating depth of knowledge by testing receptive and productive knowledge which is an important part of general lexical knowledge.

Laufer *et al.* argue that because vocabulary breadth is more important than vocabulary depth, the best way to provide an accurate description of a student's vocabulary knowledge is with a test that can evaluate the size of the learner's lexicon. Furthermore, they point to several studies that have revealed vocabulary size also to be a good indicator of vocabulary depth.

Various tests of receptive and productive vocabulary have been validated and used widely. *The Vocabulary Size Test* (Nation & Beglar, 2007) is a multiple-choice test devised to measure written receptive vocabulary and therefore its format is suitable to determine how many of the target words the students recognize and understand. Multiple-choice tests have been evaluated as having good reliability (Milton, 2009) and the test-takers have to have a fair understanding of the word in order to answer correctly (Nation & Beglar, 2007). Students generally choose their answers according to some comprehension of the words rather than arbitrarily and guessing has very little affect (Nation, 2001). The test uses distracters that share some elements of meaning with the correct answer, further demanding knowledge of the test word. Each item is tested separately so learners will not be able to exclude the definitions that fit the words they do know. The level of difficulty of the answers can be easily controlled and it can be objectively and efficiently marked, a trait considered very important (Nation & Beglar, 2007; Coxhead, 2006).

Laufer (1998) maintains that words should be tested in isolation to avoid confusing results with ability for inferencing. In this case, a non-defining context

provides only structural information so no contextual clues are provided; the target word is given and the students choose between four answer choices. Example:

This is too **arbitrary** for me

- a) decided by coincidence
- b) expensive
- c) difficult
- d) vulgar or offensive

This criteria also fits Coxhead's (2006) definitions of reliability, practicality and validity. It is reliable because it is objective and practical in terms of preparation and grading as well as taking a relatively short time for students to finish. Also, it is valid because it tests exactly what it is supposed to and does not require the students to portray other language skills (Coxhead, 2006, p. 135). The multiple-choice format is widely used in and was for instance used in the case of the *Word Generation Program* to examine the results of the 12 week pilot version of the curriculum, discussed earlier.

Vocabulary size tests are very popular because they are reliable and relatively simple to construct. Tests that examine depth of vocabulary have been the most controversial and have proven difficult to test for reliability (Schmitt, 2010). However, testing for strength of vocabulary has been recommended and the reliability of such tests has been established (Nation, 2006; Laufer et al, 2004). Nation (2008) recommends the testing and teaching of productive as well as receptive vocabulary. Productive questions require more knowledge of the target word than receptive questions and are therefore well suited to examine how well the students know the words; being able to select a word's meaning from four choice options does not necessarily mean being able to use the word unprompted.

Various productive tests have been devised, such as *The Productive Vocabulary Levels Test* (Nation, 2008). The test is a cloze test, each question consisting of a sentence with contextual clues about the missing word. One or two of the first letters of the requested words are provided to avoid prompting words that would fit in the context but are not being tested. Example:

She had no reason for her decision; it was quite ar_____

Such a test evaluates whether the students' knowledge of the words is strong enough to retrieve them and use productively without the target words being in any form present on the test. This format was also used by Laufer et al (2004), that found that this form of testing tests active-productive knowledge, which is the strongest form of vocabulary knowledge.

3. Choosing the appropriate treatments and evaluation instruments

As discussed in the introduction, there are two major aspects to this study. One involves the instructional treatment that includes the method of instruction and learning materials that were constructed for both the Study Group and the Control Groups and the other is the evaluation of the treatment.

Before executing the treatment and conducting the study itself, several issues had to be addressed. In preparation of the study it was necessary to establish a baseline of proficiency from the Academic Word List (Coxhead, 2000), determine exactly which part of the list would be appropriate to teach to the group in question, and to devise the treatment instruments according to the needs of the students.

This was done by conducting a pre-study. I administered two diagnostic tests and their results helped in the selection of the target words for the study. Furthermore, the results of the diagnostic tests affected the construction of the learning materials. At first, I had planned for the material to teach all target words in the same manner. However, when the variation of the students' knowledge of the target words became apparent, it was clear that different approach had to be taken in composing the treatment.

In this chapter I will first describe the pre-study and discuss how the results of the diagnostic tests influenced the choice of words for the study and the test format. Then I will move on describing the instructional treatments and materials used in the study. Finally I will present the research questions the study aims to answer.

3.1 The Pre-study

Before teaching the academic vocabulary at upper-secondary level it is important to determine how many of the words on the AWL were familiar to the students. The Academic Word List is a list of 570 word families of general academic words that are used in academic literature and account for 10% of all running words in academic texts (Coxhead, 2000). The words in the AWL are divided into ten sublists according to the frequency of their appearance in academic texts. Sublist one includes the most frequent and sublist ten the least frequent general academic words. Students may be less familiar with words from some sublists than others. To determine which sublists would be suitable for the study I administered two diagnostic tests to students in the upper-secondary school where the study would take place.

Although the main purpose of the diagnostic tests was to identify the appropriate academic vocabulary to teach, it also proved very helpful in choosing the appropriate test format for the study itself. This will be described in the next section.

The first diagnostic test evaluated students' receptive knowledge of sublists one and two of the AWL among students at the end of their first year of upper-secondary education, in the course English 203. Students in English 203 have had approximately seven years of English, depending on onset of instruction in primary school. Originally, this test was to determine whether teaching sublist one in the following course, English 303 would be fitting. The results prompted another exam among students in English 303, who were finishing their third term of English at upper-secondary level. This time sublists 3, 5, 7, and 9 were tested. As a result, words from sublists 7 and 8 were chosen as the target words for the study.

3.2 Choosing the Appropriate Test Format

Establishing a baseline of proficiency was one challenge that had to be overcome prior to the study, another was determining which of the many standardized vocabulary tests would be most appropriate. It was deemed unnecessary to create a new test as there are several tried and true tests available on English vocabulary. *The Vocabulary Size Test* (Nation & Beglar, 2007), described in the previous chapter, has several features that fit the purpose of the study. The test is accessible to all online, although the words from the AWL list are not tested separately, so they can be found among the first 10,000 word families used as a database for the test. Nation's earlier test, *The Vocabulary Level's Test* (Nation, 2001) does include a section testing words from the AWL. As the test does not include all the words specifically chosen for this study, I adapted this test to create a new test, using the principles of the *Vocabulary Size Test*, putting the test words in a non-defining context and using high frequency words for the definitions or synonyms among the possible answers so that understanding of the distracters would not affect evaluation of understanding of the target words.

The first diagnostic test examined only receptive knowledge of the target words and after analysing the results it became evident that a clearer picture of the students' knowledge could be seen by also testing the words productively.

The second, productive part of the test is modelled on *The Productive Vocabulary Levels Test* (Nation, 2008). Again, a test including the target words of the study did not previously exist so I used the principles of Nation's test to write new questions. Examples of the receptive and productive part of the exam can be seen in chapter 2.9.

Before the final version of the test was ready, several people among family and friends piloted the test and many of their answers prompted changes in the questions to

prevent this from happening: for instance, by adding to the given letters in the productive part, so that words other than the target word could be eliminated.

The greater the number of test words included, the more reliable the test will be. However, as discussed in the literature review, the amount of words should not surpass the point where the length of the test exceeds the students' ability to concentrate; that would also affect the reliability of the test. Lessons in the Icelandic school system are generally forty minutes long and therefore I aimed at constructing a test that would take approximately forty minutes to complete. The productive part of the tests require more time per question than the receptive part, therefore the productive part included fewer questions.

3.3 Establishing a Baseline: The First Diagnostic Test

The first diagnostic test was administered to two groups in English 203 during the spring semester of 2012 and the words on the test were from sublists one and two of the AWL. Forty-six students took the test. The words were only tested receptively, using a multiple choice test such as the one described in the previous chapter.

As previously mentioned, the academic word list consists of 570 word families. The headwords of each family are listed, followed by the family members of each family. The headwords of each family are the most frequent of the family members (Coxhead, 2000) and are therefore generally acquired before lower-frequency words (Nation, 2008). It is therefore quite possible that the students have understanding of the

headword without fully comprehending some of the words from within the family, therefore lacking depth of knowledge of the words in question.¹

Example:

Table 3. Word families

Headword	benefit	respond	legislate
Family members	beneficial	responded	legislated
	beneficiary	respondent	legislates
	beneficiaries	responding	legislating
	benefited	responds	legislation
	benefiting	response	legislative
	benefits	responsive	legislator
		responsiveness	legislators
		unresponsive	legislature

If the test only tested for knowledge of the headwords the results could possibly be misleading and fail to establish the need for learning about the words in question. Therefore, in the former test, from sublists one and two, half of the test questions consisted of headwords and the other half of words from within the families.

Half the test words came from sublist one of the AWL and the other half came from sublist two. I chose the test words arbitrarily. Every third word from each sublist was chosen for the test and then every other word as a head word and the other half from within the families. Because of this method of choosing, some words on the test were not words I would have preferred to test because they were too easy, for example because of their relationship to Icelandic words. Furthermore, some of the words that

¹ Students who had learnt the meaning of many of the suffixes, -ive, -or, -ture etc., would of course recognize many of the family words passively. This raises the issue of word formation, which is an important subject and relevant to learning academic language, although not a part of this study.

were to be tested as family members were related to the headword to such a degree that it did not test any deeper knowledge of the word. This had some effect on the results.

Forty-six students took the test and the average ratio of correct answers from the whole exam was 65%. When sublists one and two are examined separately, the results were quite different. 85% of the questions consisting of headwords were answered correctly but only 51% of the questions including family members were answered correctly. This difference shows clearly that there is a variation between breadth and depth of vocabulary knowledge among the students and could also point to a lack of understanding of word formation. Sublist two, however, had very similar results from headwords and family members, 60% and 61%. This was somewhat predictable because of the problem mentioned above, the family members being very similar to the headwords and as the test words were selected randomly the proportion of “easier” words was, in this case, coincidental. The distribution of results was as follows:

Table 4. The results from the test of words form sublists one and two, in English 203

Ratio of correct answers	Number of students out of 46	Percentage of students
0-30%	0	0%
30- 40%	3	8%
40%-60%	20	50%
60%-80%	15	38%
80-90%	9	23%
Above 90%	0	0%

I concluded that sublists one and two would not fit the purpose of the study as it would be preferable that the majority of the words were unfamiliar to the students. Therefore a second diagnostic test was administered.

3.4 The Second Diagnostic Test: Receptive and Productive Vocabulary

Originally, I had envisaged administering the same test among English 303 students but due to their high ratio of correct answers I constructed another test shortly after the first diagnostic test, with the aim of determining the knowledge of sublists with lower frequency words. The second test, which included sublists 3, 5, 7 and 9, therefore also included a section where productive knowledge of the words was tested. Thirty-seven students took the test.

To avoid testing predictably easier words at the expense of testing words that are supposedly more difficult, I handpicked half the words on the basis of my evaluation of their difficulty. These are words with no similar words in Icelandic and rarely encountered in the textbooks used in the courses the students in question have taken, presumably because they are of lower frequency than some of the other words in the lists. The teachers of the course in question, agreed that their students were less likely to know these than other words on the lists. The other half of the test words were randomly selected as in the previous test.

The results from the receptive part of the test were considerably lower than from the previous test. Furthermore, correct answers were highest in sublist 3 and lower in each subsequent list with the exception of the random part of sublist 7. Results from all lists were considerably lower for the specifically selected words than from the randomly chosen ones, supporting my theory that even though all the words belong to the same sublist, some of them are predictably recognized by fewer students than others. The average ratio of correct words from the receptive part was 47%, more precisely 34% from the *specific selection* and 60% from the randomly picked words. A further analysis of the results is as follows:

Table 5. Ratio of correct answers in the receptive part of the test from sublists 3,5,7 and 9 in English 303

Sublist	3	5	7	9
<i>Specific selection</i>	45%	33%	32%	27%
<i>Random selection</i>	71%	56%	64%	49%
Average from both selections	58%	44,5%	48%	38%

Table 6. Distribution of results from the receptive part of the English 303 test

Ratio of correct answers	Number of students out of 37	Percentage of students
0-20%	0	0%
20-40%	15	41%
40-60%	14	38%
60-80%	8	22%
Above 89%	0	0%

As seen in table 6, the bulk of the students had between 20% and 60% correct answers. None were under 20% or over 89%. The average ratio of correct answers from the productive part was 19%, a notably lower outcome than from the receptive part. Furthermore, the students had on average 32% correct out of the randomly chosen words but only 6% out of the specifically selected words. In addition, 22% of the students had no correct answers, no student had above 56% and 86% of the students had results between 20% and 40%. This outcome is in concordance with literature on passive/active or receptive/productive vocabulary (Laufer, 1998; Nation, 2001), stating that students know more words receptively than they do productively.

Table 7. Distribution of results from the productive part of the English 303 test

Ratio of correct answers	Number of students out of 37	Percentage of students
0%	8	22%
5-20%	14	37%
20-40%	10	27%
40-56%	5	14%
Above 56%	0	0%

The outcome of the productive part of the diagnostic test was very different from the receptive part. Here, 59% of the student knew less than 20% of the words productively and no student knew more than 56% of the words.

Certain conclusions may be drawn from these results. Firstly, that there is a clear need to teach the academic vocabulary among upper-secondary English students and secondly, that there is considerable variation among the students' competence in the area. Some of the students are severely lacking in knowledge and would struggle substantially with university-level academic texts, while others would encounter fewer difficulties. A program that would bridge the gap between the most and least competent students, with regards to academic vocabulary knowledge, would have to be tailored to suit individuals with diverse needs.

3.5 Conclusions Drawn from the Pre-study

The results of the diagnostic tests from sublists 3, 5 and 7 of the Academic Word List led to the conclusion that sublist 7 would be the appropriate vocabulary to teach in English 303. As each sublist contains only 60 words, sublist 8 was added to the study curriculum to raise the number of target words to a 120. It might be argued that 60

words would suffice; however, if the whole AWL is to be covered in upper-secondary English, two lists per term would be an absolute minimum. I wanted to develop a teaching plan that would be practical in the sense that it would successfully teach the students the target vocabulary while still covering an appropriate amount of words. Teaching fewer words would perhaps show more progress among the students but in practice, only a certain amount of time can be afforded to specific vocabulary per term. The program would have to realistically represent the amount of words that could be covered in a term.

The diagnostic test had also confirmed my hypothesis that some words on the lists are predictably less known by the students than others and that the lists include many words that a large portion of the students know already.

3.6 Selecting Which Words to Test

It was clear at this point that the words within each sublist were not all equally well known by the students. It was therefore important to examine whether the AWL is the most advantageous criterion for choosing academic words to teach at this level of education. Could it be that the list represents words that are important to know but that some of which are not necessarily important to teach, as many students know them already? This would have to be considered in the choice of words to include on the pre- and post-tests.

In order to objectively establish the students' knowledge of words from a specific list, the words on the test must be chosen randomly. Nonetheless, doing so would not sufficiently represent the need to teach specific words on the lists. After the first diagnostic test, it became clear that this was the case and that if the words on the test were only selected randomly, the results would not show a precise enough picture of the

students' knowledge. A plausible solution was to select a part of the words for the tests randomly and another part specifically, choosing words that were likely to be more difficult for the students than others. This arrangement would allow for a twofold analysis of the students' knowledge of the words on the list and establish or invalidate the theory that some of the words will be predictably less known by the students. I asked my fellow teachers to go over the lists and select words they deem more difficult than others for the students in question. As a result, the words on the tests were divided into two categories, a *specific selection* and a *random selection*.

3.7 Instructional Treatments and Materials

For the purpose of this study, I designed a vocabulary learning program to teach the target words explicitly, applying the established principles of vocabulary learning that were discussed in the literature review.

Three main elements are prominent in the design of the material: a focus on depth of processing, repetition and inclusion of learning techniques in the instructional process. Recall that depth of processing has been identified as a major factor in ensuring the retention of lexical knowledge. Repetition of the target words was acquired through activities where students revisited the words through class activities and the process introduced learning techniques that the students could use learning vocabulary in the future.

Twenty words (the *specific selection*) had been chosen to test specifically. These are commonly not known by the students, thus they were also taught to the whole class. As the students' knowledge of the remaining words varied, each student could learn only the words he/she needed to learn independently.

The remaining 100 words were then divided into four groups of twenty five. Once a week, a productive test containing twenty five words was administered to the students. At the end of that class the students received a list containing specifying which words they had to work on. The following week they would hand in their vocabulary cards and take a test with the next twenty five words, and so on.

The learning method includes the following five steps:

Step 1: Students are prepared for participation in the program.

Step 2: The twenty words of the *specific selection* are taught explicitly in class using a method including vocabulary cards.

Step 3: The students use the method learned in step 2 to learn the remaining 100 words independently. This includes self-tests that determine which words each student needs to learn.

Step 4: Vocabulary card activities are used to revisit the words learned in steps 2 and 3.

Step 5: Students read texts that include the target words and take an oral exam from those texts.

3.7.1 Preparing the students for participation

Prior to the treatment, even before the pre-test was administered, I met with the treatment group (from now on the Study Group) and presented the study and the program to them. We discussed how much of the reading material in Icelandic universities is in English and the percentage of words in a text one needs to know to fully understand the text. Then I introduced the Academic World List and explained the coverage of the list in academic texts versus the texts they are used to reading and spoken language. I wanted them to understand that having a good ability to use the English language at their level of studies and communication was not necessarily

sufficient to cope with English texts at the University level. To demonstrate this I copied the first page of a novel the class was reading and asked them to read it and tell me whether they understood what it was about. Then I showed them an equally long portion of an academic text and asked them to do the same (see appendix A). Most students seemed surprised and said they found it much more difficult or even incomprehensible. I then showed them the academic text again, this time highlighting all the words in it that belong to the AWL, roughly 10% of the text, or approximately one academic word per line. My hope was to illustrate memorably the importance of learning the target vocabulary, and hopefully thus motivating the students.

By raising the students' awareness of the importance of the vocabulary for further studies I hoped to motivate them internally, appealing to their will to learn to better themselves and become more competent in their future endeavours. Grades can provide external motivation and therefore the students' success was rewarded with grades. The final grade for this particular course is divided in two: 50% for a term grade which includes their homework and performance in assignments and tests during the term, and 50% for the final exam. However, the students who receive 8,5 or higher on their term grade are not required to take the final exam and their term grade becomes the final grade. Many of the students find this worth striving for. As the program demands a considerable amount of work on the students' behalf, the class teacher and I thought it fair that it would account for a fair portion of the term grade. This would also motivate the students to study for the post-test. The post-test therefore counted 10% of the term grade and a grade for handing in their vocabulary cards counted for 5%. Thus it would count as 15% of the final grade for the students who received an average grade of 8,5 for the term.

3.7.2 Teaching the selected words.

After administering the pre-test, the teaching began. In the first class I explained the method to the students and introduced the concept of a vocabulary card with four sides.


The vocabulary cards are made from A5 sheets that are folded in two. The students write the head word in English on the front of the vocabulary card and on the back they write an English explanation and an Icelandic translation. The vocabulary card can be opened where there are two more sides. On the first side, the students write a mnemonic technique with key words and perhaps draw a picture and on the second they write original sentences that include family members of the target word. Here, I also explained the concept of the word family. The contents of all four sides of the vocabulary cards were provided in the first part of the process, where the first 20 words would be presented.

How to make a 4 sided vocabulary card



Front: The target word	Back Definition in English Meaning in Icelandic
Inside 1 Key word Picture Description of a mental picture Sentence with the key word	Inside 2 Family members in sentences Example sentences

Example

<p>Front:</p> <p>Automate</p>	<p>Back:</p> <p>To make something operate automatically</p> <p>Að gera sjálfvirkt</p>
<p>Inside 1:</p> <p>Keyword: auto + mate</p> <p>Imagine some one you know who is married or your girlfriend/boyfriend turning into a robot thus becoming automated.</p> <p>Perhaps a picture</p> 	<p>Inside 2:</p> <p>Family members:</p> <p>automatic (adjective) automated (adjective) automates (verb) automating (verb) automatically (adverb) automation (noun)</p> <p>Write sentences including these family members.</p>

Students received coloured paper and an envelope to put the cards in. Four different colours were available but each student used only one colour. The purpose of this arrangement was to facilitate pair or group activities, where each participant would have a different colour so that the cards could be easily differentiated in activities where students would combine their cards. The students were asked to bring the vocabulary cards to class at all times so they would be available to work on them when convenient.

The first twenty words were taught in ten consecutive classes. The words were taught two at a time, paired so that words that are morphologically or phonologically similar were taught together to avoid interference as learners can easily confuse similar words (Nation, 2001; Coxhead, 2006).

For the first two classes I came and presented the material myself to get the students and teacher started. For the remaining eight classes, the class teacher presented the words at the beginning of each class. The words were introduced on slides and students made notes directly on to their vocabulary cards. Each word took 3-4 slides and the same method was then repeated.

First, a word was introduced and the students wrote it on the front of their vocabulary card. Then two example sentences were given, the students were instructed NOT to write them down. The example sentences are in rich context to facilitate the students inferring the meaning. In the first slides the class did

1 Convert

- Sólrún became a different person when she **converted** from Christianity to Bhuddism.
- They **converted** Lilja's bedroom into a gym because the weather was too bad to go for a run.
- What part of speech is **convert**?
 - What do you think it means?
 - Why do you think that?

this together with the teacher but after that students discussed the words in pairs. This part of the method combines three factors: student co-operation, training in inferencing from context and negotiation for meaning. Recall that inferencing skills are important for further learning of vocabulary and negotiating for meaning promotes retention of lexis. The teacher takes part in this process to begin with to familiarize the students with the method but after that the students discuss the words in pairs as co-operation by the students can be very beneficial (Schmitt, 2000).

The students first deliberated the question: what part of speech is the word? The idea is to maximize the attention given to each word as that has been shown to increase retention as well as helping with the inferencing process.

After a discussion, a simple explanation in English and an Icelandic translation were given, which the students wrote on the back of the vocabulary card. This would make certain that the meaning is clear to the students. It would

Convert

- To change something into a different form.
- Umbreyta.
- Keyword: **converse**
- See yourself taking off a converse shoe and **converting** it into a convertible, with magic!



also demonstrate more than one manner of displaying meaning so the students could use the method they are most comfortable with.

Next a mnemonic technique was used to deepen the process of learning the word. Key words were used to create a mental image and the slides included sentences that connected the key word, the target word and its meaning. As recommended by Nation (1990, 2001) and others, pictures were used to provide a visual connection, facilitating retention.

I provided keywords and pictures for the first ten words to introduce the method. For the next ten words the class and teacher worked together in making a mnemonic for each word, to start training the students in making they own keywords as they would do so for the remaining 100 words.

I provided the teacher with keyword ideas to fall back on should it prove difficult to activate the students. However, they were generally motivated to find key words and no problems arose.

In the last slide students were asked, in pairs, to write sentences that included the members of the word families. The parts of speech were given, at this stage, to facilitate that and previously the nature of adjectives and adverbs were reviewed. Nation & Beglar (2007) believe that working with the word family can be beneficial. Studying related words in different contexts provides an interesting perspective which will advance the chance of both retention and development of vocabulary depth.

The purpose of this part of the process was twofold: to introduce related words, contributing to depth of knowledge, and to train the students in using the words productively, thereby deepening the thought process and strengthening their

Write sentences in your vocabulary cards that include these family members

- convert (verb)
- conversion (noun)
- *converted* (adjective)
- convertible (noun)
- converting (verb)
- converts (verb)



knowledge. The slides for this part of the program are in appendix A. Getting the students to write original sentences proved problematic. The students complained that they did not know how to write an original sentence using a specific given word and needed more time than we had anticipated. This surprised us. Consequently, I reduced the number of family members on each slide, from which students chose one or two to include in an original sentence, to avoid exceeding the time limits previously agreed upon.

3.7.3 The remaining 100 words learned independently.

After the first twenty words were taught with this method, the students started learning the remaining words independently. At this point the previously mentioned productive tests were administered once a week. The words that the students knew with enough strength to use productively on the test were not included in their personal curricula. The students then had one week to make the vocabulary cards with the remaining words, which they handed in at the end of that time, when the next 25 words were tested.

The students were meant to undertake most of this work during the English lessons, although students with the least correct answers on the exams would have too many words to work on to finish in class and would have to do homework as well. However, shortage of time lead to less class time being given to the project than anticipated. By the end of this part of the process all students had had the opportunity to work with all the words they did not already know. However, as the second part required the students to work independently and outside the classroom, we had less control over the amount of work the students put into the project. Alas, there will always be students who do not complete their homework (Hunt & Beglar, 2005), even if

it is mandatory and affects the term grade as in this case. It is worth noting that we did not have unrealistic expectations in this matter.

The students were required to fill out all four sides of the vocabulary cards. However, they could choose how to do so, applying the methods they found most interesting or convenient, remembering that successful learners know and use various methods to learn new vocabulary. The students decided whether to provide translations, English explanations or both but they had to look the words up and therefore apply *evaluation* to choose which meaning to write down. Some used keywords, either in Icelandic or English and others used pictures and they chose which family members to use for their production of original sentences. When I went over and graded the cards I made comments where the cards did not fulfil all requirements to guide the students in their next batch of cards.

3.7.4 Activities using vocabulary cards.

As discussed earlier it is crucial to revisit words in order to facilitate their retention as each encounter will strengthen the knowledge of the target words. Vocabulary card activities provide repetition of the target words. To ensure the participation of all students, the activities were conducted in class and not assigned as homework.

After learning the first twenty words, the students started using their cards in activities they could later use independently, for instance to study for an exam. The following three activities were used:

1) Students test themselves or each other: This activity is simple and convenient in class or as homework and students can use it alone or in groups. It is also a very good way to study for an exam. First, recognition is trained by facing the English word and asking what the meaning is. When the student cannot answer, the card is opened and the mnemonic key words, pictures and sentences with word families are used as clues to help the student remember the meaning of the word. When a word is recognized it is put aside and the student is quizzed until all the cards are on the side, all questions then having been answered correctly. Words will be repeated until all words have been recognised.

Secondly, recall is trained by facing the meaning and asking for the target word. Again, the correct definitions allow for the cards to be removed from the pile and the questions are repeated until the pile is empty.

In both variations, all participants give attention to form and meaning and revisit words they have learnt before. The students that did not have their cards were assigned to groups with students who had their cards so they could take part.

2) ALIAS for academic vocabulary: Henriksen (1995) recommends tasks where webs of associations are made. When various aspects of the meaning of a word are linked, it can strengthen the knowledge of lexis. I therefore designed a task activity where students had to make connections between the target words and other words and concepts. This activity as the game “Alias”, which is a popular board game that most students are familiar with. Students take turns giving various clues about a word on their cards without saying the word itself while the other students try to guess the word in question. For the student guessing, this activity will exercise the retrieval of the target words and for the ones asking the question it will require a thought process where the

student has to understand the word fully and make connections to other words which ought to provide for a deep level of processing the word.

3) Making a cloze exercise: Each of the students chose ten words they wanted to work on and made a cloze test where the ten words in question would be the answers. They then switched papers and took the quiz their partners had made. The papers were then returned to their creators who graded them and finally showed their partners which mistakes they had made. This exercise requires both a deep level of processing and trains the retrieval of words.

All activities turned out well in practice although more time would have been required for the cloze exercise. A fourth activity had been planned but was abandoned due to a lack of time.

3.7.5 Providing incidental exposure to the target vocabulary for Control Group One.

One of two control groups (CG1) participating in this study was to be exposed to all target words incidentally by reading texts they were included in. Such texts needed to be provided and students needed to be motivated to read them thoroughly. The texts in question were therefore the subject of an oral exam. The students would have to gain understanding of the vocabulary to fully understand the texts and be prepared to discuss them on the exam. Whether that would cause retention of the target vocabulary would be seen in the post-test of the control group. The study group would also read the texts and take the oral exam so a comparison of the results from the oral exam of the study group and control group one would provide an opportunity to examine whether

having learnt the vocabulary prior to reading the texts would enhance the study group's understanding of the material.

3.7.6 Composing graded readers.

After extensively searching for graded readers including the target vocabulary, with no results, I concluded that I would have to construct the texts myself. In a new national curriculum for Icelandic upper-secondary schools, six foundations for educations are among the core elements. These foundations are to be interwoven in all subjects, influence choices in teaching material, methods and communication. The foundations are the following: Literacy, self-sustainability, health and wellbeing, democracy and human rights, equality and creativity (Aðalnámskrá framhaldsskóla, 2012). These foundations became the topics of the reading texts and after sorting the 120 target words into groups according to which of the subjects they were likely to fit with, four subjects remained: equality, human rights and democracy, self-sustainability and media literacy. I wanted to use authentic texts, rather than writing them myself so I then looked for interesting articles on the subjects. I then combined various articles and added or rephrased sentences to include the target vocabulary. In some instances vocabulary from the target sublists was already present in the texts. The articles can be found in appendix C.

3.8. Research Questions

Having identified the appropriate academic vocabulary to teach to the students in question, constructed a learning program to do so and devised a study to measure the

impact of the treatment, I hoped the study would answer the following research questions:

1. Is there a need to put special emphasis on academic vocabulary in upper-secondary English in Iceland or does the current course of study address this issue adequately?
2. Do the students have greater receptive than productive knowledge of the target words?
3. Does explicit vocabulary teaching result in better retention of the target vocabulary than incidental exposure from reading?
 - a) Is there a gain in the target vocabulary among students whose curricula do not include academic vocabulary specifically?
 - b) Does the pre-teaching of the target vocabulary affect the understanding of academic texts that include the vocabulary in question?
 - c) Is the sublist division of words in the AWL suitable for the purpose of selecting vocabulary for Icelandic upper-secondary students or should the words be categorised by different criteria for this particular group?

4. Methodology

As discussed earlier, this is a two part study including the teaching material used and the assessment of the subsequent development of the students' vocabulary knowledge. This chapter will describe the methods used to conduct the study and collect data. First, I will describe the participants of the test groups and the materials used for the test and treatment. Next I will outline the test administration and instructional period. Finally, I will describe the data evaluation and analysis.

4.1 Participants and Test Groups

All participants in the study were students of the course English 303. They were therefore in their third term of English at Upper Secondary level, having studied English for at least eight years in total. The number of participants was 122, 77 boys and 45 girls. Their age ranged from seventeen to twenty years, depending on their age upon starting upper- secondary education and order of subjects chosen.

The participants were divided into three test groups: the study group and two control groups.

1. The Study Group (SG): received explicit teaching of the target vocabulary and underwent all five steps of the treatment detailed in chapter 3.7.
2. Control Group One (CG1): received only step five, incidental exposure of the target words, detailed in chapter 3.7.
3. Control Group Two (CG2): received no treatment.

The SG and CG1 were both in school A and had the same teacher and CG2 was in school B with a different teacher. The results from CG1 would allow for a comparison of explicit

and incidental learning of the target words while CG2 would allow for a comparison with a group with no specific focus on academic vocabulary.

The SG consisted of two classes, a total of 62 students and the control groups had 32 and 28 students each. In order to select which two of the three classes school A would be the control group, and therefore not receive the vocabulary program, we simply referred the time table. The classes chosen for the study group always succeeded each other, which was convenient because I could then be with both groups in one visit to the school. The class that was taught on other days therefore became CG1, CG2 two being in another school.

The Study Group consists of two classes that received the treatment as described in chapter 3. One group had 30 students, 21 boys and 9 girls that were generally diligent and positive toward the material. The second group had 32 students, 24 boys and 8 girls, and included more students that appeared uneasy and keeping their attention was more challenging than in the first group. However, the grades between these two groups were very similar and although the first one seemed to have more diligent students, the other had a handful of students that had very good vocabulary (according to the tests used in the study) although they had difficulty keeping their attention on the material in class.

CG1, which consisted of 32 students, 17 boys and 15 girls, was, according to their teacher, an outstanding class that included many diligent students. She was content with the division of classes we had made according to the time table because she believed this class had students that needed the vocabulary program the least. The pre-test showed a higher average grade for this group than the classes in the study group. Later in the term a comparison of the average grades of the study group to those of control group one confirmed their teachers' assessments. Apart from the vocabulary program for the study the three groups had the same material and grades from essays,

presentations, other vocabulary tests and quizzes from the novels they were reading, could be compared. The comparison revealed a consistent difference: the average grades of this group (CG1) were higher than the grades of the students in the study group in all accounts. The difference was not substantial but it was consistent.

CG2, which had 28 students, 15 boys and 13 girls, was in another school and had a different curriculum so a comparison of term grades could not be made.

4.2 Materials

The materials used in the study are mainly twofold, the tests (the same used for the pre- and post-tests), and the treatment materials used for teaching, detailed in chapter 3.7.

Additionally, a short survey, to evaluate the students' attitude towards the teaching program was administered.

The pre- and post-tests are identical, which is acceptable given the fact that they were administered with over three months apart. The test is in two main parts, each contain two sections.

- Part one: Thirty-five cloze questions testing productive knowledge of the target words (example in chapter 3.2). All words in part two were also tested in part one.
- Section 1A: twenty questions with words from the *specific selection*.
- Section 1B: fifteen questions with words from the *random selection*.

- Part two: Fifty multiple choice questions testing receptive knowledge of the target words (example in chapter 3.2).
- Section 2A: twenty questions with words from the *specific selection*.
- Section 2B: thirty questions with words from the *random selection* (see chapter 3.6 for description of *specific* and *random selection*)

The test can be found in appendix G.

A post-test survey was also conducted to examine the students' attitude towards the program and the methods used to learn the target vocabulary. The questionnaire for the survey can be found in chapter 5.4.

4.3. Procedure

The study was conducted in the fall semester of 2013. The pre-test was administered in the beginning of the semester and the post-test towards the end of the semester. The treatment was given in the time between. A post-test survey was also conducted to examine the students' attitude towards the teaching material. This section will describe the test administration and the instructional period.

4.3.1 Test administration.

In school A, where the SG and CG1 were, the pre-test was administered in the second week of the semester and the post-test in the fifteenth week of the semester. Each class was divided between two classrooms so the test could be administered to the whole class at once. After finishing, the students returned to their English 303 classroom where they worked on individual assignments. Thus students were under no pressure for time. The SG and CG1 were tested electronically, using the Open Source Management

Program Moodle. The program shuffles all questions to preventing the students from seeing each other's answers. To avoid questions in part two to influence the answers in part one, the first part of the test has to be completed in order to open part two, that can then not be reopened.

The pre-test was administered to CG2 in school B in the second week of the semester and the post-test in the fifteenth week. Due to various circumstances the test was administered on paper. The paper version also had shuffled questions and the first part had to be handed in before the students received the second part.

After the study group concluded the post-test, they were asked to comment on the teaching material in a post-test survey. The questionnaire can be found in chapter 5.4, where the results will be detailed.

As the vocabulary program and study were a part of the curriculum and evaluation of the study group the tests in school A were not taken anonymously. The school administration felt that even for CG1 the tests would not have to be anonymous as the study was considered to be well within the normal proceedings of the school. The administration further felt that no specific permits would be needed. For CG2, however, there did not seem to be any need to connect each test to a specific student and the tests were therefore taken anonymously. Furthermore, identifying the tests by name would have required permits, as the study had no further implications for the course than the two short periods when the pre- and post-tests took place.

4.3.2 Instructional period.

The following will describe when the five steps of the instructional period, detailed in chapter 3.7, were implemented for the SG.

The first step of the treatment, preparing the students, was conducted after the pre-test, in week two. Step two, the explicit teaching of the *specific selection* words, was conducted in ten consecutive classes during the second to fifth weeks of the semester. Step two, learning the remaining 100 words independently, was conducted in weeks six through nine. During the step two period, step three, vocabulary card activities, was also implemented to some extent and further practiced in weeks ten to thirteen, when the students also received the texts in step five which they used to prepare for the oral exam administered in week fourteen.

The SG and CG1 received step five of the treatment simultaneously and, as previously stated, CG2 received no treatment.

4.4 Data Evaluation

Moodle, the computer program used to administer the tests, can grade the multiple choice part automatically as there is only one possible answer. In the cloze test, however, students write the target word instead of choosing between answer possibilities. As this is not a spelling test, variations in spelling of the target words were accepted as a correct answer. I went over the productive part of the test, manually adding to the list of correct answers all variations in spelling that met the criteria of the exam. Any version of the target word that when read out loud would be understood clearly was considered close enough to be accepted. For example, the possible variations

of the word *differentiate* included the following versions: *diferenciante*, *diferanciante*, *differentiate*, *diffarenciate*, and so forth.

Apart from the main part of the study, the pre- and post-tests, a few other factors were evaluated. The results of an oral exam were used to compare the SG and CG1 and a post-test survey was used to evaluate the SG's attitudes towards the teaching material. Also, a comparison was made between the progress of the students who completed their homework, and those who did not.

4.5 Data Analysis

4.5.1 Analysis of the scores on pre- and post-tests.

Two types of data analysis were performed, by two analysts, myself and a statistician. The analysis made by the statistician only includes test results from students that took both pre- and post-test. This analysis revealed that the mean difference between the pre- and post-test was -41.2 ($SD = 26.29$), which is statistically significant $t(49) = -11.08, p < .001$ (two-tailed). In other words, the mean of grades increased by 41.2 for the students that received the explicit teaching of the target words. The table in Appendix I shows a statistically significant difference in all four parts of the test for the study group. Neither control group shows any significant difference between pre- and post-tests.

My own analysis included all tests performed and will be discussed in detail in chapter 5. Pre-and post-tests were compared with regard to all four parts of the test. My analysis includes means and standard deviation. Grades were given in percentage of correct answers.

Furthermore, data from the pre-test was used to identify the words that received the lowest and the highest ratio of correct answers. The top and bottom ten words were

then analyzed further with regards to their frequency in genres other than academic literature. The purpose of this analysis was to attempt to explain why some words within the AWL are predictably better known by the students than others, even though they belong to the same sublists of the AWL.

4.5.2 Analysing the affect of the treatment on reading comprehension.

As discussed in chapter 3, step 5 of the treatment involved reading texts that included the target vocabulary. The texts were the subject of an oral test that was administered to the students. The Study Group and Control Group One took the same oral test. Both groups read the same texts, that included the 120 target words of the study, but the SG had had explicit pre-teaching of the words in question whereas CG1 did not. The instructions were to read the texts thoroughly to gain full understanding of their content, which they would then be asked about on the oral exam. The oral test was administered by the students' class teacher. Grading was based on the students' understanding of the articles and English proficiency. I compared the grades of the SG and CG1 and found that the SG had a slightly higher mean. The results of the oral exam will be further discussed in chapter 5.3.

4.5.3 Analysing the highest and lowest scoring words on the pre-test.

It is well known that there is a strong correlation between the frequency of words and how well and in what order students learn them. That said, why are words that are equally frequent in the AWL clearly not equally well known by the students in the study? Furthermore, why could the teachers predict which words they would be? One reason might be that although they are of high frequency in academic texts they

could be of a much lower frequency in spoken language and fiction than many of the other words on the list. According to Laufer et al (2004) the words on the AWL include words that are among the third to the fifth thousand most frequent and also other less frequent words. Therefore the ordering of words on the AWL into sublists according to their frequency in academic text does not apply in other contexts and their order of frequency is different in general texts.

In order to examine this further I looked up the frequency of the words in genres other than academic language, using information about word frequency. The words all belong the sublists 7 and 8 of the AWL and are therefore of equal frequency in academic language. I analysed the results of the receptive part of the pre-test and found which 10 words most students knew and which 10 words the fewest number of students knew. I then looked at their frequency in two ways: frequency in general and frequency in spoken American language. To do this I used the Corpus of Contemporary American English (<http://corpus.byu.edu/coca/>).

The main reason I chose the American Corpus is that my impression is that the students are exposed to more American English than British English, especially through television. The reason I chose spoken language specifically is that it is probably the genre that most closely resembles the language the students are exposed to through the media.

5. Results

This chapter discusses in detail the results of the study. First, the pre-test will be discussed specifically and then the pre- and post-tests will be compared. This will reveal how the test scores were raised as a result of the treatment for the SG. The SG results will then be compared to the post-test results of SG1 that received only the incidental exposure part of the treatment, and SG2 that received no treatment.

The productive- and receptive parts of the test represent different levels of strength of word knowledge and will therefore be analysed separately. Furthermore, I expected a consistent difference between the students' knowledge of words from the *specific*- and *random selections*; they will therefore also be viewed independently. I will also compare the specific parts of the tests between the three groups with histograms to graphically show the grade distribution. Furthermore, I will discuss the results of the post-test survey that was intended to evaluate the students' attitudes towards the treatment and make a comparison of the test scores of the students who handed in their homework and those who did not. Finally, I will explain how a word's frequency in other genres than academic, can predict how well the students will know that word.

5.1 Pre-test Results

5.1.1 The productive part of the pre-test.

The percentage number in the mean column of Table 8, refers to average percentage of correct answers. The standard deviation (SD) column shows how wide the distribution of grades was from the average. Where SD is low, it indicates that the students do not vary much in their knowledge of the target words but the higher the SD the more the variation of knowledge among the students.

Table 8. Results from the productive part of the pre-test

	Study Group		Control Group 1		Control Group 2	
	Mean	SD	Mean	SD	Mean	SD
Total Mean	16%	0,14	21%	0,12	18%	0,15
<i>Specific selection</i>	4%	0,08	3%	0,05	6%	0,09
<i>Random selection</i>	32%	0,25	44%	0,25	39%	0,28

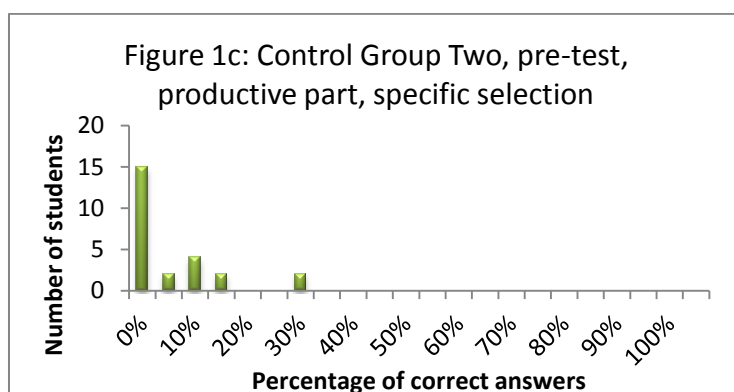
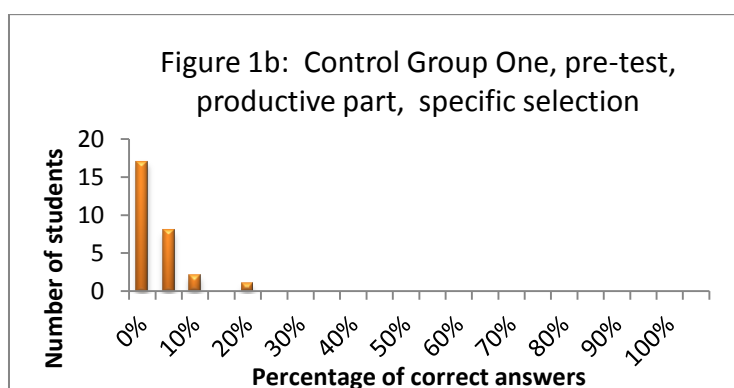
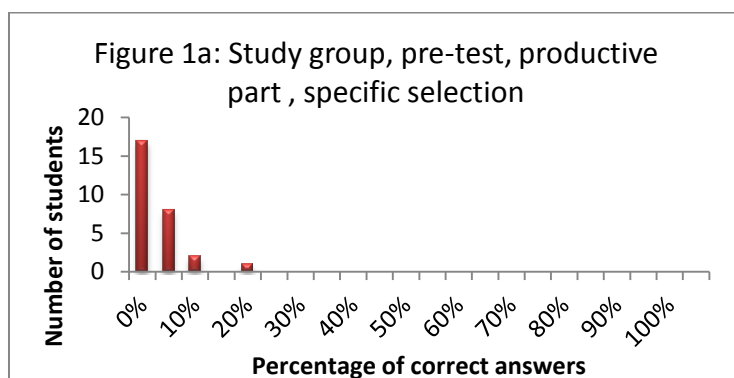
As seen in table 8, the over-all results from the productive part of the pre-test were fairly similar between all groups. The mean for the whole test is 16% for the study group (SG), 21% for Control Group One (CG1) and 18% for Control Group Two (CG2). As expected, all groups are significantly lower on the *specific selection* words than the *random selection* words. In fact, the scores on this particular part were so low that the average ratio of correct answers was around one out of 20 questions. The difference between the groups is the highest in the *random selection* words, where CG1 has 44% whereas the other groups have 32% and 39%. As said before, this is consistent with other grades in the course. CG1 seems to be a bit higher in average over-all in the pre-test, as well as term grades in general when compared to the study groups in English 303.

In this part of the exam the standard deviation is also very similar between groups. The SD is very low for the *specific selection*; in all groups the SD is below 0,1 or 10% which means that the grades are distributed very closely to the mean because all grades are low. The SD for the *random selection* is much higher (0,25 or 25%), indicating a wider range of grades. This shows that the students' competence in the more frequent words is much wider in range than that of the less frequent ones. This would tell us that even the students that have a high score in the *random selection* are lacking in their knowledge of the words from the *specific selection*. However, it is interesting that in this

part where there is a clear difference in mean of the *random selection* between groups, the SD is nevertheless the same for the SG and CG1 and only a fraction higher for CG2. This would suggest that although the groups differ in means, the distribution of grades from the average is the same.

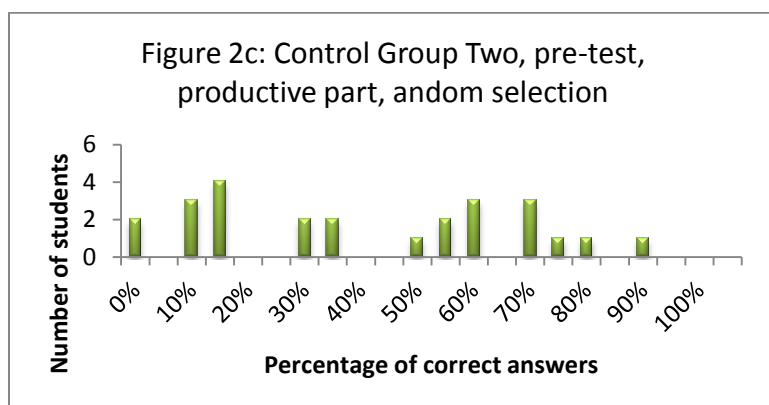
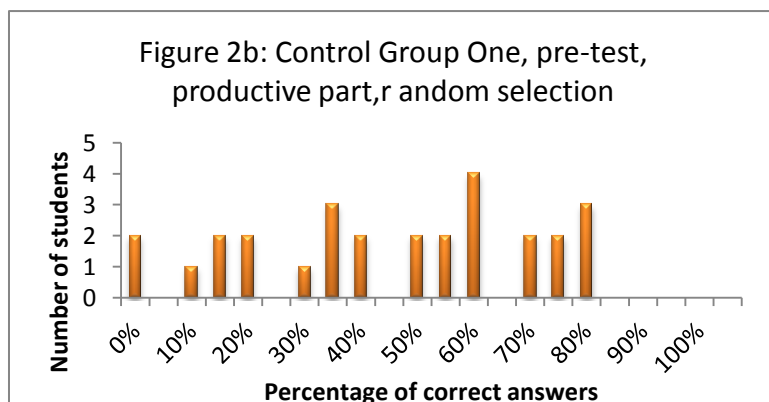
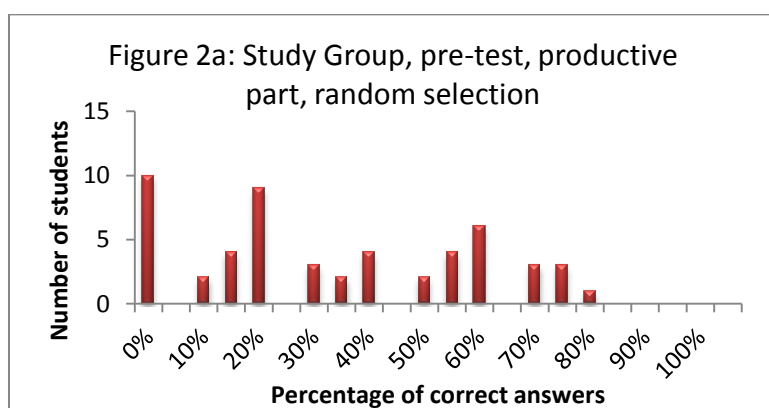
The following figures show the distribution of grades from the *specific selection* words of the productive test for the SG, CG1 and CG2.

Figures 1a, 1b and 1c: Distribution of grades from the *specific selection* words of the productive pre-test for the SG, CG1 and CG2.



In all groups the vast majority of students have below 10% ratio of correct answers. The highest score was 35%, with only 3 students between 20 % and 35%. This shows a consistent and severe lack of productive knowledge of the words that were tested.

Figures 2a, 2b and 2c: Distribution of grades from the *random selection* of the productive pre-test for the SG, CG1 and CG2.



The results of the *random selection* are quite different from the *specific selection* and the grades are higher. The distribution of grades is from zero to 90% correct answers. Very few students are above 80% but below that the grades are quite evenly distributed. The Study Group is somewhat lower than the control groups, 68% of its students having 50% or fewer correct answers and 32% of the students answering more than 50% correctly. 54% and 56% of the Control Group students have a 50% or lower ratio of correct answers.

5.1.2 The receptive part of the pre-test.

Table 9. Pre-test, receptive part

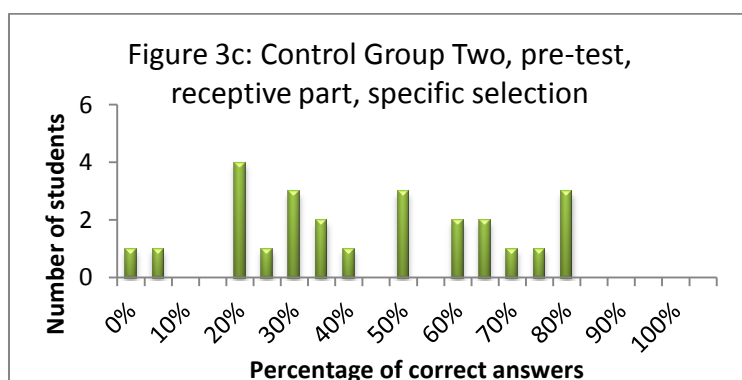
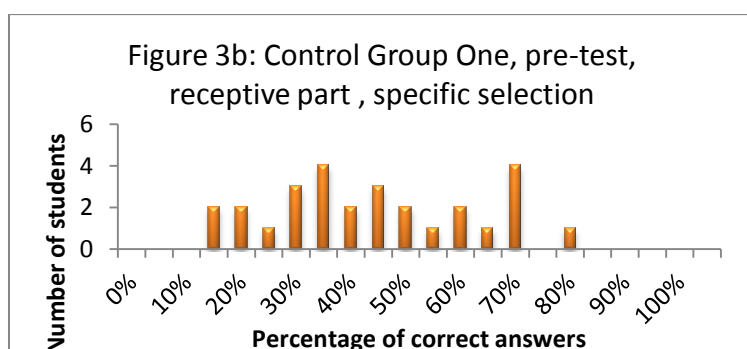
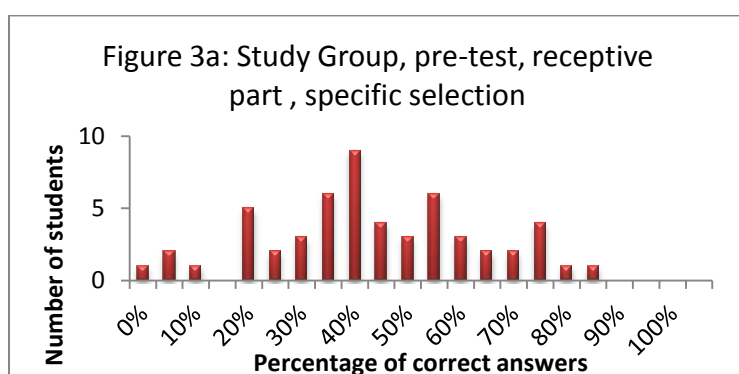
	Study Group		Control Group 1		Control Group 2	
	Mean	SD	Mean	SD	Mean	SD
Total Mean	58%	0,20	61%	0,17	58%	0,21
<i>Specific selection</i>	44%	0,20	44%	0,19	44%	0,24
<i>Random selection</i>	68%	0,21	72%	0,19	67%	0,22

In accordance with other studies (Laufer et al, 2004), the scores on the receptive part of the test are significantly higher than those of the productive part. CG1 is slightly higher than the other two groups, although all groups show similar results, between 58% and 61%. Interestingly, all groups average on exactly 44% of the *specific selection* words and on the *random selection* words CG1 is slightly higher, at 72%, than the other two, at 67% and 68%. As in the productive part, the *specific selection* words are also significantly lower than the *random selection* words. The standard deviation is very similar between the groups.

The SD numbers in this part are very different from the productive part. As said before, the productive part showed a much lower SD for the *specific selection* than the

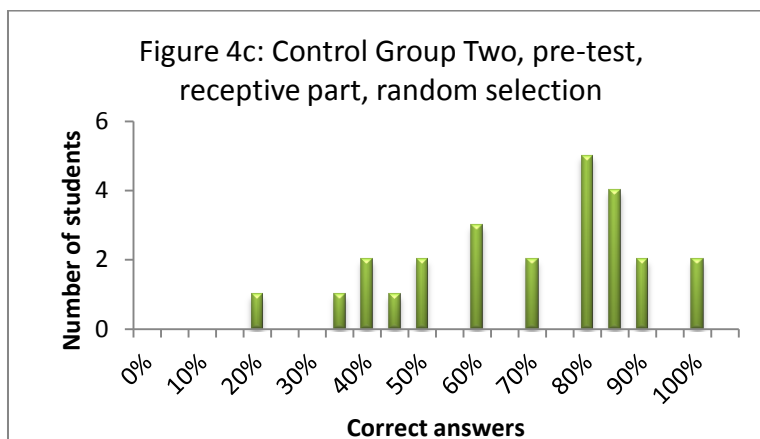
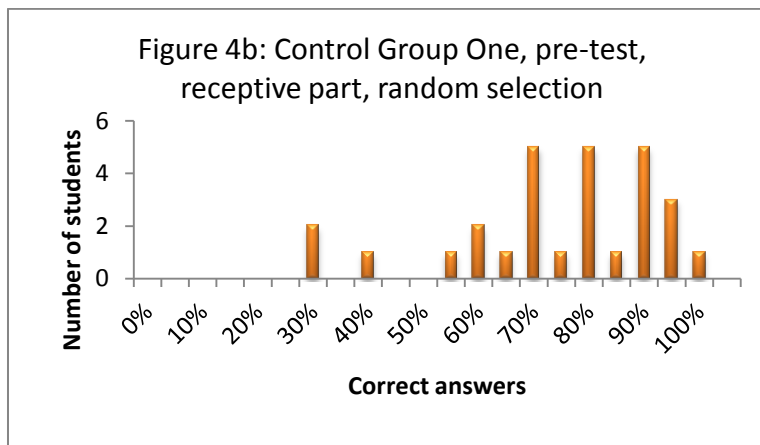
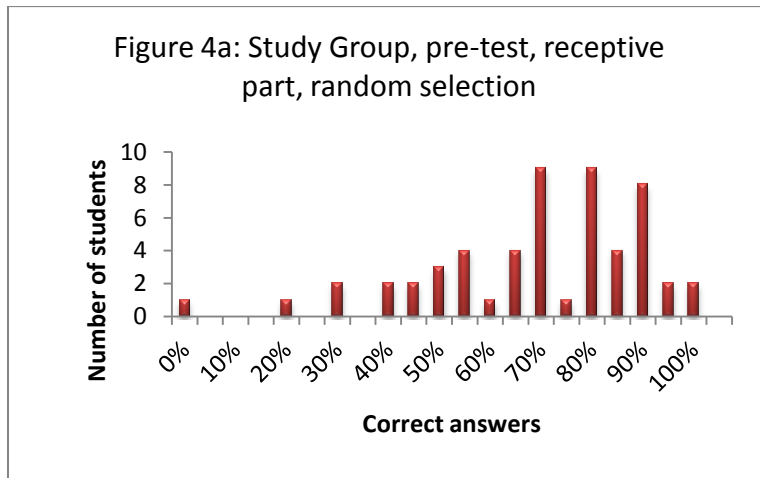
random selection because students varied in their knowledge of the *random selection* but all grades were low in the *specific selection*. Here, however, the range of grades from the average is the same for both random- and *specific selections* even though the mean is much higher for the *random selection*. The range of the students' receptive knowledge is therefore much wider than that of their productive knowledge.

Figures 3a, 3b and 3c: Distribution of grades from the *specific selection* words of the receptive pre-test for the SG, CG1 and CG2.



Here, 65% of the SG have 50% or fewer correct answers and the control groups are similar, 68% of CG1 and 64% of CG2.

Figures 4a, 4b and 4c: Distribution of grades from the *specific selection* words of the receptive pre-test for the SG, CG1 and CG2.



The receptive part of the pre-test that examined the randomly selected words is the part where the groups' results varied the most. It is also the part of the test where students generally showed the most competence. The students in the SG scored on

average 32% whereas CG1 averaged on 44% and CG2 on 39%. However, both the SG and CG2 had 20% students that scored 50% or below. Only 11% of CG2 scored below 50%.

The SG had the lowest ratio of students scoring 75% or above, 47% whereas in CG1 52% of students scored 75% or above and 57% of CG2 did the same.

5.2 Post-test Results

Table 10. Comparison of pre- and post-tests

	PRE Study	POST Group	PRE Control	POST Group 1	PRE Control	POST Group 2
Productive test	16%	56%	21%	22%	18%	22%
Productive <i>specific selection</i>	4%	44%	3%	6%	6%	5%
Productive <i>random selection</i>	32%	71%	44%	43%	39%	45%
Receptive test	58%	78%	61%	57%	58%	60%
Receptive 20 <i>specific selection</i>	44%	70%	44%	44%	44%	45%
Receptive <i>random selection</i>	68%	83%	72%	67%	67%	71%

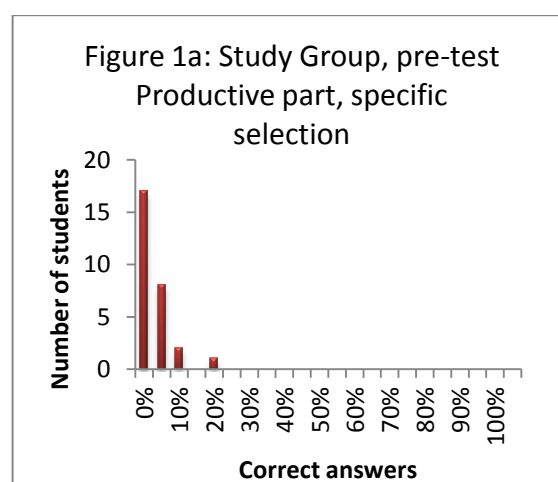
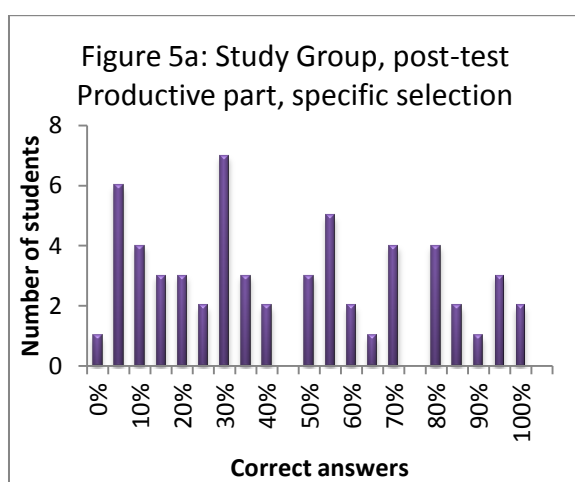
The results show a considerable increase in knowledge among the study group on all parts of the test. The total average grades of control group one are the same at the beginning and end of the term on the productive part but there is a slight decrease in the receptive part. Control group 2 shows a very slight raise in both productive and receptive parts. What I find interesting in the CG2 group is that the students do show slightly increased knowledge on the randomly selected words, i.e. the ones that are more common in spoken language. However, CG1 shows decreased knowledge of the same words. The difference is not significant and one plausible explanation for the decrease in mean may be that some of the students did not take both exams.

5.2.1 The productive part of the post-test.

The mean from both sections (*specific*- and *random selections*) of the productive part of the test reveals a significant raise in scores for the SG, from 16% to 56%. Both control groups show little change between pre- and post test, CG1 ranging from 21% to 22% and CG2 from 19% to 22%.

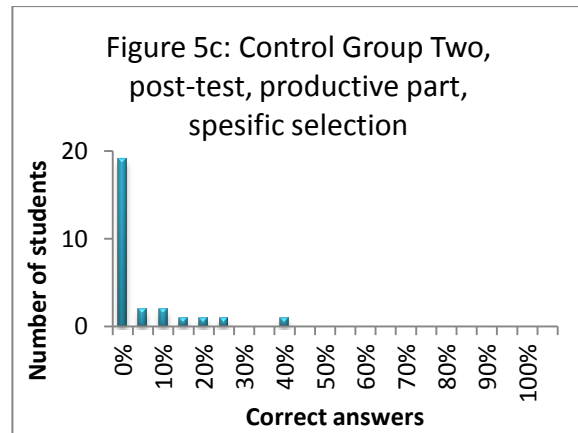
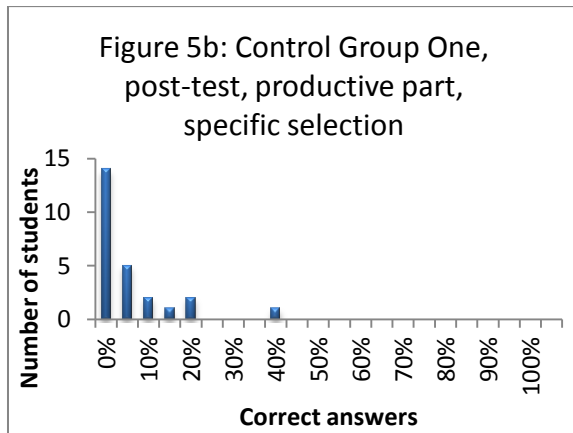
When the *specific selection* is viewed separately, the SG average grade goes from 4% to 44%. AS can be seen in the tables below, distribution of grades for the SG was very narrow on the pre-test, all students answered less than 35% of the questions correctly and 92% of the students had no correct answers. On the post-test, however, 59% of the SG students answer more than half the questions correctly and 21% of them have above 75% correct answers. The difference between pre- and post-tests is therefore substantial.

Figures 5a, 5b and 5c: Distribution of grades for the *specific selection* words on the post-test.

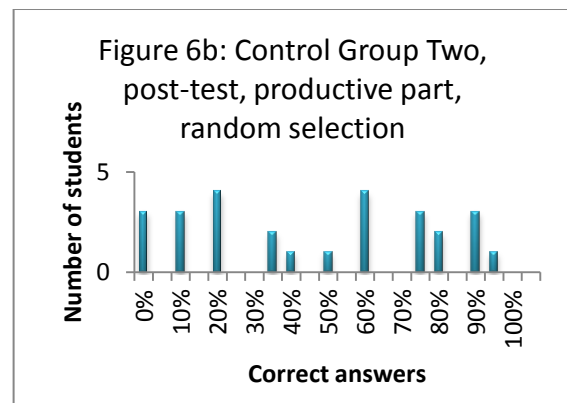
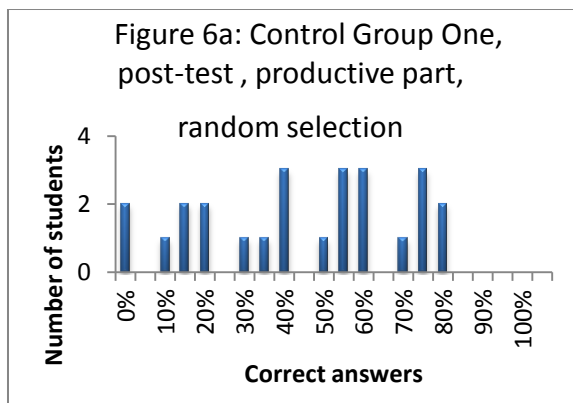


When the *specific selection* words are viewed for the control groups, neither group made progress. In both control groups a single student had 40% correct answers

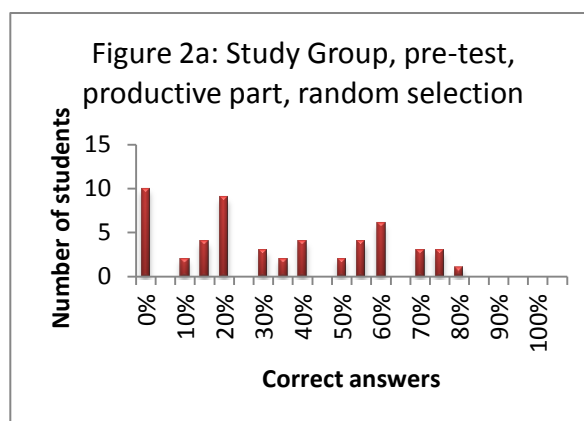
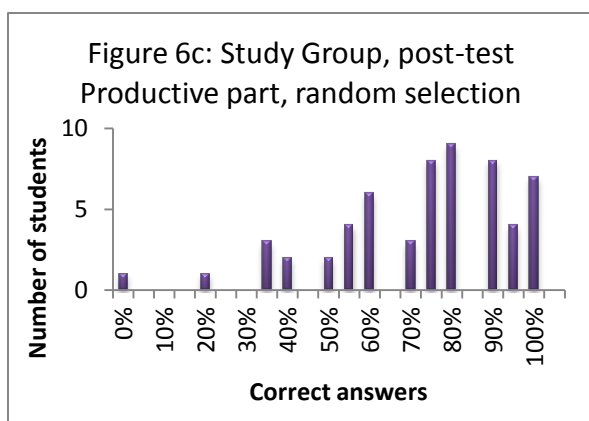
and 70% of the students had no correct answers in the post-test. The rest of the students scored below 25%.



Figures 6a, 6b and 6c: Distribution of grades for the *random selection* words on the post-test



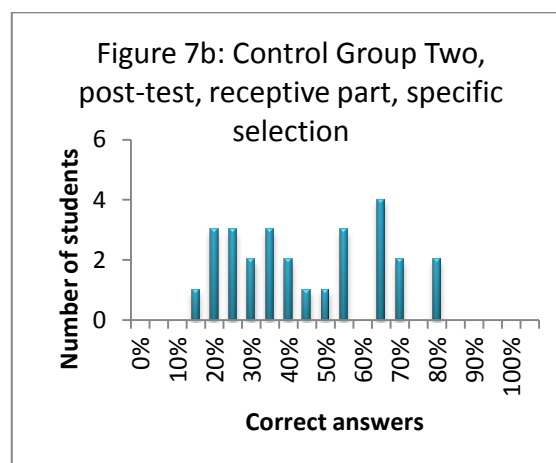
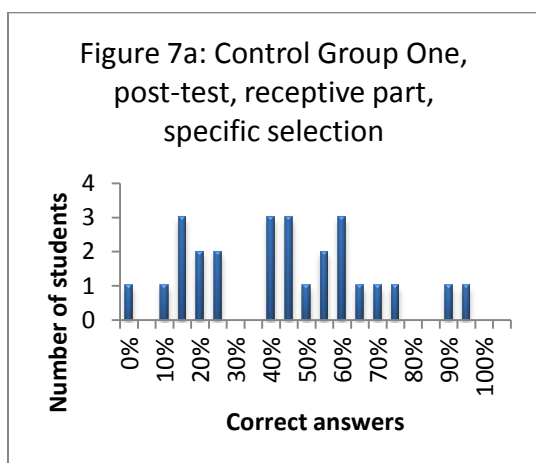
On the part with randomly chosen words the CG1 mean went from 44% to 43% but CG2 showed more improvement going from 39% to 45%. Once again, this may be because some of the students that took the post-test were not present in the pre-test, or vice versa. The distribution of grades was very similar, in both groups 52% of the students scored 50% or less. No student in CG1 had more than 80% correct answers, however, in CG2 4 students, 15% of the group scored above 80%.



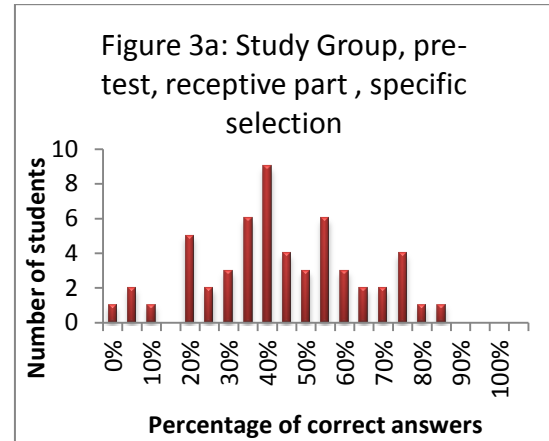
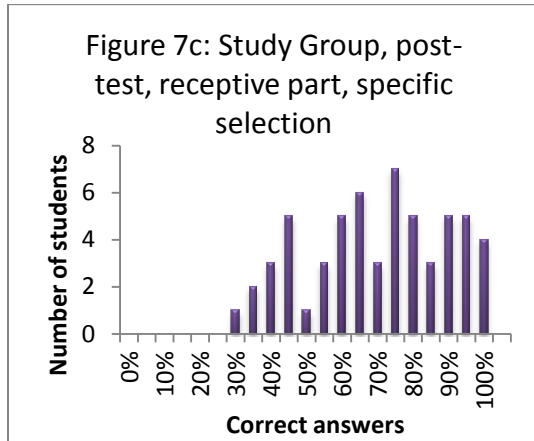
When the pre- and post-tests of the SG are compared a clear difference can be seen. The average grade for the SG is 71% on the post-test as opposed to 32% on the pre-test. Whereas 68% of the students had 50% or fewer correct answers in the pre-tests, only 16% scored below 50% in the post-test. Furthermore, while 8% of the students had grades of 75% or higher (80% being the highest score) in the pre-test, 62% of students scored above 75% in the post-test and many of them had no mistakes on the exam. The progress of the study group is therefore significant.

5.2.2 The receptive part of the post-test.

Figures 7a, 7b and 7c show the distribution of grades on the *specific selection* words, receptive part of the post-test.

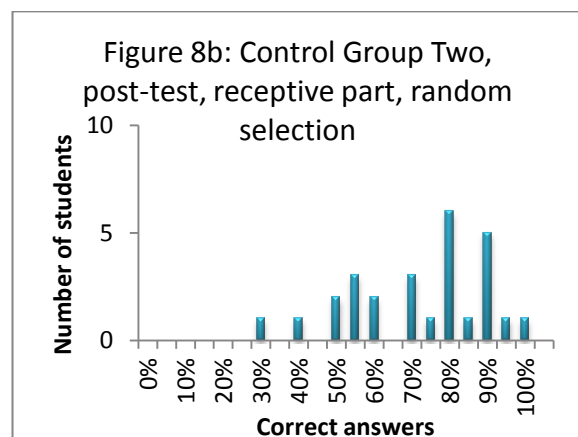
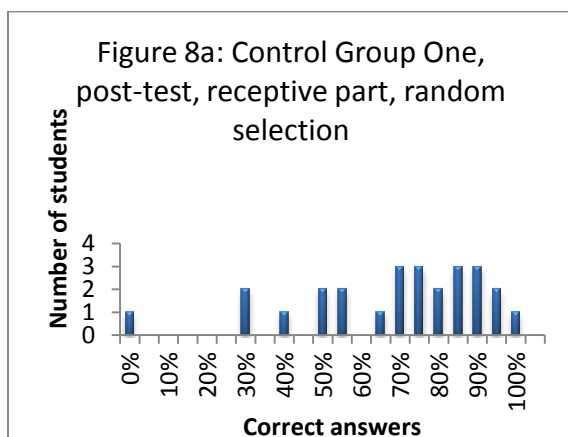


Regarding the *specific selection* component of the receptive part on the post-test, neither control group showed improvement although they show a small variance in the distribution of grades on the post-test.

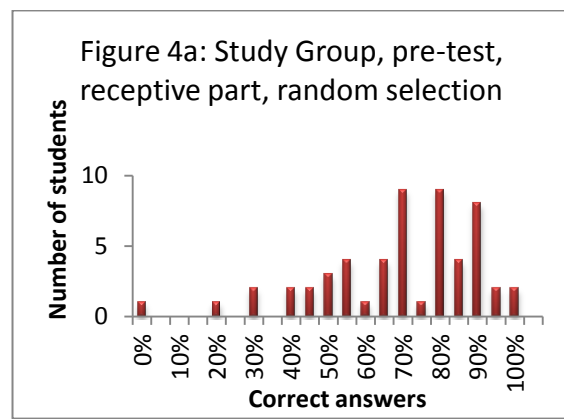
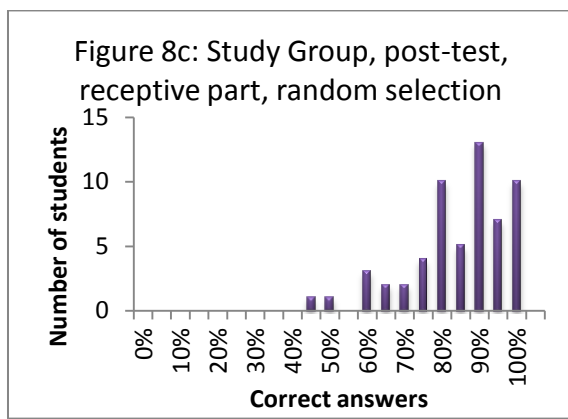


The Study Group, on the other hand, showed significant improvement on this part of the test, going from 44% mean on the pre-test to 70% mean on the post-test. On the pre-test only 11% of the SG scored 75% or above, on the post-test 50% of the students scored that high. Whereas 65% of the students scored below 50% on the pre-test and 25% below 30%, none of the students score below 30% on the post-test and only 21% score below 50%.

Figures 8a, 8b and 8c show the distribution of grades on the randomly chosen words, receptive part of the post-test.



Both control groups showed a slight change in mean between pre- and post-tests on this part of the exam. The average grade of CG1 was 72% on the pre-test but 67% on the post-test, perhaps partly because some of the students did not take both tests. CG2 was raised from 67% to 71% mean. The distribution of grades also varies. 23% of CG1 scored 50% or less but only 15% of CG2 did the same. However, the percentage of students that scored 75% or above was very similar between the groups, 56% (CG2) and 54% (CG1).



When the pre-and post-tests of the SG for this part of the exam are compared the difference is not as substantial as in other parts of the exam. The average grade is 83% on the post-test but was 68% on the pre-test. One of the reasons for this is how high many of the students already scored on the pre-test, leaving little or no room for improvement. However, whereas 20% of the students scored below 50% on the pre-test only one did on the post-test, scoring 45%. The 47% of students that had a grade of 75% or higher on the pre-test went up to 84% and 29% of the students scored 95% or higher whereas only 7% of the students had done so well on the pre-test.

5.3. Results of the Oral Exam

Comparing the grades of the SG and CG1 on the oral exam is interesting. The SG's average grade is higher than that of CG1 but the difference is minimal. However, when other grades of the course (including the pre-test, essays, presentations, quizzes from novels etc) are compared, the oral exam is the only grade where CG1 does not surpass that of the SG. Although the difference is not substantial, the figures suggest that the SG had at least some advantage in having learnt the target vocabulary.

5.4 Post-test Survey

In an attempt to get a clear picture of the student's attitude towards the treatment, a post-test survey was conducted. After the post-test had been administered the students of the study group were asked to comment on their opinion of the teaching material. The purpose of the survey was to determine how the students liked the material and how useful they deemed it to be. Table 11 shows the questions asked and the students' answers. 57 students were present when the survey was administered.

As seen in Table 11, when the students were asked how they liked the vocabulary card method, 19% said they did not like it, 53% said they thought it was ok and 28% said they liked it. Therefore 72% of the students either liked it or thought it was ok. When asked if the students thought the method was a useful way to learn vocabulary only 2% answered "no" and 30% said "maybe". However, 68% of the students thought the method was useful.

When asked whether the students would use the method to study for other exams 37% of the students answered "no" and 46% answered "maybe". 18% of the students said they would use the method further.

Table 11. Post-test survey, questions and answers

How did you like the vocabulary card method of studying?		
I didn't like it	11	19%
It was ok	30	53%
I liked it	16	28%
Do you think the vocabulary card method is a useful way to learn new words?		
No	1	2%
Maybe	17	30%
Yes	39	68%
Do you think you will use the vocabulary card method to study for other exams, like the final exam?		
No	21	37%
Maybe	26	46%
Yes	10	18%
Do you think it is important to learn and know academic vocabulary?		
No	2	4%
Maybe	6	11%
Yes	49	86%

When asked about the importance of learning and knowing academic vocabulary 86% of the students answered "yes", 11% answered "maybe" and only 4% answered "no".

It is interesting that although the majority of the students are aware of the benefits of the method and the importance of knowing the material, fewer are certain they will actually use it. There are also clearly students who find the method and

material useful but do not like it. Perhaps this explains why some of the students are not going to use the method even though they find it useful.

5.5 Correlation between Test Results and Homework

The *specific selection* words were taught to all students explicitly and in the class activities, where they used the vocabulary cards; all students were exposed to the rest of the words to some degree. Nevertheless, the primary part of learning the 100 words outside the *specific selection* required homework. As stated before, the students took a productive test with 25 of the 100 words per week, each student thus determining which of the 25 words they needed to work on. Each week, during a one month period, they handed in vocabulary cards with the words they had not known productively on the test. Of course this meant that the number of words they had to work on varied. Out of the 61 students, 24 (39%) handed in their vocabulary cards all 4 times, and 8 students (13%) handed their cards in two or three times out of four. However, 29 students, or 48% handed in their cards once or not at all. Although the vocabulary cards counted for 5% of their grade, this did not surprise the teachers; it seems that motivating students to do their homework in English can be very difficult. The survey showed that many of the students who liked the material, thought it was an efficient way to learn words and thought the words were important to learn; nevertheless did not think they would use the method outside this project. This might suggest that these students quite deliberately did not intend on doing the homework assigned for English classes. However, the reason for this is unclear, although one might assume that at least part of the students did not feel they needed to do homework in the subject.

To determine what effect the homework had on the vocabulary acquisition I grouped the students in respect to the amount of homework they did and compared the grades of each group.

Table 12. Grades and amount of homework

Students' hand-in ratio	4 times (22 students)	2-3 times (4 students)	0-1 time (24 students)
Pre-test mean	45%	45%	37%
Post-test mean	74%	65%	61%
Mean difference	37%	20%	25%

Out of the eight students in the group that handed in their vocabulary cards two or three times, only four students were present on both pre- and post-tests. As all students took the post-test this means that they either quit the course before the end of the term or were not present on the pre-test. With so few students in this group, the numbers are less likely to be reliable. However, the other groups have 22 and 24 students, thus the focus here will be on these two groups. Furthermore, they were by far the largest, indicating that most students either lean in the direction of generally handing in all homework, or generally not doing so.

There is a difference in the performance of the two groups on the pre-test. The students who did their homework had a mean of 45% correct answers while the others had a mean of 37%. As expected, the more diligent group of students were much higher on the post-test, at a mean of 74% correct answers, having raised the average grade by 37 points. The other group increased their percentage of correct answers by 25 points (12 points less), averaging on 61% on the post-test. This would suggest that although the program is more successful for those who do their homework, it also increases the

vocabulary of the students who only participate in the class activities and do not hand in their homework.

The fact that the group that did not hand in vocabulary cards had lower grades on the pre-test might suggest that students who do their homework in general have a better vocabulary than those who do not. The difference between the two groups on the pre-test was 8 points but on the post-test it was 13 points, suggesting that the gap between the groups had widened, although both groups showed vast improvement.

5.6 Why are some of the Target Words Better Known than Others?

The results of the pre-test show clearly that the words in the *specific selection* score much lower than the words in the *random selection*, as had been expected. I found it important to determine exactly why that was the case. Knowing how to predict which words of the AWL will be more challenging than others, can prove very beneficial when choosing which words to emphasize in the teaching of academic vocabulary.

Recall that the AWL consists of words that do not belong to the 2000 most frequent words of English (The General Service List). When the 10 best known words are looked up in the corpus, eight of them turn out to be very close to the 2000 word mark, the least frequent being at 3300. The exceptions are the words *definite* and *differentiate*. What these two words have in common is that they are closely related to very common words: *definitely* and *different*, which can explain why so many students know what they mean receptively, although almost none of them knew the words productively on the pre-test. It is, of course, quite possible to infer the meaning of a word correctly based on one's understanding of a related word and syntax. When the frequency of these words in an academic context is compared to their frequency in

spoken American English they are clearly more frequent in spoken language than the words in the bottom ten group. A few of the words occur around five times per million words but most occur over twenty times and the most frequent one occurs 85 times per million words. *Definite* and *differentiate* are among the lowest but their more commonly used relations (*definitely* and *different*) are very frequent in spoken language.

Table 13. Highest and lowest scoring words

10 highest scoring words	Correct answers	10 lowest scoring words	Correct answers
priority	80%	ambiguous	20%
abandon	87%	extract	28%
drama	92%	empirical	11%
quote	88%	arbitrary	13%
unique	84%	paradigm	11%
clarify	84%	implicit	30%
highlight	89%	infrastructure	39%
definite	86%	denote	35%
schedule	89%	predominant	37%
differentiate	80%	offset	36%

The ten words that fewest students knew are much less frequent in spoken language than in academic language. In fact, these words are very common in Academic English, occurring from ten to 60 times per a million words whereas their frequency in spoken language is very low, mostly under three times per million. Furthermore, only one of them falls within the first 5000 words on the English frequency list, while the others are very infrequent. The word *infrastructure* differs from the other nine words. It is the 3645th most frequent word, making it much more frequent than any of the other

words in this group. Its frequency in spoken language is also much higher than that of the others, where it occurs around twenty times per million words.

The difference between the occurrences of the words in these two categories in American spoken English is therefore substantial. I also reviewed the frequency of these words in the genre of fiction using the American Corpus. Although I did not make an in-depth analysis of all the words, preliminary results were very similar to that of spoken language, the top ten words being more frequent and the bottom ten being very infrequent. The analysis of the frequency of these 20 words shows that some of the words on the AWL are more difficult for the students than others and that these words can be identified by their frequency in other genres of the language.

6 Discussion

6.1 Concerning the Pre- and Post-tests

As the control groups did not show a gain in the vocabulary, the pre-test is a good evaluation of the state of knowledge of academic vocabulary on this level in ENS 303.

The pre-test shows a consistent and startling lack of productive knowledge of the special selection words (3-6% mean of correct answers) and although the *random selection* words show better results, they are all the same low (32-39%) and 54-68% of the students know less than half of the words productively. For vocabulary of such importance for academic studies, this cannot be acceptable.

As expected, the students have greater receptive knowledge. However, the mean is only around 60% in both pre- and post-test for the control groups. Very few students know over 80% of the words and very many students know less than half of the words receptively. The answer to Research Question 1: "Is there a need to put special emphasis on academic vocabulary in upper-secondary English in Iceland or does the current course of study address this issue adequately?" is therefore clear. The students do not have enough knowledge of the words and thus it would be very advantageous to teach academic words specifically.

As mentioned before, vocabulary learning is an incremental process and words are learnt receptively before the knowledge reaches the strength of productive competence. The pre-test showed that many of the words that the students knew receptively, they were not able to use productively. The mean of correct answers for the *specific selection* was only 4% on the productive part while the same words were at 44% on the receptive part. These were the words that showed most growth, going to 44% on

the productive part to 70% on the receptive part. On the pre-test most of the group knew less than 5% of the words but after the program 60% of the group knew more than half the words productively and a large part even knew more than 75% of the words. So although the result was not 100% successful for all students, they were clearly in the process of learning the words. The spelling mistakes made on the pre- and post-test confirm this. There were very few spelling mistakes on the pre-test, simply because the students had no idea of which word to write. On the post-test, however, very many mistakes were made in spelling, showing that the students were in the process of learning the words, knowing how they sound and making attempts at the spelling. This answers Research Question 2: the students do have greater receptive than productive knowledge of the target words.

In the *random selection* there was less room for improvement. Some students already knew a large portion of the words. Thus, many of the students who knew above 60% of the words on the pre-test, knew all of the words on the post-test. Although a handful of students already knew all the *random selection* words on the receptive part of the pre-test, no student knew all of those words productively. On the post-test, however, many students knew more than 90% of the words productively. The difference between the pre- and post-tests of the Study Group is striking and there can be no doubt that the program had a substantial impact on the students' knowledge of the target words.

The benefit of incidental vocabulary learning has been greatly debated. Therefore it was very interesting to see how Control Group 1, would do on the post-test in contrast with the other groups. The comparison with Control Group 1, where there was no notable gain in the target vocabulary, confirms that explicit vocabulary teaching results in better retention of lexical items than incidental exposure from reading, thereby answering Research Question 3. In fact, although many would doubtless have

anticipated some gain in vocabulary among the students who had incidental exposure, there was none. Of course there is no way of knowing exactly how many times the students read the articles and the progress might have been better had there been more reading material including the target vocabulary. The grades on the oral exam, however, show that the students did read the articles to the point that they were able to discuss their contents. As discussed in Chapter 2, students who translate the words they encounter in order to understand the content of a text do not necessarily retain the vocabulary in question. The wide belief that reading is the best way to learn new words is not supported by this study.

Control Group 2 did show a very slight improvement in spite of having no planned encounters with the target vocabulary. On the words from the *specific selection* there was no gain, neither in the productive nor receptive parts of the exam. However, the mean increased a fraction in the *random selection*, from 39% to 45% in the productive test and from 67% to 71% in the receptive part. Unfortunately the tests were anonymous, so it could not be determined whether some of the students that took the pre-test and received low grades were missing on the post-test, or even replaced by students with high grades. However, another possibility is that because the *random selection* included words of higher frequency, they were a part of the students' teaching material and they had simply learnt them during the term. Nevertheless, the increase is minimal and fails in comparison with the progress of the Study Group. The answer to Research Question 3a, "Is there a gain in the target vocabulary among students whose curricula do not include academic vocabulary specifically?" is therefore that there is not sufficient gain in the target vocabulary among students whose curricula do not include academic vocabulary specifically.

6.2 Homework and Test Results

It is interesting that the group that did not hand in the vocabulary cards nevertheless raised their grades considerably. This could have several explanations. Firstly, they did receive explicit teaching of twenty of the words on the test. Secondly, they were exposed to all words during activities where students used vocabulary cards. Thirdly, they were exposed to all words in the texts they read for the oral exam and perhaps more incidental learning took place (as opposed to control group one) because they had already been introduced to the words. As discussed in chapter 2, students are more likely to acquire vocabulary depth from incidental exposure if they have already had explicit teaching of the target vocabulary. Finally, this group of students may have studied for the final exam, even though they did not hand in the vocabulary cards. The method is therefore successful, even for those who did not work as diligently as some, although the degree of success is also clearly in correlation to the amount of work done.

One of the problems most language teachers have to face is how much students in a single class can vary in competence. Also, vocabulary is often introduced in class but homework is required to retain knowledge of the words. The results of the post-test survey suggest that students who generally do their homework had more lexical knowledge on the pre-test than those who are less inclined to do homework. Moreover, their progress during the instructional period surpassed that of their fellow students, further widening the gap between the two groups. Perhaps, for a method to be successful, it should take place mostly in the classroom and rely less on homework. This is of course highly debatable.

6.3 The Effect of the Pre-teaching of Words on Reading Comprehension

For several reasons, evaluating whether the SG had better understanding of the texts proved very difficult. Firstly, I did not administer the oral exams myself, and secondly, it is difficult to ensure total objectivity on an oral exam, especially one where the administering teacher knows the students well. A thorough evaluation of the affects on the explicit vocabulary teaching on the understanding of the texts in question would have been very complex and time consuming.

The answer to Research Question 3b, “Does the pre-teaching of the target vocabulary affect the understanding of academic texts that include the vocabulary in question?”, is therefore not conclusive, although the grades of the oral exam do suggest the program had some effect on reading comprehension among the study group.

6.4 The Frequency of Academic Words in Other Genres

One of the most influential factors affecting any curriculum is time. A teacher always has to prioritise and choose which projects will benefit students the most and somehow there never seems to be enough time. Choosing the appropriate vocabulary to include in a curriculum is no exception. Of course teachers do not want to spend time on explicit teaching of vocabulary that the students already know, time would be better spent on important words that they do not.

The students in this study clearly knew some of the target words before receiving the treatment. Furthermore, their teachers could to some extent predict which those words were. Therefore, I wanted to establish a method for such predictions.

My results show that most of the students know receptively the words that are most common in spoken American English and they do not know the words that are rare

in that genre. However, determining whether that means the more common words are suitable material to teach or not is subject to opinion.

The answer to Research Question 3c, “Is the sublist division of words in the AWL suitable for the purpose of selecting vocabulary for Icelandic upper-secondary students or should the words be categorised by different criteria for this particular group?” is therefore not a simple one. On the one hand, it is clear that some of the words on the list are very frequent and therefore students are certain to encounter them on numerous occasions without them being a part of a specific program. On the other hand, even among the top ten words 8%-20% of the students did not answer correctly. In the light of their frequency, both in academic texts and other genres, they are clearly important. Therefore one could argue that a program, such as the one in this study, where students test themselves and learn new words according to a personalised curriculum, is a plausible method to make sure these important words are learnt.

Research Question 3c would therefore make an interesting topic for further research. It would certainly be interesting to identify which of the words from the AWL students already have ample exposure to, thereby facilitating an efficient selection of words that require explicit instruction.

6.5 Limitations of the study

Any study is bound to have its limitations and looking back there are a few things I would do differently if I had the chance. Firstly, a more reliable outcome would have been accomplished with CG2 had the tests not been anonymous. There are several reasons for this. Because the tests of this group were anonymous, this meant that I would not be able to connect the two parts of the test to specific students. At the time I did not know this would have an impact on which types of reliability tests could be made

for this group. Also, anonymity meant that I could not determine if all the same students took the pre- and post-tests, which would have had implications for the post-test results. The slight raise in scores could have been because of a strong student that only took the post-test, but this I could not determine. Furthermore, the fact that no test could be traced back to its owner could have influenced the effort the students put into answering the questions. However, had that been the case, the test scores would probably have been lower than all the other groups, which they were not.

The tests were administered electronically to all groups except CG2. Whether not administering the test on paper to this particular group had any impact on the test results is difficult to say. It did take a shorter amount of time than the electronic administration of the test, where students had to log into the system and in some cases start the computers, after having to move from their classroom to a computer room. This may have some implications. However, the similarities in the outcomes of CG1 and CG2 would suggest this was not an important factor.

Administering the same oral text to a group that had received explicit teaching of the target words on one hand, and a group who had not on the other, was an excellent opportunity to evaluate the impact of the treatment on reading comprehension. This was not originally intended to be a part of the study but as all the data was available it was included. The mean scores of the oral exam were very high and my own experience as a teacher is that it is very difficult for a class teacher to be objective in such tests. They are administered face to face, the students are nervous and the teacher inevitably feels a great deal of empathy and wants his/her students to succeed. Furthermore, the depth of the students' understanding of the material is difficult to evaluate, having been absent in the exams myself.

Perhaps by preparing detailed evaluation rubrics and administering the test myself I would have gotten more reliable results. However, in order to overcome these limitations much extra work would have been required and there simply was not enough time.

Finally, in order to contrast incidental exposure and explicit teaching, it would have been ideal to supply CG2 with numerous encounters with the target words. Having only read one text including the target words is perhaps not enough to make a fair comparison. However, my experience as a teacher is that when vocabulary is taught by reading short texts and glossing vocabulary or doing vocabulary exercises, repetition is not provided within the time frame needed to facilitate retention. In reality, repetitions are often left to the student so only those who do their homework and study for exams are exposed to ample repetitions, as is the case with CG2. Therefore, although the study may not have provide the repetitions needed to compare incidental exposure to explicit teaching in the most optimal manner, it did display a realistic picture of how teachers often attempt to increase their students' vocabulary knowledge incidentally.

7. Conclusion

Learning academic vocabulary should be a high priority issue in upper-secondary English education. It has been established that readers are able further to expand their vocabulary through extensive reading, after they have learned the most frequent vocabulary (Nation, 2001). Explicit teaching of 10% of the words covered in academic texts therefore would seem to have the potential to boost the level of understanding considerably, also raising the probability of further incidental vocabulary acquisition.

The approach taken by Snow's *Word Generation Program* was to add explicit teaching of the academic vocabulary to the previously existing curriculum: five new words were introduced and worked with every week and a few minutes were taken from each of the students' regular classes to do so. Although Snow's subjects were L1 speakers in middle school, the problem faced in Iceland is also that of academic literacy, which ought to establish an acceptable reason to explore whether applying their approach could be beneficial.

Several course books that concentrate on academic vocabulary in English as a second language have been published (such as Schmitt & Schmitt, 2011). However, as such a text book would not suit all classes, it would be interesting to construct teaching material that would be an addition and not replace the material already in use. Matsuoka and Hirsh (2010) studied a course book in English for upper-intermediate students and found that its texts had AWL coverage between 0.9% and 3.6%, averaging in 2.1%. Although they concluded that the textbook provided opportunities to learn academic vocabulary they recommend pre-teaching the words from the AWL. According to Nation (2001) the sooner a word is properly introduced and worked with, the sooner the learner will develop depth of knowledge of that word. Therefore explicit teaching could

enhance the students' utilization of the encounters they have with the academic words in the texts they work with. Also, an average of 2,1% coverage of words from the AWL means that 2,1% of the words in the text books come from the AWL. This does not guarantee exposure to all words from the list as the words in these 2,1% could be mostly limited to the most frequent ones from the first sublists of the AWL. Therefore, the words from the less frequent sublists could be entirely missing from the textbooks. This coverage percentage is equivalent to the 2% Nation (2008) has found in texts of fiction and although fiction and other textbooks are used in English upper-secondary education in Iceland, the present study shows clearly that the students do not have sufficient knowledge of academic vocabulary.

The first five sublists of the AWL account for 8,3% of the word coverage in academic texts but even though "Sublists 5-10 add little to the overall coverage of the AWL, they are worth including, as these less frequent items occur in a wide range of texts and are unlikely to be acquired incidentally through reading" (Coxhead, 2000, p. 228).

In light of this information, I would propose using a program that would help students expand their learning strategies as well as learning the words from the AWL, such as the one used in this study. The sublists could be divided among the first four courses of upper-secondary English to ensure that the students get an opportunity to master all the words on the list and start to develop depth of knowledge of these words and the ability to use them productively. Most programs in upper-secondary school have at least four compulsory English courses, with the exception of the natural science program that only requires three courses (The Icelandic national curriculum guide for Upper Secondary School). However, students have the option to take more courses and many of them do so. According to a study mentioned earlier, 89% of the science majors

that participated had taken more than the three compulsory English courses (Birna Arnbjörnsdóttir & Hafdís Ingvarsdóttir, 2010a, p.7) . Teaching the AWL in the first four courses would therefore ensure full coverage of the list for the vast majority of students intending on further education.

This study concludes that there is a clear need to put special emphasis on academic vocabulary in upper-secondary English in Iceland and that the current course of study does not address this issue adequately. There is also reason to recommend that more emphasis be put on the development of productive vocabulary knowledge. Furthermore, the commonly used incidental methods of vocabulary teaching need to be supplemented by explicit teaching of important vocabulary. This view is supported by the substantial increase in the SG's vocabulary compared to the lack of progress made by the study groups.

Many would agree that the quality of higher education has an impact on the prosperity of a nation. It has been established that many Icelandic students do not have sufficient preparation to deal with an education in English and the need to remedy this must not be overlooked. The problem is by no means a simple one and I would not suggest that a program such as the one proposed here would provide a complete solution. It could, however, be a part of the solution and a step in the right direction.

8. References

- Albrechtsen, D., Haastrup, K., & Henriksen, B. (2008). *Vocabulary and writing in a first and second language: Processes and development*. Hampshire: Palgrave Macmillan. ATH hjá Birnu er þetta 2007
- Allen, R. (2010, April). Mastering literacy skills for college readiness. *Education Update*, 52(4), 2-5. Retrieved November 20, 2011 from <http://www.ascd.org/publications/newsletters/education-update/apr10/vol52/num04/Mastering-Literacy-Skills-for-College-Readiness.aspx>.
- Anna Jeeves. (2008). *"Some words are simply very difficult": Reading proficiency in English*. MA thesis. Reykjavik: Háskóli Íslands.
- Ásrún Jóhannsdóttir. (2008). Which way to go? A study of incidental and intentional vocabulary acquisition. *Málfríður*, 25(2), pp. 16-19. Retrieved February 03, 2012 from http://malfridur.ismennt.is/haust2009/vol-25-02-16-19_aj.htm
- Ásrún Jóhannsdóttir. (2009). *Incidental and Intentional Vocabulary Acquisition: A study of age and cognitive development in children's language learning*. MA thesis. Reykjavík: Háskóli Íslands.
- Berman, R. (2010). Icelandic university students' English reading skills. *Málfríður*. 26(1), 15-18.
- Birna Arnbjörnsdóttir. (2011). Exposure to English in Iceland: A quantitative and qualitative study. *Ráðsetfnurit Netlu - Menntavika 2011*. Reykjavík: Menntavísindasvið Háskóla Íslands.
- Birna Arnbjörnsdóttir & Hafdís Ingvarsdóttir. (2010a). *Coping with English at university: Students' Beliefs*. Retrieved January 25, 2012 from *Ráðstefnurit Netlu*: <http://skemman.is/en/stream/get/1946/7798/20389/1/008.pdf>
- Birna Arnbjörnsdóttir & Hafdís Ingvarsdóttir. (2010b). Enskan og fræðaskrifin. In E. Erlendsdóttir, & R. Þráinsdóttir (Eds.), *Milli mála. Ársrit stofnunar Vigdísar Finnbogadóttur í erlendum tungumálum. 2. árgangur*. (pp. 179-200). Reykjavík: Háskólaútgáfan.
- Birna Arnbjörnsdóttir. (2007). English in Iceland: Second language, foreign language, or neither! In Birna Arnbjörnsdóttir & Hafdís Ingvarsdóttir (Eds.), *Teaching and Learning English in Iceland* (Vol. 1, pp. 51-78). Reykjavík: Stofnun Vigdísar Finnbogadóttur.
- Coady, J. (1997). L2 vocabulary acquisition through extensive reading. In J. Coady, & T. Huckin (Eds.), *Second language vocabulary acquisition*. Cambridge: CUP. pp. 225-237.
- The corpus of contemporary American English. <http://corpus.byu.edu/coca/>
Coxhead, A. (2000). A new academic word list. *TESOL Quarterly*, 34(2), pp. 213-238. Retrieved January 25, 2012 from <http://www.jstor.org/pss/3587951>.
- Coxhead, A. (2006). *Essentials of teaching academic vocabulary: Cengage learning English for academic success*. (P. Byrd, J. Reid, & C. Schuermann, Eds.) Boston: Heinle Cengage Learning.
- Day, R., & Bamford, J. (1998). *Extensive reading in the second language classroom*. Cambridge: CUP.

- Day, R., & Bamford, J. (2002, October). Top ten principles for teaching extensive reading. *Reading in a Foreign Language*, 14(2), 136-141. Retrieved April 22, 2012 from <http://nflrc.hawaii.edu/rfl/october2002/day/day.html>
- Dörnyei, Z. (1994). Motivation and motivating in the foreign language classroom. *The Modern Language Journal*, 78(iii), 273-284. Retrieved April 23, 2013 from <http://mailer.fsu.edu/~jkeller/EDP5217/Library/Curiosity%20&%20Attention/Attention/Doranyi%281994%29%20Foreign%20Language%20Classroom.pdf>
- de Bot, K., Paribakht, T. S., & Wesche, M. (1997). Toward a lexical processing model for the study of second language vocabulary acquisition: Evidence from ESL reading. *Studies in Second Language Acquisition*, 19, 309-329. In Nassaji, 2006.
- Gass, S. M. (1997). *Input, Interaction, and the Second Language Learner*. Mahwah: Lawrence Erlbaum Associates.
- Haastrup, K., & Henriksen, B. (2000). Vocabulary acquisition: Acquiring depth of knowledge through network building. *International journal of applied linguistics*, 10(2), 221-240. Retrieved February 11, 2012 from <http://onlinelibrary.wiley.com/doi/10.1111/j.1473-4192.2000.tb00149.x/pdf>.
- Hazenbergh, S., & Hulstijn, J. H. (1996). Defining a minimal receptive second-language vocabulary for non-native university students: An empirical investigation. *Applied Linguistics*, 17(2), 145-163. Retrieved April 04, 2012 from http://scholar.google.is/scholar?q=defining+a+minimal+receptive+second-language+vocabulary+for+nonnative+university+students+an+empirical+investigation&hl=en&as_sdt=0&as_vis=1&oi=scholar&sa=X&ei=rxymT5bSNemR4ASgm8HnBA&ved=0CBUQgQMwAA
- Hellekjær, G. O. (2007). Reading: From a forgotten to a basic skill. *Språk & språkundervisning*, no. 2, 23-29. Retrieved February 10, 2010 from http://www.hiof.no/neted/upload/attachment/site/group55/Hellekj_r%282007%29Reading.pdf.
- Hellekjær, G. O. (2009). Academic English reading proficiency at the university level: A Norwegian case study. *Reading in a Foreign Language*, 21(2), 198-222. Retrieved February 11, 2012 from <http://nflrc.hawaii.edu/rfl/October2009/articles/hellekjaer.pdf>
- Hellekjær, G. O. (2010). Lecture comprehension in English-medium higher education. *Hermes - Journal of language and communication studies*, 45, 11-35. Retrieved February 12, 2012 from <http://download2.hermes.asb.dk/archive/download/Hermes-45-hellekj%C3%A6r.pdf>
- Henriksen, B. (1999). Three dimensions of vocabulary development. *Studies in Second Language Acquisition*, 21, 303-317.
- Hirsh, D., & Nation, P. (1992). What vocabulary size is needed to read unsimplified texts for pleasure? *Reading in a Foreign Language*, 8(2), 689-696. Retrieved May 16, 2013 from <http://nflrc.hawaii.edu/Rfl/PastIssues/rfl82hirsh.pdf>
- Hu, M. & Nation, I.S.P. (2000). Vocabulary density and reading comprehension. *Reading in a Foreign Language* 23,1, 403-430. Retrieved May 12, 2012 from <http://nflrc.hawaii.edu/rfl/PastIssues/rfl131hsuehchao.pdf>
- Hulstijn, J. (1997). Mnemonic methods in foreign language vocabulary learning: Theoretical considerations and pedagogical implications. In J. Coady, & T. Huckin (Eds.), *Second language vocabulary acquisition*. Cambridge: CUP. pp. 203-224

- Hulstijn, J. (2001) Intentional and incidental second language vocabulary learning: A reappraisal of elaboration, rehearsal and automaticity. In P. Robinson (ed.), *Cognition and Second Language Instruction* (pp. 258-286). Cambridge: Cambridge University Press. Retrieved May 29, 2013 from <http://dare.uva.nl/document/176492>
- Hulstijn, J. (2005). Theoretical and Empirical Issues in the Study of Implicit and Explicit Second-Language Learning. *SSLA*, 27, 129-140. USA: Cambridge University Press. Retrieved June 18, 2013 from <http://dare.uva.nl/document/176438>
- Hunt, A. & Beglar, D. (2005). A framework for developing EFL reading vocabulary. *Reading in a Foreign Language* 17,1. Retrieved June 3, 2013 from <http://nflrc.hawaii.edu/Rfl/April2005/hunt/hunt.html>
- Kinsella, K. (2003). *The academic word list: A list of 570 high-incidence and high-utility academic word families for secondary school, higher education, career*. Retrieved February 10, 2012 from Scholastic.com: http://teacher.scholastic.com/products/read180/community/pdfs/Vocabulary/Academic_Word_List_by_Frequency.pdf
- Krashen, S. (1989). We acquire vocabulary and spelling by reading: Additional evidence for the input hypothesis. *The Modern Language Journal*, 73, iv. Retrieved June 15, 2013 from Jstor.org
- Krashen, S. & Brown, C.L. (2007). What is academic language proficiency? *STETS Language & Communication Review*, Vol. 6, No1. Retrieved July 5, 2013 from http://www.sdkrashen.com/articles/Krashen_Brown_ALP.pdf
- Laufer, B. (1992). Reading in a foreign language: How does L2 lexical knowledge interact with the reader's general academic ability? *Reading in a Foreign Language*, 15, 95-103.
- Laufer, B. (1997). The lexical plight in second language reading: Words you don't know, words you think you know, and words you can't guess. In J. Coady, & T. Huckin (Eds.), *Second language vocabulary acquisition*. Cambridge: CUP.
- Laufer, B. (1998). The development of passive and active vocabulary in a second language: same or different? *Applied Linguistics*, 19(2), 255-271. Retrieved January 27, 2012 from <http://www.education.auckland.ac.nz/webdav/site/education/shared/about/centres/lipis/docs/readings/laufer-1998.pdf>.
- Laufer, B., & Hulstijn, J. (2001). Incidental vocabulary acquisition in a second language: The construct of task-induced involvement. *Applied Linguistics*, 22(1), 1-26. Retrieved January 29, 2012 from <http://www.corpus4u.org/forum/upload/forum/2005112217011578.pdf>.
- Laufer, B., Elder, C., Hill, K., & Congdon, P. (2004). Size and strength: Do we need both to measure vocabulary? *Language Testing*, 21, 202-226. doi: 10.1191/0265532204lt277oa
- Matsuoka, W., & Hirsh, D. (2010, April). Vocabulary learning through reading: Does an ELT course book provide good opportunities? *Reading in a Foreign Language*, 22(1), 56-70. Retrieved February 28, 2012 from <http://nflrc.hawaii.edu/rfl/April2010/articles/matsuoka.pdf>

- The Icelandic national curriculum guide for upper secondary school : general section : 2012 [Aðalnámskrá framhaldsskóla : almennur hluti á ensku]. Retrieved July 25, 2013 from <http://eng.menntamalaraduneyti.is/publications/curriculum/>
- Milton, J. (2009). *Measuring Second Language Vocabulary Acquisition*. Bristol: Multilingual Matters.
- Nagy, W., Anderson, R., Schommer, M., Scott, J., & Stallman, A. (1989) Morphological families in the internal lexicon. *Center for the Study of Reading*. Retrieved May 17, 2013 from https://www.ideals.illinois.edu/bitstream/handle/2142/17726/ctrstreadtechrepv_01989i00450_opt.pdf?sequence
- Nassaji, H. (2003). Higher-level and lower-level text processing skills in advanced ESL reading comprehension. *The Modern Language Journal*, 87(ii), 261-276. Retrieved April 22, 2012 from <http://jstor.org/stable/view/1193036>
- Nassaji, H. (2006). The relationship between depth of vocabulary knowledge and L2 learners' lexical inferencing strategy use and success. *The Modern Language Journal*, 90(iii), 387-401. Retrieved April 4, 2012 from <http://onlinelibrary.wiley.com/doi/10.1111/j.1540-4781.2006.00431.x/pdf>
- Nation, I. S. P. (1990). *Teaching & learning vocabulary*. Boston: Heinle & Heinle publishers.
- Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge: CUP.
- Nation, I. S. P. (2006). How large a vocabulary is needed for reading and listening? *Canadian Modern Language Review*, 63(1), pp. 59-82.
- Nation, I. S. P. (2008). *Teaching vocabulary: Strategies and techniques*. Boston: Heinle.
- Nation, I. S. P., & Beglar, D. (2007). A vocabulary size test. *The Language Teacher: JALT2007 Pre-Conference Special Issue*, 31(7), 9-13. Retrieved February 27, 2012 from http://www.victoria.ac.nz/lals/about/staff/publications/paul-nation/2007-beglar_TLT.pdf
- Nation, I. S. P., & Waring, R. (1997). Vocabulary size, text coverage and word lists. In N. Schmitt, & M. McCarthy (Eds.), *Vocabulary: Description, acquisition and Pedagogy*. Cambridge.
- Parry, K. (1997). Vocabulary and comprehension: Two portraits. In J. Coady, & T. Huckin (Eds.), *Second language acquisition*. Cambridge: CUP.
- Paribakht, T.S., & Wesche, M. (1997). Vocabulary enhancement activities and reading for meaning in second language vocabulary acquisition. In J. Coady & T. Huckin (Eds.), *Second Language Vocabulary Acquisition* (pp. 174-202). Cambridge: Cambridge University Press.
- Paribakht, T.S. & Wesche, M.B.(1998). "Incidental" and instructed L2 vocabulary acquisition: Different contexts, common processes. In D. Albrechtsen, B. Henriksen, I. M. Mees, & E. Pulsen (Eds.), *Perspectives on foreign and second language pedagogy*. Odense: Odense University Press. pp. 203-216.
- Pigada, M. & Schmitt, N. (2006). Vocabulary acquisition from extensive reading: A case study. *Reading in a Foreign Language* 18,1. Retrieved Feb 28, 2012 from <http://nflrc.hawaii.edu/rfl/april2006/pigada/pigada.html>

- Prinz, P. (2011). Academic literacy: reading, writing, and critical thinking in a second language. *Lecture delivered at the University of Iceland in October 2011*. Reykjavík: Háskóli Íslands.
- Qian, D. (2002). Investigating the relationship between vocabulary knowledge and academic reading performance; An assessment perspective. *Language Learning*, 52(3), 513-536. Retrieved February 10, 2012 from <http://onlinelibrary.wiley.com/doi/10.1111/1467-9922.00193/pdf>.
- Qian, D. D., & Schedl, M. (2004). Evaluation of an in-depth vocabulary knowledge measure for assessing reading performance. *Language Testing*, 21(1), 28-52. Retrieved February 15, from <http://www.savingthewahyanites.net/wp-content/uploads/2012/01/Qian-2004-EvaluationOfAnIn-DepthVocabularyKnowledgeMeasureForAssessingReadingPerformance.pdf>.
- Read, J. (2000). *Assessing Vocabulary*. Cambridge: CUP.
- Schmitt, D., & Schmitt, N. (2011). *Focus on Vocabulary 2: Mastering the Academic Word List*. New York: Pearson Longman.
- Schmitt, N. (2000). *Vocabulary in language teaching*. Cambridge: CUP.
- Schmitt, N. (2008). Instructed second language vocabulary learning. *Language Teaching Research* 12,3 pp. 329–363 Retrieved July 12, 2013 from <http://ltr.sagepub.com/content/12/3/329.full.pdf+html>
- Schmitt, N. (2010). *Researching Vocabulary: A vocabulary research manual*. Hampshire: Palgrave Macmillan.
- Seymour, S., & Walsh, L. (2006). *Essentials of teaching academic reading: English for academic success*. (P. Byrd, J. Reid, & C. Schuermann, Eds.) Boston: Thomson Heinle.
- Snow, C. (2011). Word generation: Promoting classroom discussion to teach academic language and deep comprehension. *Lecture delivered at the University of Iceland 14 September 2011*. Reykjavík: Háskóli Íslands. Retrieved February 12, 2012 from <http://upptokur.hi.is/player/?r=b4d0d5c2-c89b-4d1f-bde0-7bb2e9c52794>.
- Stanovich, K. (1980). Toward an interactive-compensatory model of individual differences in the development of reading fluency. pp. 32-71. Retrieved April 20, 2012 from <http://www.jstor.org/stable/747348?seq=1>
- Stanovich, K. E. (1982). Individual differences in the cognitive processes of reading 1: Word decoding. *Journal of Learning Disabilities*, 15, pp. 485-493.
- Sverrisdóttir, Oddný G. (2007). Um mikilvægi hvatatengds tungumálanáms: Þýskubíllinn skorar í tungumálanámi. *Mál málanna*. Reykjavík: Stofnun vigdísar Finnboðadóttur.
- Trosborg, A. (1998). The teaching of pragmatic functions in a foreign language. In D. Albrechtsen, B. Henriksen, I. Mees, & E. Poulsen (Eds.), *Perspectives on Foreign and Second Language Pedagogy: Essays presented to Kirsten Haastrup on the occasion of her sixtieth birthday* (pp. 239-251). Odense: Odense University Press.
- Waring, W., & Nation, P. (2004). Second language reading and incidental vocabulary learning. In D. Albrechtsen, K. Haastrup & B. Henriksen (Eds.), *Angles on the English-speaking World* (pp. 97-110). Copenhagen: Museum Tusculanum Press.

Wesche, M., & Paribakht, T. S. (1999). Introduction: Incidental L2 vocabulary acquisition: Theory, current research and instructional implications. *Studies in Second Language Acquisition*, 21, 175-80.

Willis, J. (1996). *A Framework for Task-Based Learning*. London: Longman.

Word Generation. (2011). Retrieved Dec 06, 2011, from <http://wg.serpmedia.org/index.html>

Appendices

Appendix A: Slides with teaching material for the first twenty words

Slide 1

- More than 90% of all reading material at University level is in English.
- Therefore, the ability to read and understand English texts is crucial to doing well in any Icelandic university.
- One of the most important factors of understanding a text is.....
- Knowing the words in it!



Slide 2

It was 7 minutes after midnight. The dog was lying on the grass in the middle of the lawn in front of Mrs Shears' house. Its eyes were closed. It looked as if it was running on its side, the way dogs run when they think they are chasing a cat in a dream. But the dog was not running or asleep. The dog was dead. There was a garden fork sticking out of the dog. The points of the fork must have gone all the way through the dog and into the ground because the fork had not fallen over. I decided that the dog was probably killed with the fork because I could not see any other wounds in the dog and I do not think you would stick a garden fork into a dog after it had died for some other reason, like cancer for example, or a road accident.

Slide 3

Lexical knowledge can be defined in a number of ways. Some researchers claim that knowing a word involves a range of inter-related 'subknowledges' such as morphological and grammatical knowledge and knowledge of word meanings. Others assume that lexical knowledge consists of progressive levels of knowledge, starting with a superficial familiarity with the word and ending with the ability to use the word correctly in free production. Tests of lexical knowledge often focus on one 'sub-knowledge', for example, comprehension of meaning, production of meaning, vocabulary use, or word associations. Others attempt to measure several 'subknowledges' and or the learner's progress along a continuum of knowledge. When only one aspect of knowledge is tested, the number of items is usually large as the tests aim to sample a range of vocabulary large enough to measure the learner's total vocabulary. On the other hand, in vocabulary 'depth' tests, which tests each item for several areas of knowledge, the number of items is necessarily limited with the result that they do not contain a representative range of items.

Slide 4

- Some words are more important to know than others.



- **The academic word list**
 - ✓ covers 10% of academic texts in all subject areas
 - ✓ ca one word in each line
 - ✓ 570 words
- Examples of academic words:
 - Accumulate, prospective, analyse, clarify, inspect.....

Slide 5

Lexical knowledge can be **defined** in a number of ways. Some **researchers** claim that knowing a word **involves** a **range** of inter-related 'subknowledges' such as morphological and grammatical knowledge and knowledge of word meanings. Others **assume** that lexical knowledge **consists** of progressive levels of knowledge, starting with a superficial familiarity with the word and ending with the ability to use the word correctly in free production. Tests of lexical knowledge often **focus** on one 'sub-knowledge', for example, comprehension of meaning, production of meaning, vocabulary use, or word associations. Others attempt to measure several 'subknowledges' and/or the learner's progress along a continuum of knowledge. When only one **aspect** of knowledge is tested, the number of **items** is usually large as the tests aim to sample a **range** of vocabulary large enough to measure the learner's total vocabulary. On the other hand, in vocabulary 'depth' tests, which test each **item** for several **areas** of knowledge, the number of **items** is necessarily limited with the result that they do not contain a representative **range** of **items**.


Slide 6

- What is knowing a word?
- You remember a word better if you.....
- See it often
- Use it as you do something you have to really think about



Slide 7

How to make a 4 sided vocabulary card




Front: The target word	Back: Definition in English Meaning in Icelandic
Inside 1 Key word Picture Description of a mental picture Sentence with the key word	Inside 2 Family members in sentences Example sentences

Slide 8

Example

Front: Automate	Back: To make something operate automatically Að gera sjálfvirk
Inside 1: Keyword: auto + mate Imagine some one you know who is married or your girlfriend/boyfriend turning into a robot thus becoming automated . Perhaps a picture	Inside 2: Family members: automatic (adjective) automated (adjective) automaters (verb) automating (verb) automatically (adverb) automation (noun) Write sentences including these family members.



Slide 9

1 Convert

- Sólrún became a different person when she **converted** from Christianity to Bhuddism.
- They **converted** Lilja's bedroom into a gym because the weather was too bad to go for a run.
- What part of speech is **convert**?
 - What do you think it means?
 - Why do you think that?

Slide 10

Convert

- To change something into a different form.
- Umbreyta.
- Keyword: **converse**
- See yourself taking off a converse shoe and **converting** it into a convertible, with magic!



Slide 11

Write sentences in your vocabulary cards that include these family members

- convert (verb)
- conversion (noun)
- *converted* (adjective)
- convertible (noun)
- converting (verb)
- converts (verb)




Slide 12

Pop quiz

"Conversion, software version 7.0
Looking at life through the eyes of a tire hub
Eating seeds as a pastime activity"

A) Who said this in a song?
B) What line comes next?

A) System of a Down
B) The toxicity of our city



cityhttp://www.youtube.com/watch?v=dUe5ylNalBs

Slide 13

2 Paradigm

- The verb *to sing* is a good **paradigm** for some other irregular verbs. If you remember sing-sang-sung, you can also remember ring-rang-rung and drink-drank-drunk because they are alike.
- In 2007 a **paradigm** for happiness was having a lot of money. For many, this has changed and other things are considered more important.
- What part of speech is **paradigm**?
 - What do you think it means?
 - Why do you think that?

Slide 14

Paradigm - Keyword

- An example serving as a model.
- Fyrirmynd – dæmi.
- Keywords:

- Para (kærustupar) + Daim



All the chocolates envied the two Daims of their loving relationship. They were the perfect **paradigm** for marriage.

Slide 15

Write sentences in your vocabulary cards that include these family members

paradigm (noun singular)
paradigms (noun plural)



Slide 16

3 Predominant

- The fishing industry is the **predominant** source of income in the Westman Islands.
- The staff on the fishing boats are **predominantly** male.
- What part of speech is **predominant**?
 - What do you think it means?
 - Why do you think that?

Slide 17

Predominant

- Having most power or influence or being most common.
- Helstur, ríkjandi, ráðandi.
- Key words: **Dom + in + ant**
- My friend **Dom** had a costume party. Almost everyone was dressed as an **ant**. The ant suit was therefore **predominant**.



Slide 18

Write sentences in your vocabulary cards that include these family members

- predominance (noun)
- predominantly (adverb)
- predominate (noun)
- predominated (verb)
- predominates (verb)
- Predominating (verb)



Slide 19

4 Hierarchy

- A group of dogs will often fight to establish a **hierarchy**, which is based on strength and size. The strongest dog dominates the others.
- In most companies a CEO is at the top of the **hierarchy**, being in charge of the other employees.
- What part of speech is **hierarchy**?
 - What do you think it means?
 - Why do you think that?

Slide 20

Hierarchy

Any system of persons or things ranked one above another.

Stigveldi, valdakerfi.

Keyword: **higher** + **Archy**

All the dogs are called **Archy**. The **highest Archy** controls the others.



Slide 21

Write sentences in your vocabulary cards that include these family members

hierarchy (noun)
 hierarchical (adjective)
 hierarchically (adverb)
 hierarchies (noun plural)



Slide 22

5 Implicit

- This is **implicit** vocabulary learning because you are not told directly what the word means but you figure it out from the context of this sentence.
- I would like you to stop dropping hints and communicating **implicitly** and just tell me straight up what you want to say!
- What part of speech is **implicit**?
 - What do you think it means?
 - Why do you think that?

Slide 23

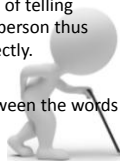
Implicit

- Implied but not directly expressed.
- Óbeinn.
- It can also mean unquestioning or absolute.
- Skilyrðislaus.

Slide 24

Implicit


- Keyword: **limp + is + it?**
- Imagine someone you know limping with exaggeration as an **implicit** way of telling everyone they are in pain. The person thus **implies** it, without saying it directly.
- Do you see the connection between the words implicit and imply?



Slide 25

Write sentences in your vocabulary cards that include these family members

implicit (adjective)
implicitly (adverb)



Remember the difference between an adjective and an adverb?

Slide 26

6 Advocate

- Sólrún is a great **advocate** of playing games in the classroom. She thinks the teacher and students should have some fun!
- Ghandi was perhaps the greatest **advocate** for peace in the 20th century.
- What part of speech is **advocate**?
 - What do you think it means?
 - Why do you think that?

Slide 27


Advocate

- A person who supports someone or something publicly.
- A verb describing the action of supporting someone or something publicly.
- Talsmaður.

Slide 28


advocate

- Keywords: **ad + ate**
- Ghandi was very thin. He would have had to **ad** to what he **ate**.
- Ghandi was an **advocate** in two ways: he **advocated** peace and he was a lawyer. Lawyers are often called **advocates**.



Slide 29

Write sentences in your vocabulary cards that include these family members



advocate (verb or noun)
advocacy (noun)
advocated (verb past tense)
advocates (verb)
advocating (verb)


Slide 30

7 Infer

- She didn't understand the word but by reading the sentence logically she could **infer** its meaning.
- The size of this headstone leads me to **infer** that someone very important was buried here.
- What part of speech is **infer**?
 - What do you think it means?
 - Why do you think that?

Slide 31

- To come to a conclusion by reasoning.
- Draga ályktun.




Infer

- Keyword: **in + fur**
- Kanye and his girlfriend were both dressed **in fur**, which caused many people to **infer** that they are not animal lovers.

Slide 32

Write sentences in your vocabulary cards that include these family members



infer (verb)
inference (noun)
inferences (noun)
inferred (verb)
inferring (verb)
infers (verb)

Slide 33

8 Offset

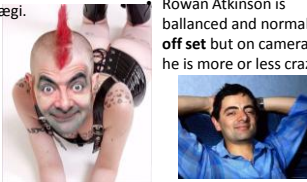
- Sugar is used as **offset** to the sour taste of rhubarb when it is used for jam.
- Attempts to **offset** fluctuations in the economy have failed, resulting in the lack of financial stability.
- What part of speech is **offset**?
 - What do you think it means?
 - Why do you think that?

Slide 34

Offset

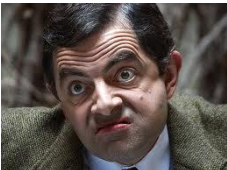
- Something that causes ballance.
- Eitthvað sem skapar jafnvægi.
- Key word: *off set*

Rowan Atkinson is ballanced and normal **off set** but on camera he is more or less crazy.



Slide 35

Write sentences in your vocabulary cards that include these family members



- offsets (noun)
- offsetting (verb)

Slide 36


9 Denote

- What makes you think my blonde hair denotes stupidity?
- Getting high results on an IQ test usually **denote** that a person is smart.
- What part of speech is **denote**?
 - What do you think it means?
 - Why do you think that?

Slide 37


denote

- To indicate.
- Gefa til kynna, tákna.
- Key words:
The note
- The fact that Beyonce could hit any **note** as a child **denoted** that she would become an excellent singer!



Slide 38

Write sentences in your vocabulary cards that include these family members



- denotation (noun)
- denotations (noun)
- denoted (verb)
- denotes (verb)

Slide 39


10 Successor

- Many thought that Þóra Arnórsdóttir would be the current presidents' **successor** but she was not, as he was re-elected.
- I want you to be my **successor** when I retire. I need someone I can count on to take my place.
- What part of speech is **successor**?
 - What do you think it means?
 - Why do you think that?

Slide 40


Successor

- A person who takes another's place in a job or position.
- Eftirmaður, arftaki.
- Key words:
suck + scissors
- John was fired because he **sucked** at using **scissors**. I got his job, I'm his **successor**.



Slide 41

Write sentences in your vocabulary cards that include these family members



- succession (noun)
- successions (noun)
- successive (adjective)
- successively (adverb)
- successors (noun)

Slide 42


11 Conform

- How can you **conform** to this nonsense? You should make up your own mind instead of just doing as they say.
- It can be difficult for foreigners to **conform** to a new culture that is very different from their own.
- What part of speech is **conform**?
 - What do you think it means?
 - Why do you think that?

Slide 43

Conform

- To behave like the environment wants you to.
- Að laga sig að, samræmast.
- **Key word:**
- **Key word sentence:**



Slide 44

Write sentences in your vocabulary cards that include these family members

• conformable (adjective)	• conformist (noun)
• conformability (noun)	• conformity (noun)
• conformance (noun)	• conforms (verb)
• conformation (noun)	• nonconformist (noun)
• conforming (verb)	• nonconformity (noun)

Slide 45

12 Reinforce

- We need to **reinforce** the dam so it won't burst when the flood comes.
- Napoleon tried to **reinforce** his army but he was still outnumbered by the enemy.
- What part of speech is **reinforce**?
 - What do you think it means?
 - Why do you think that?


Slide 46

Reinforce

- English explanation.
- Styrkja, efla.
- **Key word:**
- **Key word sentence:**
- **Picture?**

Slide 47

Write sentences in your vocabulary cards that include these family members



- *reinforced (adjective)*
- reinforcement (noun)
- reinforcements (noun)
- reinforces (verb)
- reinforcing (verb)

Slide 48

13 Comprise

- This class **comprises** 28 students from all over Iceland.
- The syllabus in this course is **comprised** of a novel, the *Porridge* book and many other things.
- What part of speech is **comprise**?
 - What do you think it means?
 - Why do you think that?

Slide 49

Comprise

- To consist of.
- Samanstendur af.
- Key word:
- Key word sentence:
- Picture?

Slide 50

Write sentences in your vocabulary cards
that include these family members

Comprise (verb)
Comprised (adjective)
Comprises (verb)
Comprising (verb)

Slide 51

14 Induce

- The doctor used medicine to **induce** labour, since the mother-to-be was overdue by a week.
- People who have bullemlia often put their fingers down their throats to **induce** vomiting .
- What part of speech is **induce**?
 - What do you think it means?
 - Why do you think that?

Slide 52

Induce


- To cause or bring about.
- Að orsaka eða valda.

- Key word:
- Key word sentence:
- Picture?

Slide 53

Write sentences in your vocabulary cards that include these family members

- **induce (verb)**
- *induced (verb past tense)*
- induces (verb)
- inducing (verb)
- induction (noun)



Slide 54

15 Arbitrary

- Our choice in hotels was completely **arbitrary**. We stopped at the first one we saw.
- The group was furious at Sólrún for **arbitrarily** asking the students to read the lines.
- What part of speech is **arbitrary**?
 - What do you think it means?
 - Why do you think that?

Slide 55

Arbitrary

- Decided by coincidence or personal reasons and not by rules or principles.
- Handahófskennt, geðþóttalegur.
- Key word:
- Key word sentence:
- Picture?

Slide 56

Write sentences in your vocabulary cards that include these family members

arbitrary (adjective)
 arbitrariness (noun)
 arbitrarily (adverb)

Slide 57

Empirical

- Based on experience or tests.
- Raunvísindalegur.
- Key word:
- Key word sentence:
- Picture?

Slide 58

16 Empirical

- Due to the lack of **empirical** evidence, the police had to drop the charges.
- **Empirical** studies are likely to be based on data analysis.
- What part of speech is **empirical**?
 - What do you think it means?
 - Why do you think that?

Slide 59

Write sentences in your vocabulary cards that include these family members

empirical (adjective)
empirically (adverb)
empiricism (noun)

Slide 60

17 Differentiate

- It can be difficult to **differentiate** between black and dark blue. They often look so alike.
- Can you **differentiate** between the twins? I always mix them up!
- What part of speech is **differentiate**?
 - What do you think it means?
 - Why do you think that?

Slide 61

Differentiate

- To know or see the difference between.
- Greina á milli.

- Key word:
- Key word sentence:
- Picture?

Slide 62

Write sentences in your vocabulary cards that include these family members

- differentiated (verb)
- differentiates (verb)
- differentiating (verb)
- differentiation (noun)

Slide 63

18 innovate

- Companies in the computer industry need to **innovate** constantly to keep up with its competitors.
- The company decided to reveal its newest **innovation**, the cleaning robot.

- What part of speech is **innovate**?
 - What do you think it means?
 - Why do you think that?

Slide 64

Innovate

- To introduce something new.
- Kynna nýjung, skapa eitthvað nýtt.
- **Key word:**
- **Key word sentence:**
- **Picture?**

Slide 65

Write sentences in your vocabulary cards that include these family members

- innovation (noun)
- innovates (verb)
- innovating (verb)
- innovations (noun)
- innovative (adjective)
- innovator (noun)

Slide 66

19 Infrastructure

- The transportation system, education system and health-care, are all a part of the city's **infrastructure**.
- After a natural disaster it is often a priority to rebuild the **infrastructure** so that the health-care, communication and transportation systems work properly.
- What part of speech is **infrastructure**?
 - What do you think it means?
 - Why do you think that?

Slide 67

Infrastructure

- the fundamental facilities and systems serving a country, city.
- Innviðir, uppbygging, grunngerð.
- **Key word:**
- **Key word sentence:**
- **Picture?**

Slide 68

Write sentences in your vocabulary cards that include these family members

- Infrastructure (noun)
- Infrastructures (noun)

Slide 69

20 Deviate

- She was fired for **deviating** from office policy. They didn't want her to follow her own ideas instead of theirs.
- People who **deviate** from the norms of society are often judged harshly. Perhaps because people are often afraid of what they don't know.
- What part of speech is **deviate**?
 - What do you think it means?
 - Why do you think that?

Slide 70

Deviate

- To turn aside from a course or way.
- Vikja, bregða út af.

- **Key word:**
- **Key word sentence:**
- **Picture?**

Slide 71

Write sentences in your vocabulary cards that include these family members

- deviated (verb)
- deviates (verb)
- deviating (verb)
- deviation (noun)
- deviations (noun)

Appendix B: Vocabulary card activities

Slide 1

Today's self exam



- 25 fill-the-gap questions.
- No grade.
- The outcome will tell you which words to learn next, 0-25, depending on how well you do.
- You make vocabulary cards on your own for the words you have to learn, like the ones you have done so far.
- Hand them in next Tuesday, one week from now.
- The cards will be 5% of your grade.

Slide 2

Card game - round one

- Switch cards so your partner has your cards and you have his/hers.
- Turn the side with the word in English to face you and take turns asking each other what the words mean.
- If you partner cannot answer, open the card and read the key words or example sentence as a clue and give your partner another chance to answer.



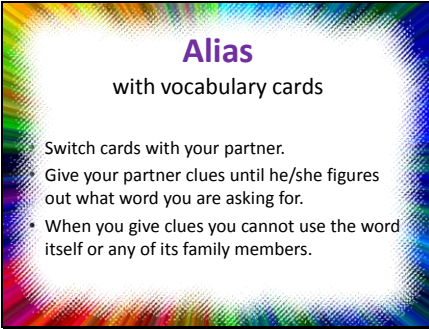
Slide 3



Card game – round two

- Turn the cards the other way, so the translation and English explanation are facing you.
- Read them to your partner and ask for the English word.
- If you partner answers correctly, put the card aside. If not, put it at the back of the pile.
- Keep going until you have no cards left because your partner has answered them all correctly.

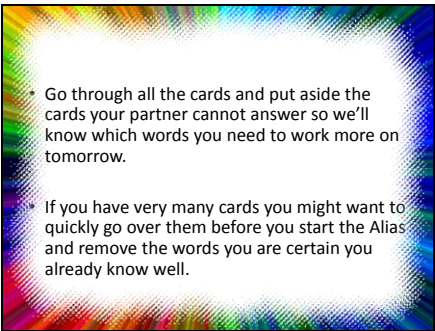
Slide 1



Alias
with vocabulary cards

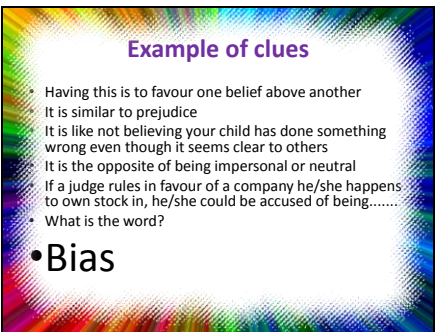
- Switch cards with your partner.
- Give your partner clues until he/she figures out what word you are asking for.
- When you give clues you cannot use the word itself or any of its family members.

Slide 2



- Go through all the cards and put aside the cards your partner cannot answer so we'll know which words you need to work more on tomorrow.
- If you have very many cards you might want to quickly go over them before you start the Alias and remove the words you are certain you already know well.

Slide 3



Example of clues

- Having this is to favour one belief above another
- It is similar to prejudice
- It is like not believing your child has done something wrong even though it seems clear to others
- It is the opposite of being impersonal or neutral
- If a judge rules in favour of a company he/she happens to own stock in, he/she could be accused of being.....
- What is the word?

• **Bias**

Slide 1

Fill the gap

- In pairs, choose 10 cards at a time with words you find difficult. You can use the ones left over from yesterday's alias.
- Together, write all the words in a box on the top of a blank page.
- Then write fill-the-gap sentences that the words in the box would fit in.

Slide 2

- When you are finished, let the teacher know, and exchange pages with another pair and fill out each other's exercises.
- When you have answered each other's exercises, switch again and correct the mistakes.
- Then do the same with the next 10 cards.

Slide 3

Example

manipulate	empirical	simulate	radical
------------	-----------	----------	---------

- To sentence someone to death you need _____ evidence.
- His political ideas are very _____.
- I just got a doorbell that _____ a barking dog.
- I don't like people who try to _____ me.

Appendix C: Articles with the target words for an oral exam

Campaign against pink toys for girls enjoys rosy outlook

Pinkstinks campaign against toy industry's narrow view of gender roles gains ground after Hamleys abandons colour-coded floors.



Girls are targeted from an early age by the 'princess industrial complex'.

Photograph: Cultura RM / Alamy/Alamy

When two sisters launched an "anti-pink" campaign two years ago, **advocating** to liberate girls from a toy industry dedicated to making the pretty princesses image a **paradigm** for young girls, they had no idea of the fuss it would cause in the **adult** world.

"We got mail from all over the world," says Emma Moore, one half of Pinkstinks, the group she runs with her **identical** twin sister, Abi. Some of the letters are **comprised** of **complements** for not **conforming** to the toy industry's agenda but **predominantly**, it was hate

mail. "They said things like 'you must be lesbians, you're ugly'. The reaction was so extreme you'd think we'd tried to cancel Christmas." **Ultimately**, the letters represented the **classic** reaction the sisters had expected and **confirmed** their belief that there is a **definite** need for a **comprehensive** operation to improve the situation.

Notwithstanding the backlash, the sisters have turned out to be at the vanguard of a movement whose time may have come.

When the London toy store Hamleys stopped labelling its floors in blue for boys and pink for girls last week and rearranged toys by type rather **differentiating** by gender, there were loud cheers from those who believe the pre-teen pink-blue divide has gone too far.

A campaign on Twitter had accused the store of "gender apartheid", but although Hamleys **denies** that the initiative was a response to that campaign, the relabelling was claimed as another small victory in the campaign against the "pinkification" of girlhood.

Before the **adaptation** Hamleys' girls department was home to a menagerie of fluffy animals, cookery sets and hair-and-beauty paraphernalia, including a beauty salon called Tantrum, while the boys' floor had a **couple** of rows of cars, and a selection of spaceships and construction sets.

The American writer Peggy Orenstein calls this an example of the "princess industrial complex", arguing that in the late 1980s marketeers **detected** that there were bigger sales opportunities if the toy market was divided into two distinct camps. The argument that this would **eventually reinforce** gender

roles was ignored and the decision was **finite**, money over morals. Despite the movement for gender equality in the following years, the marketeers' **successors** stuck to their policies.

"Colour didn't come into the nursery until around 1900 and, when it did, pink was for boys and blue was for girls," says the author of *Cinderella Ate My Daughter: Dispatches from the Front Lines of the New Girlie-Girl Culture*. "This profound fetishism of pink is a **contemporary phenomenon** and a market-driven construct. Princess is the only game in town."

Pinkstinks argues that the toy industry increasingly makes products for girls that centre on being pretty, passive and obsessed with shopping, fashion and makeup, **simulating** fictional characters like Barbie and the Bratz dolls. Its second, smaller campaign successfully challenged Sainsbury's over the labelling of children's dressing-up clothes, whereby doctors' outfits were labelled as being intended for boys and nurses' and beauticians' outfits were tagged "girl". The end point, they say, is a narrowing of girls' choices and aspirations. According to Pinkstinks there is no need to **insert** ideas about **prospects** for employment at such an

early age. On the **contrary** it should be a **priority** to **equip** children with the knowledge that they can become **practitioners** of whatever they want. In order to **eliminate** gender inequality we need to **dispose** of old ideas instead of **transmitting** them further and strengthening their **foundation**.

Quoting Moore, who has two daughters aged five and nine: "girls are increasingly worried about the way they look, and feel **displaced** and like they can't get ahead in their lives unless they look like Cheryl Cole". The sisters founded the group after having children and becoming alarmed by gender-segregated toys as Emma's house filled up with pink plastic while Abi's — with two boys — became packed with Power Rangers and the like. Theirs is certainly not an **isolated** case. Moore added: "That's not an issue for every single girl but it is an issue for a significant number of girls, **thereby** making it an important one."

There appears to be little **empirical** evidence behind the colour coding used in toy shops. A wealth of evidence indicates that colour preferences are learned rather than innate. Some studies have suggested that boys are pre-programmed for rough-and-tumble

games and toys with moving parts and **vehicles**, and that girls are drawn to dolls and role-play, but after many studies in the past **decade**, the evidence is not conclusive.

Pinkstinks, which was founded in 2008, is run from the 40-year-old sisters' respective bedrooms in Lewisham. They are supported by a small group of **volunteers** who help decide the campaign strategy, which relies on social networking, video and blogging to raise awareness and tackle companies. With little money for **publication** or expensive **media** advertising, this seems to be the best **mode** of communication to **highlight** the **topic**.

So far they have gathered 5,000 followers on Twitter and some 2,500 supporters on Facebook.

"It is quite exhausting sometimes," said Moore, whose day job is as a project manager for a research firm while her sister is a freelance film-maker. "We try to raise money by selling merchandise. If we sell a T-shirt we raise about £2." They visit schools to give talks and despite their size frequently receive requests for "teaching packs".

The next campaign "slap on the face of childhood" will tackle the growing market for makeup aimed at young girls.

Gary Grant, managing director of The Entertainer toy chain, said: "If girls didn't want pink, we wouldn't make it pink." The bestselling babywalker on the market was originally only available in blue, but when a pink version was introduced it outsold the original, he said.

"Is that the manufacturer **manipulating** the market or consumers deciding what **commodities** to buy?" he said. Lego was **predominantly** played with by boys, he claimed, with attempts by the manufacturer to get girls on side with pink bricks an "unmitigated disaster".

Pinkstinks's first campaign targeted "sexist" toys, including a pink globe with mermaids swimming in the sea, stocked by the Early Learning Centre. Within two weeks it had gone global and reached 45 countries. However, not all of the coverage was positive. One newspaper branded the Moore sisters "dour and humourless feminists".

The extreme reaction to the first Pinkstinks campaign led the sisters to question whether they should carry on. "We don't make a living from this, we do it **voluntarily** in our spare time," said Moore. What swung it in the end was the steady flow of emails they receive from young girls. "They make me cry. They say we need to carry on, you're our voice." Increasingly, judging by last week, it is one that is being heard.

Based on material from:

<http://www.guardian.co.uk/lifeandstyle/2011/dec/18/campaign-against-pink-toys-for-girls>

UN issues first report on human rights of gay and lesbian people

Human rights are those rights which are fundamental for living and for normal human existence. They are based on the concept that every man and woman, irrespective of social class, belief, colour, race, sexual orientation and nationality is born with certain fundamental rights such as, the right to live, speech, freedom, justice, etc. These rights are, therefore, enshrined in the constitution of the countries. In order, that these basic rights be maintained and adhered to by the nations of the world, The United Nations adopted a Charter of human rights soon after its formation. The Universal Declaration of Human rights which the UN adopted on 10 December 1948 enumerates some of these basic rights of man.

The problem of human rights is that people and countries are **unique** and have a different understanding of the term and its protection. In some countries political and civil rights are not given or guaranteed to all its citizens. In some other countries, economic and



social rights are not enforced. Therefore, the basic idea behind stressing human rights is that all governments should try to maintain these fundamental rights and see that all types of discrimination in this respect are **abandoned**.

Nevertheless, many types of discrimination and violation of human rights are seen in different parts of the world. It is true that racial discrimination known as 'Apartheid' as existed in South Africa formerly no longer exists in the world. Yet today, people are forced to flee their land of birth and forced to live in refugee camps under miserable conditions. Today minorities in many parts of the world have no political rights and many children do not have access to education.

On 15 December 2011, the first ever United Nations report on the human rights of lesbian, gay, bisexual and

transgender (LGBT) people details how around the world people are killed or endure hate-motivated violence, torture, detention, criminalization and discrimination in jobs, health care and education because of their sexual orientation or gender identity.

Violence against LGBT persons tends to be especially vicious compared to other **bias**-motivated crimes, the report notes, citing data indicating that homophobic hate crimes often include “a high degree of cruelty and brutality.”

Although homophobic and transphobic violence **fluctuates** between countries, it has been recorded in every region of the world, the report finds, and ranges from murder, kidnappings, assaults and rapes to psychological threats and arbitrary deprivations of liberty.

LGBT people are often targets of organized abuse from religious extremists, paramilitary groups, neo-Nazis, extreme nationalists and others, as well as family and community violence, with lesbians and transgender women at **visible** risk.

In the report, Navi Pillay, the UN High Commissioner for Human Rights, calls on countries to cancel laws that

criminalize homosexuality, abolish the death penalty for offences involving consensual sexual relations, harmonize the age of consent for heterosexual and homosexual conduct, and **induce** changes in the situation **via comprehensive** anti-discrimination laws.

In 76 countries it remains illegal to engage in same-sex conduct **plus** in at least five countries –, in Iran, Mauritania, Saudi Arabia, Sudan and Yemen – it is still punishable by death.

In countries where homophobia is **implicit** in the law, it encourages homophobia in society at large. If the State treats people as second class or second rate or, worse, as criminals, then it’s inviting people to do the same thing. Mr. Radcliffe said that while all people have freedom of religion, “no religious belief or cultural values can justify stripping people of their basic rights.”

Ms. Pillay, during a public conversation last week on social media, also called for an end to bullying and other forms of persecution of LGBT people.

Although in many countries violence against LGBT people is not as prominent as in others, other forms of human rights

violations may be taking place, although **somewhat** less **dramatic**. We can ask ourselves, do LGBT people have all the same rights as straight people? **Intense** violence, or any form of violence, is clearly in **contradiction** to human rights but other violations are perhaps more difficult to see. Among things **charted** as human rights are the right to marriage and to have a family. The same law is supposed to apply to everyone and we are all supposed to have the same rights. This is in no way **ambiguous**. How can it then in some countries be illegal for gay people to get married or adopt children?

As said before, various countries have different ways of looking at human rights. For instance, recently 66 boys were **extracted** from public school in Malaysia to go to macho boot camp. The choice of boys was not **random** but based on their "feminine" traits. The education department in Terengganu state established the camp to help boys deal with "identity issues" and place them on a "proper path in life". The camp requires **dynamic** physical training and is intended to prevent boys, ages 13 to 17, from continuing or developing feminine traits.

An Amnesty International spokeswoman said the operation smacks of

homophobia in a nation where homosexuality is illegal.

Malay government officials have also spoken out against the camp. "The experience of being singled out on the basis of perceived characteristics is an extremely traumatizing experience, in particular for adolescent teens," said Malaysia's Women, Family and Community Development minister. "Such profiling has potentially serious psychological repercussions."

At the same time, the opposite is happening in California. Recently, Sacramento Governor Jerry Brown signed legislation prohibiting a form of therapy aimed at changing a minor's sexual orientation from gay to straight, the first law of its kind in the nation. State Senator Ted Lieu, introduced the measure based on his belief that so-called conversion therapy is non-scientific and dangerous. It has caused an **accumulation** of problems and in some cases patients have later committed suicide or suffered severe mental and physical anguish.

"No one should stand idly by while children are being psychologically abused, and anyone who forces a child to try to change their sexual orientation must

understand this is unacceptable,” said Lieu. “Gov. Brown should be commended for protecting LGBT youth by ending this type of quackery.”

Kate Kendell, executive director of the National Center for Lesbian Rights, said the bill was needed so “state-licensed therapists cannot subject young people to practices that have been universally condemned by mainstream medical experts and that cause terrible harm.”

Nevertheless, this sort of therapy is still legal and practiced in many places and the bill was opposed by Republicans as an intrusion by the state into the decision of parents about how to raise their children.

The charter of human rights states that we all have a responsibility and a duty to other people, and we should protect their rights and freedoms. Everyone should ask themselves the question: “how can I do that?”

Based on material from:

<http://www.shareyouressays.com/15341/write-an-essay-on-human-rights>

<http://www.un.org/apps/news/story.asp?NewsID=40743#.UHWIwK4xbbw>

<http://www.newser.com/story/116870/effeminate-boys-sent-to-macho-malay-boot-camp.html>

<http://www.onlinesentinel.com/news/Ban-on-gay-conversion-therapy-for-minors-signed-into-law.html>

Sustainable Development and the Bruntland Report

Environmental, economic and social well-being for today and tomorrow



Sustainable development has been defined in many ways, but the most frequently quoted definition is from *Our Common Future*, also known as the Brundtland Report:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

- *the concept of needs, in particular the essential needs of the world's poor, to which overriding priority should be given; and*

- *the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs."*

All definitions of sustainable development require that we see the world as a system—a system that connects space; and a system that connects time.

When you think of the world as a system over space, you grow to understand and **appreciate** that air pollution from North America affects air quality in Asia, and

that pesticides sprayed in Argentina could harm fish stocks off the coast of Australia.

And when you think of the world as a system over time, you start to realize that the decisions our grandparents made about how to farm the land continue to affect agricultural practice today; and the economic policies we endorse today will have a **widespread** impact on urban poverty when our children are adults.

We also understand that quality of life is a system, too. It's good to be physically healthy, but what if you are poor and don't have **guaranteed** access to education? It's good to have a secure income, but what if the air in your part of the world is unclear? And it's good to have freedom of religious expression, but what if you can't feed your family?

The concept and **ideology** of sustainable development is rooted in this sort of systems thinking. It helps us understand ourselves and our world. The problems we face are complex and serious and the search for solutions must not be **terminated** too early. We can't address them in the same, **uniform** way we created them. But we *can* address them and **inevitably**, if we are to **survive**, we must.

To **clarify**, the Bruntland Report, or Our Common Future, is the report made and

released by the World Commission on Environment and Development in 1987. It is often called the Bruntland report after the chairperson of the commission, the then Prime Minister of Norway, Mrs Gro Harlem Bruntland. The report is one of the most **radically** influential environmental documents of the 20th century. It is representative of the growing global awareness in the second half of the century of the enormous environmental problems facing the planet, and of a growing shift towards **global** environmental action. As citizens of Earth we are **revising** the way we think, **intervening** where we have gone wrong and trying to **minimize** or **reverse** the harm for future generations. We **innovate** new technologies and find ways to **offset** the misbalance of the planet. As the report **exhibits**, humankind saw a **visual** image of earth from space for the first time only a few decades ago, and yet this has had a profound impact on the way in which we perceive the earth and our place on it. The Commission's brief was to re-examine and **inspect** the critical environment and development problems on the planet and to formulate realistic proposals to solve them; to create a 'global agenda for change'. It was to work within the principle of Environmentally Sustainable Development (ESD). **Guidelines** for improvement will not help if they come from the top of a **hierarchy**

and focus on simply **prohibiting** things that are harmful to the environment.

Problems like **exploitation**, **chemical** pollution and **nuclear** waste will not be solved over night and harmony can only be **restored** with **widespread** co-operation and the **ideology** has to become a part of the **infrastructure**. The report represents a collective call to action, involving all nation states as participants in finding solutions to the 'tragedy of the commons'.

In the words of Bruntland, one of its goals was:

"to help define shared perceptions of long-term environmental issues and the appropriate efforts needed to deal successfully with the problems of protecting and enhancing the environment, a long-term agenda for action during the coming decades, and aspirational goals of the world community." (Bruntland 1987:ix).

The report approaches the environmental and development issues which were (and still are) facing the world as one common challenge, to be solved by collective action by many nations rather than through the pursuit of national self-interest. It examines population and human resources, food security, species and ecosystems, energy, industry, and 'the urban challenge' of humans in their built environment.

Importantly, it approaches these common concerns with a holistic perspective. For example, the report illustrates how the problems of poverty and population are interconnected. By examining the interactions between the problems facing the world, the report develops common approaches to peace, security, development and the environment.

Based on material from:

http://www.csrhellas.org/portal/images/stories/files/1987_brundtland_report.pdf
<http://www.iisd.org/sd/17>

Thoughts on Plagiarism



Plagiarism is a silent and deadly disease that can creep into your writing and turn you from an independent, creative researcher and author into a mere copycat of other people's original thoughts and ideas. Plagiarism usually starts with a small sentence or **paragraph** being used without proper **quotation** or reference and escalates into the copying of whole papers or articles. This I believe is a very dangerous trend, especially during a student's formative years.

As a student in high school, we were taught it is **crucial** not to plagiarize. Some early term papers did contain some plagiarism and we did not receive severe penalties for the transgression, but the teachers let us know in no uncertain terms that plagiarism would not be tolerated as the school year progressed and certainly plagiarism would not be tolerated at the college level. Independent thought using published

articles as the seed of your own original ideas was the key to making students into good researchers and writers.

Aside from the lack of learning that plagiarism promotes, the stigma of being caught and labelled as a plagiarist can follow you through your professional life. There is a famous politician who was caught plagiarizing a paper in college, and even though that was his **sole** transgression and happened over 25 years ago, it is still brought up today. If you will take the easy way out through plagiarism, you may also be tempted to take the easy way out in other endeavours in your life. Doing the hard work when researching and writing articles and papers is not **arbitrary**, on the contrary it is good training and discipline for every area of your life. These life lessons will become habits and **accompany** you the rest of your life.

When people learn that someone is willing to plagiarize others' work, they become suspicious of that person. Having cheated once **denotes** that you will do it again. Once the boundary of stealing ideas has been crossed, others will be watching to see if you are willing to go farther in **deviating** from social norms, perhaps by stealing other things. In a business setting this can ruin a team effort creating a **tense** atmosphere. It can have everyone **virtually** looking over their shoulder to see if someone is stealing their ideas to present as their own instead of freely **channelling** and expressing their ideas and creating an atmosphere of sharing and contributing.

I speak from experience. I am a fourth-year student of Sociology at the University of Windsor. I pleaded guilty to academic misconduct, namely plagiarism, and I will be facing an academic suspension for two full semesters. This is my first offence. It consisted of writing an entire project without acknowledging the sources and even without incorporating my own thoughts.

My **schedule** was hectic and I did not start the project until one week before I was supposed to **submit** it, which was

not enough time to finish it since we required reading the book and theorizing it in our own words. But guess what? I could not even comprehend the entire book and the material from the **appendix** in one week, let alone developing a **thesis** statement. Being too late seemed to be my **theme** for the semester and I really needed a good **grade** for this essay. I wished I could be **converted** into an **automated** factory of writing but I just stared at an empty **file** on my computer and nothing happened. I wanted an easy way out! I started googling to see if I could get some **aid** from the internet and ended up with materials from three different sources, pasting and putting them together as my own.

I went to the professor to show my initial draft to see how it looked, and was told what I needed to do. I did not take the professor's advice as it seemed like I could get away with my plan. The second stage was getting back the papers. The professor handed me a written paper telling me that I plagiarized my paper and got a zero grade. I **inferred** the anger of my professor from the way he said the Academic Integrity Office had been informed and they would call me about

an investigation that may result in a suspension or expulsion from the University. This was the worst moment; I realized that I had made a horrible mistake and had ignored honesty and integrity. My first reaction was to tell the professor that I would like to meet the next day. I came to the office with a written letter stating my failure to acknowledge sources. I said this was based on a personal issue (health condition) and I could not concentrate on the work properly and asked the professor to forgive me and not report my actions. What I have learned so far with this act, is that most of the time students blame others or make excuses for such failures, but this is my absolute failure and I should not blame others or point to other factors. This is a serious offence and I promise myself not be involved in this again in the future.

My advice to other students is to be honest and be committed to your own work, and stop relying on copying internet materials and not acknowledging sources. You will never learn anything by copying and pasting and why even go to school if not to learn?

In conclusion, plagiarism is a good habit to stay away from because as most "addictive" endeavours, it leads to more serious infractions and consequences.



Based on material from:

http://www.uwindsor.ca/academicintegrity/sites/www.uwindsor.ca/academicintegrity/files/Plagiarism_in_fourth_year.pdf

<http://medinger.hubpages.com/hub/Thoughts-on-Plagiarism>

Appendix D: Small tests, with answers

Academic Vocabulary Self-test one

What's your name? _____

Please fill in the gaps with the appropriate words.

The first letter or letters are given, sometimes the last letter as well.

Remember to read the sentences well before choosing a word.

Example: A) My parents' marriage is over. They are are getting a diorce

B) Is this too difficult for you to un derstand?

1. Please don't ab_____ me, I'm so afraid of being left alone!

abandon

2. If you have trouble remembering the name of the characters in the book, try to

hi_____ them as you are reading, it might help. highlight

3. Stop acting like a child, you are an ad_____ and should act your

age! Adult

4. She has a very un_____e style, few people dress like her. unique

5. He suffered minor brain injury in the part of the brain that is cr_____

to memory. Therefore he cannot remember the last two weeks. crucial

6. The dentist had to ex_____ my tooth, it was too damaged to fix. extract

7. I really app_____ everything you have done for me! You have

been so helpful. appreciate

8. If you want to explain information that includes numbers more visually you can

make a pie ch_____. That way pieces of a pie are used to

represent percentages and the division can be seen very clearly. Chart

9. Another word for a product, something you buy, is co_____.

commodity

10. She doesn't like the straight lines of con_____ architecture, she

prefers older houses. contemporary

11. The numbers in the lottery are completely ra_____ so there is

no way to predict which ones will be picked. Random

12. Please in_____ the DVD disc into the player and then press

PLAY. insert

13. How can you d_____ having been at the scene of the crime? The picture clearly shows it is you. deny

14. If you is_____ yourself completely and play computer games alone all day you'll end up losing your friends. isolate

15. Can we please just talk calmly about this? I've had enough dr_____ for one day! drama

16. His bad investment decisions lead to the ev_____ bankruptcy of the company. eventual

17. My timetable had math and English at the same time so I needed to re_____ it. revise

18. Having a car is a huge pl_____ when you are looking for a job. plus

19. How do you think a new cola drink would do in Iceland? What is the pr_____ ct for success in sales of such a beverage? prospect

20. The band's fame spread quickly around the gl_____ and soon its songs were being played in every country of the world. globe

21. The bus is my favourite mo_____ of transportation, I don't really like driving myself. mode

22. I find it so_____ t strange that you decided to quit school, since you always seemed determined to go to University. somewhat

23. You broke the terms of your contract and therefore I am going to te_____ it immediately. You are fired! terminate

24. Have you chosen a to_____ for your formal essay? Topic

25. Luckily, he had no vi_____ scars on his face after the accident. Visible

Academic Vocabulary

Self-test two

Name _____

Please fill in the gaps with the appropriate words.

The first letter or letters are given, sometimes the last letter as well.

Remember to read the sentences well before choosing a word.

1. The th_____ of last year's dance was Disco. This year it's going to be Punk. theme
2. I will try to gr_____ your essays this weekend so that you'll know how you did next week. grade
3. Someone from the fire department is going to ins_____ the restaurant before it can open. inspect
4. Don't try to ma_____e me into doing something I don't want to! manipulate
5. Even though it is a productive way to make electricity, many people are against nu_____ energy because of the danger of accidents. nuclear
6. I am a health pra_____ at the local hospital. practitioner
7. The English have been reluctant to change their cu_____ from pounds into euros.
8. When I go fishing I only keep the first three fish I catch, the rest I re_____e. release
9. You should learn how to take a co_____, you always seem embarrassed when I say something good about you. complement
10. Look at the sc_____ before you go out to the bus station so you'll know when it's coming. Schedule
11. I'm not coming to visit today. I have a terrible cold and I don't want to tr_____ it to you. transmit
12. You need a licence to drive any ve_____. Just imagine if anyone could drive without first learning how to! vehicle
13. Who is going to ac_____y you to the dance tonight? accompany
14. We are id_____ twins, few people can tell us apart. identical
15. I took a first a_____ course to be able to help if someone ever got injured around me. aid

16. The essay is due next Monday and you can either su_____ it in class or on-line. submit
17. They decided to au_____e the factory, even though over 100 people would lose their jobs. automate
18. My paintings will be shown at an art ex_____t in a new gallery this weekend. exhibit
19. Did you know that the ch_____l formula for water is H₂O? chemical
20. The device can de_____t the smallest trace of smoke and start an alarm before a fire could do much damage. detect
21. The pu_____n of the book took a very long time because the author was accused of plagiarism. publication
22. He tried to co_____t modern theories of human evolution by using the Bible, but no one would listen to him. Contradict
23. The group is never boring or dull, always dy_____ and a lot of fun. dynamic
24. Never wave or call a waiter, that is considered rude. It is more polite to just get vi_____ contact and perhaps to smile or nod. visual
25. I had a fi_____ with all my documents. Have you seen it? file

Academic Vocabulary

Self-test three

Student: _____

Please fill in the gaps with the appropriate words.

The first letter or letters are given, sometimes the last letter as well.

Remember to read the sentences well before choosing a word.

1. I have been spending money I didn't own for a long time so I've managed to acc_____ a lot of dept. accumulate
2. I think the novel was great but I might have some bi_____ since I'm the author's mother. bias
3. I don't understand what you are saying, could you cl_____y? clarify
4. I have not been cutting classes a lot recently, on the co_____ I've been in every single class for the past month! contrary
5. I used to think a de_____ meant 12 years but then I realized it is 10 years. decade
6. In most computer games you have to kill or somehow el_____e your enemies. eliminate
7. Recently foreign film-makers have been accused of ex_____g Icelandic workers because they are willing to work for far less money than foreign ones. exploiting
8. Like many other sports, football has a fi_____e number of players on each team to make sure the teams are equal and not too large. finite
9. I tried to get her to tell be where she was last night but she was very unclear and gave me rather am_____ s answers. ambiguous
10. You have no idea how long this will take! How can you gu_____ that you will be back in time for the party? guarantee
11. Tv, newspapers, the internet and radio are all forms of me_____. media
12. I don't know how long it's been since I saw someone with a regular old mobile phone. It seems that the new smart phones will soon completely di_____ce the older generation of cellphones. displace

13. In a formal essay, a new idea should always be presented in a new paragraph. Paragraph
14. The mayor said his first priority would be to fix the roads of the town. I agree, that is a very important issue. priority
15. Martin Luther King's "I have a dream" is perhaps the most famous quote from the last century. quote
16. They were arguing and fighting. It was very intense. I wished they would relax a bit! Intense
17. I flew to New York via London. There was no direct flight so I had to switch planes in London. via
18. It was a miracle that everyone on the ship survived when it sank. Survived
19. This old car looks like it's new! Did you restore it yourself? Restore
20. The ultimate challenge for every parent is sometimes to learn when to say no. Ultimate
21. The parenting exercise used a doll to simulate a baby. The students had to feed it and take care of it and if they didn't it cried. Simulate
22. He killed a man in a fight and was convicted of voluntary manslaughter. Voluntary
23. She taught them twenty new words, thereby increasing their vocabulary. thereby
24. I'm a vegetarian so eating meat is against my ideology. Ideology
25. He wrote a comprehensive book about Icelandic birds. It included every single type of bird that lives in Iceland. comprehensive

Academic Vocabulary

Self-test four

Student: _____

Please fill in the gaps with the appropriate words.

The first letter or letters are given, sometimes the last letter as well.

Remember to read the sentences well before choosing a word.

1. It can be hard for foreigners to ad_____ to a new culture when they move to a new country. Adapt
2. I like to watch the discovery ch_____ because I like documentaries. channel
3. I'm calling to co_____m your doctor's appointment tomorrow. confirm
4. Before going on a hike it is important to eq_____ yourself with warm clothes, plenty of water and food. Good shoes are also very important. equip
5. At the end of some books there is something called an ap_____. It usually has extra information that didn't fit in the book for some reason. appendix
6. He is very moody. His mood can fl_____ from very happy to extremely sad in a matter of minutes. fluctuate
7. Friendship is the fou_____ of any relationship. It is something you can build on. foundation
8. We have all seen a picture of the food pyramid. It is a good gui_____ for healthy eating. guideline
9. When something cannot be avoided it is in_____le. Inevitable
10. Romeo and Juliet, by William Shakespeare is a cl_____c play. classic
11. We have to do something. We cannot watch him throw his life away like that. It is time for us to in_____ne. intervene
12. Once you have committed the murder, how will you di_____ of the body? It is very important that it will never be found! dispose
13. The school got rid of the coca-cola machines to try to mi_____ the students' consumption of soda during school hours. Minimize

14. They tried to pr_____ it eating in the class rooms but the students still brought their food to class. prohibit
15. There was a ra_____ change in her appearance when she cut her hair short and died it black! Radical
16. The prince is the so_____ heir of the kingdom, being the king's only child. sole
17. Why are you so te_____? Please try to relax! Tense
18. She put the car in re_____ and backed into the parking space. reverse
19. At the end of the introduction, write your th_____ statement. thesis
20. The spelling of the word 'read' is un_____m in the past and present tense, even though they are pronounced differently. uniform
21. The on-line computer world is sometimes called vir_____ reality, because it is not actually reality. virtual
22. The black plague was one of the most wi_____ad diseases of its time, it managed to reach most of the world. widespread
23. She was brought up in South-Africa so she had never seen such a ph_____ as snow before. phenomenon
24. Did he give you a de_____e answer or is he still thinking about it? definite
25. What is more than one but less than three teaspoons of sugar? A co_____ of teaspoons of sugar. couple

Appendix E: answer sheets for self-tests

Small test one – key

Student: _____

The following words are the answers from your self-test. The ones that are marked are the ones that weren't correct on your test, therefore they are the ones you will learn better.

Please make vocabulary cards, like the ones we've done so far, for the words that are marked and hand them in, in class next Tuesday. Make sure to hand this sheet in as well.

- | | |
|------------------|---------------|
| 1. abandon | 14. isolate |
| 2. highlight | 15. drama |
| 3. adult | 16. eventual |
| 4. unique | 17. revise |
| 5. crucial | 18. plus |
| 6. extract | 19. prospect |
| 7. appreciate | 20. globe |
| 8. chart | 21. mode |
| 9. commodity | 22. somewhat |
| 10. contemporary | 23. terminate |
| 11. random | 24. topic |
| 12. insert | 25. visible |
| 13. deny | |

Small test two – key

Student: _____

The following words are the answers from your self-test. The ones that are marked are the ones that weren't correct on your test, therefore they are the ones you will learn better.

Please make vocabulary cards, like the ones we've done so far, for the words that are marked and hand them in, in class next Tuesday. Make sure to hand this sheet in as well.

- | | |
|----------------|------------------|
| 1. accompany | 14. theme |
| 2. identical | 15. grade |
| 3. aid | 16. inspect |
| 4. submit | 17. manipulate |
| 5. automate | 18. nuclear |
| 6. exhibit | 19. practitioner |
| 7. chemical | 20. currency |
| 8. detect | 21. release |
| 9. publication | 22. complement |
| 10. contradict | 23. schedule |
| 11. dynamic | 24. transmit |
| 12. visual | 25. vehicle |
| 13. file | |

Small test three – key

Student: _____

The following words are the answers from your self-test. The ones that are marked are the ones that weren't correct on your test, therefore they are the ones you will learn better.

Please make vocabulary cards, like the ones we've done so far, for the words that are marked and hand them in, in class next Tuesday. Make sure to hand this sheet in as well.

- | | |
|---------------|-------------------|
| 1. accumulate | 14. priority |
| 2. bias | 15. quote |
| 3. clarify | 16. intense |
| 4. contrary | 17. via |
| 5. decade | 18. survived |
| 6. eliminate | 19. restore |
| 7. exploiting | 20. ultimate |
| 8. finite | 21. simulate |
| 9. ambiguous | 22. voluntary |
| 10. guarantee | 23. thereby |
| 11. media | 24. ideology |
| 12. displace | 25. comprehensive |
| 13. paragraph | |

Small test four – key

Student: _____

The following words are the answers from your self-test. The ones that are marked are the ones that weren't correct on your test, therefore they are the ones you will learn better.

Please make vocabulary cards, like the ones we've done so far, for the words that are marked and hand them in, in class next Tuesday. Make sure to hand this sheet in as well.

- | | |
|---------------|----------------|
| 1. adapt | 13. minimize |
| 2. channel | 14. prohibit |
| 3. confirm | 15. radical |
| 4. equip | 16. sole |
| 5. appendix | 17. tense |
| 6. fluctuate | 18. reverse |
| 7. foundation | 19. thesis |
| 8. guideline | 20. uniform |
| 9. inevitable | 21. virtual |
| 10. classic | 22. widespread |
| 11. intervene | 23. phenomenon |
| 12. dispose | 24. definite |
| | 25. couple |

Appendix F: Diagnostic test from sublists 3, 5, 7 and 9 of the AWL

Please put an X in front of the word or definition that has **most** in common with the underlined word.

Like this:

He is a **grumpy** old man

a) he is happy

X b) he is often in a bad mood

c) he is young

d) he is hungry

<p>Convene: They decided to convene.</p> <p>a) to go away</p> <p>b) to stop what they were doing</p> <p>c) to get together</p> <p>d) to start eating</p>	<p>Comment: Did she comment on that?</p> <p>a) say something about it</p> <p>b) sit down to rest</p> <p>c) put her things down</p> <p>d) arrive</p>
<p>Corporate: He is a corporate man.</p> <p>a) he has done bad things</p> <p>b) he is dishonest</p> <p>c) he is associated with a group of people</p> <p>d) he is dead</p>	<p>Demonstrate: Can you demonstrate for me?</p> <p>a) be on your best behaviour</p> <p>b) work instead of me</p> <p>c) make up an excuse</p> <p>d) show me</p>
<p>Deduce: They could not deduce what had happened.</p> <p>a) they could not explain it</p> <p>b) they could not come to understand it</p> <p>c) they could not hide it</p> <p>d) they could not prove it</p>	<p>Initial: The initial accident was on Monday.</p> <p>a) the accident was terrible</p> <p>b) it was a fake accident</p> <p>c) the first accident</p> <p>d) the accident was well planned</p>
<p>Negate: You can negate it if you want.</p> <p>a) show me how to get somewhere</p> <p>b) deny that it exists</p> <p>c) help someone to come to an agreement</p> <p>d) borrow it</p>	<p>Philosophy: This is my philosophy.</p> <p>a) a book or document I have written</p> <p>b) a room used to study in</p> <p>c) my ideas about life</p> <p>d) living-room furniture</p>
<p>Constrain: She tried to constrain me.</p> <p>a) stop me from leaving</p> <p>b) convince me to do something</p> <p>d) make me tired</p> <p>c) make me think about something else</p>	<p>Shift: Can we shift?</p> <p>a) change positions</p> <p>b) get out of here</p> <p>c) share something</p> <p>d) walk quietly</p>

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<p>Amend: We can <u>amend</u> the document.</p> <p>a) sign it b) falsify it c) improve it d) write it</p>	<p>Capacity: What is the hotel's <u>capacity</u>?</p> <p>a) main problem b) limit of guests c) price range d) how many stars does it have</p>
<p>Facilitate: Can you <u>facilitate</u> this?</p> <p>a) make it easier b) explain it c) make it from scratch d) imagine it</p>	<p>Energy: This is a lot of <u>energy</u>.</p> <p>a) valuable things b) amount of water c) fire d) available power</p>
<p>Margin: Put it on the <u>margin</u>.</p> <p>a) the bottom side facing down d) standing upside down c) the edge d) forget about it</p>	<p>Image: Look at that <u>image</u>.</p> <p>a) some sort of picture b) statue c) a representation of something else d) all of the above</p>
<p>Sustain: Can this be <u>sustained</u>?</p> <p>a) argued against b) continued or maintained c) believed used as an example d) stopped or detained briefly</p>	<p>Orient: He tried to <u>orient</u> us.</p> <p>a) help us get to know something new b) frighten us c) change us d) change our minds about something</p>
<p>Transit: Are you in <u>transit</u>?</p> <p>a) changing b) drunk c) moving d) in prison</p>	<p>Substitute: I need a <u>substitute</u>.</p> <p>a) a secretary b) medicine for pain c) a weapon d) person acting in place of another</p>

<p>Comprise: What is it <u>comprised</u> of?</p> <p>a) surprised about</p> <p>b) afraid of</p> <p>c) made of</p> <p>d) how much does it cost</p>	<p>Classic : This is the <u>classic</u> teaching method.</p> <p>a) ancient</p> <p>b) boring</p> <p>c) best</p> <p>d) traditional</p>
<p>Innovate: We need to <u>innovate</u>.</p> <p>a) to introduce something new</p> <p>b) to solve a problem</p> <p>c) convince someone everything will work out</p> <p>d) to attack something or someone</p>	<p>Equip: How are you going to <u>equip</u> yourself?</p> <p>a) protect yourself from something</p> <p>b) prepare yourself for something</p> <p>c) free yourself from confinement</p> <p>d) get yourself out of trouble</p>
<p>Empirical: This is <u>empirical</u> evidence.</p> <p>a) the most important</p> <p>b) physical</p> <p>c) based on experience</p> <p>d) falsified</p>	<p>Ideology: What do you think of her <u>ideology</u>?</p> <p>a) that she invested money in something</p> <p>b) her way of thinking</p> <p>c) a decision she took</p> <p>d) her explanation</p>
<p>Intervene: We have to <u>intervene</u>!</p> <p>a) to interfere</p> <p>b) to take a break</p> <p>c) to stop right now</p> <p>d) to put a tube down someone's throat</p>	<p>Release: When will you <u>release</u> it?</p> <p>a) give it to someone</p> <p>b) understand it</p> <p>c) allow it to be known</p> <p>d) none of the above</p>
<p>Paradigm: This is a <u>paradigm</u>.</p> <p>a) a difficult or unsolvable problem</p> <p>b) the way between two unknown destinations</p> <p>c) an argument so strong it can be considered as evidence in a court of law</p> <p>d) an example serving as a model or pattern</p>	<p>Ultimate: This would be her <u>ultimate</u> decision.</p> <p>a) most stupid</p> <p>b) very difficult</p> <p>c) final</p> <p>d) cause her death</p>

Analogy: Can you make an analogy ? a) write a long story b) make an excuse c) provide a false alibi d) comparison	Commence: It's time to commence . a) make a change b) give orders c) begin d) stop
Concurrent: Were they concurrent ? a) happening at the same time b) in disagreement c) breaking the law d) with overdue debt:	Found: Who founded it? a) discovered it b) found the solution c) located it d) created it
Erode: This is going to erode . a) explode b) rise to the top c) be destroyed slowly d) fall down	Norm: This is not the norm . a) standard b) allowed c) good d) solution
Integral: Would you say it is integral ? a) on the inside b) so dangerous that it is lethal c) having to do with the structure of d) necessary to complete the whole	Rigid: he is rigid . a) strong b) fat c) stiff d) mean
Subordinate: I am your subordinate . a) of less importance b) I'm your boss c) I'm working instead of you d) your lawyer	Vision: He is known for his vision . a) being a good boss b) having a clear idea c) being on TV d) being exceptionally good at one particular thing

Please complete the missing words.

Like this: I have no idea how to solve this problem.

- 1) If you ex_____ someone from a party, you do not invite them.
- 2) In order for the recipe to work, you must measure the contents in the right pr_____.
- 3) There must be an al_____ way to fix the problem, this one is not working
- 4) You have to in_____ with people if you want to get to know them.
- 5) A co_____ adjective is made out of two words.
- 6) The profit from a property or an investment is called rev_____.
- 7) An institution of higher learning is often called an ac_____.
- 8) If you want permission to drive a car you need a li_____.
- 9) He always defends me and takes my side, he is my adv_____.
- 10) To in_____ something is the same as drawing a conclusion.
- 11) If someone does not fit in certain circumstances, they can ada_____ to change that.
- 12) When two things look exactly the same, they are id_____.
- 13) If two things happen at the same time or are exactly the same in shape they are co_____.
- 14) Acting like an idiot in a job interview would di_____ the chance of being hired.
- 15) Do you need a place to stay tonight? I can ac_____ you.
- 16) We just cannot agree on anything! We need someone to me_____ so we can find a common solution.

Appendix G: The study test

This test was used both as pre- and post-test. Answers are included in the productive part.

Please fill in the gaps with the appropriate words.

The first letter or letters are given, sometimes the last letter as well.

Remember to read the sentences well before choosing a word.

Example: A) My parents' marriage is over. They are are getting a divorce

B) Is this too difficult for you to understand?

- 1) It is important for doctors to be able to di_____ between types of snake bites in order to treat them appropriately. Differentiate
- 2) To in_____ something is the same as using some information to make an intelligent guess. Infer
- 3) She had no reason for her decision; it was quite ar_____ Arbitrary
- 4) It is company policy to in_____ constantly with new products to meet the changing needs of the market. innovate
- 5) Jane will be my su_____r . She'll take over my position as soon as I retire. successor
- 6) If you want to live in this house you have to co_____ with our rules. You cannot just do as you please! conform
- 7) When something is based solely on experiment or experience it is em_____. empirical
- 8) The earthquake wiped out all schools, communication and transport systems so the city's in_____ had to be largely rebuilt. infrastructure
- 9) If your chicken curry dish is too spicy you can use coconut milk to of_____ the taste. Offset

- 10) When people have a high fever it often de_____ that they have an infection. denote
- 11) Can you please co_____ these dollars into pounds for me at the bank? convert
- 12) You must stick to the plan! Don't de_____ in any way, no matter how small! deviate
- 13) She looked at him and said: "are you going to leave your socks on the floor?" Her anger was im_____t in her message. implicit
- 14) She is a strong ad_____ for the European Union and is constantly telling people that Iceland should join. advocate
- 15) In medieval England no one had more power than the king. He was at the very top of the hi_____. hierarchy
- 16) Speeding is the pr_____ cause of traffic accidents. predominant
- 17) Napoleon tried everything to re_____ his army. He needed more soldiers to win the war. reinforce
- 18) Coca cola is mostly co_____ of water and sugar. comprised
- 19) After swallowing the poison she was taken straight to the hospital where the doctors in_____ vomiting to help her. induce
- 20) The fact that size zero models have become a pa_____ for how young women "should" look has not been good for many girls' self-esteem. paradigm

- 21) We need to bring medical ai_____ and food to the area affected by the earth quake as soon as possible. aid
- 22) It is not true that being very thin is good. On the co_____ research has shown that it is not very healthy. contrary
- 23) She has a very dy_____ personality. She seems to have boundless energy! dynamic
- 24) Education is one of the fo_____ of every society. How could a society be built without education? foundation
- 25) Just i _____ your credit card into the ATM and enter your pin number and you will get your money. insert
- 26) Feeding the children has to be our pr _____. It is more important than anything else. priority
- 27) I have a whistle to si_____ the sound of a duck. This helps me hunt them. simulate
- 28) Politics is not always a popular t_____. Some people just don't like to talk about politics. topic
- 29) If you take a chick out of its nest the mother is likely to ab_____ the nest, leaving her chicks helpless, because of the smell you leave behind. abandon
- 30) Many companies are trying to au_____ cars so they will no longer need drivers at all. automate
- 31) All the furniture in her house is in modern style. She likes co_____ designers of furniture. contemporary
- 32) There is often a lot of dr_____ around a celebrity divorce. drama
- 33) I completed the make-over by using red lipstick to hi_____ her beautiful lips. highlight
- 34) All the inhabitants of Chernobyl were in danger of radiation when one of the power plant's nu_____ reactors malfunctioned. nuclear
- 35) The numbers in the national lottery are completely ra_____ so there is no way of predicting which numbers will win next week. random

Please put an X in front of what means the same as the underlined word.

Example:

Laptop: I'm working on my **laptop**.

a) table

b) car

X c) computer

d) application

<p>1. Foundation: This is a <u>foundation</u>.</p> <p>a) search party</p> <p>b) story based on a lie</p> <p>c) archaeological site</p> <p>d) non-profit organization</p>	<p>2. Contrary: I would say the <u>contrary</u>!</p> <p>a) the same thing</p> <p>b) that we have a deal</p> <p>c) the opposite</p> <p>d) tell a lie</p>
<p>3. Insert: Please insert it here.</p> <p>a) put it down between two things</p> <p>b) put one thing on top of another</p> <p>c) take one thing out of another</p> <p>d) put one thing into another</p>	<p>4. Simulate: What are you trying to <u>simulate</u>?</p> <p>a) put together</p> <p>b) imitate</p> <p>c) say</p> <p>d) convince someone of something</p>
<p>5. Automate: Is there anything we can <u>automate</u>?</p> <p>a) do ourselves</p> <p>b) change it to operate without people</p> <p>c) drive to the next location</p> <p>d) fix</p>	<p>6. Aid: we need some <u>aid</u>.</p> <p>a) work</p> <p>b) help</p> <p>c) entertainment</p> <p>d) ideas</p>
<p>7. Priority: What is your <u>priority</u>?</p> <p>a) belief</p> <p>b) previous occupation</p> <p>c) of most importance to you</p> <p>d) what you fear the most</p>	<p>8. Abandon: Will you <u>abandon</u> me?</p> <p>a) help me</p> <p>b) accompany me</p> <p>c) betray me</p> <p>d) leave me</p>
<p>9. Drama: Is it a <u>drama</u>?</p> <p>a) a story that includes conflict</p> <p>b) a play that is funny</p> <p>c) a film that is funny</p> <p>d) a story that happened a long time ago</p>	<p>10. Contemporary: It is a <u>contemporary</u> novel?</p> <p>a) it happens in the present time</p> <p>b) popular</p> <p>c) forgotten</p> <p>d) written a long time ago</p>

<p>11. Topic: Please stick to the <u>topic</u>.</p> <p>a) instructions</p> <p>b) what we are talking about</p> <p>c) the most important thing</p> <p>d) the ceiling</p>	<p>12. Dynamic: He is very <u>dynamic</u>.</p> <p>a) dangerous</p> <p>b) badly hurt</p> <p>c) popular</p> <p>d) active</p>
<p>13. Random: This is <u>random</u>.</p> <p>a) unfortunate</p> <p>b) coincidental</p> <p>c) outrageous</p> <p>d) expensive</p>	<p>14. Ambiguous: You are being <u>ambiguous</u>.</p> <p>a) unfair</p> <p>b) ridiculous</p> <p>c) unclear</p> <p>d) ironic</p>
<p>15. Quote: Where is this <u>quote</u> from?</p> <p>a) a sentence written by someone else</p> <p>b) a colourful blanket</p> <p>c) a large amount of fish</p> <p>d) a fruit</p>	<p>16. unique : This is <u>unique</u>.</p> <p>a) awkward</p> <p>b) old</p> <p>c) fabulous</p> <p>d) special</p>
<p>17. Media: What form of <u>media</u> will you use?</p> <p>a) assistance</p> <p>b) drugs</p> <p>c) means of communication</p> <p>d) public transportation</p>	<p>18. clarify : Can you <u>clarify</u>?</p> <p>a) fix what is wrong</p> <p>b) explain something</p> <p>c) cope with something</p> <p>d) surrender</p>
<p>19. Guarantee: Can you <u>guarantee</u> it?</p> <p>a) make it happen</p> <p>b) promise something</p> <p>c) destroy it</p> <p>d) buy an insurance for something</p>	<p>20. Extract: What can you <u>extract</u> from this?</p> <p>a) take away from</p> <p>b) gain from</p> <p>c) learn from</p> <p>d) make out of it</p>
<p>21. Exploit: You are <u>exploiting</u> these people.</p> <p>a) moving them to another place</p> <p>b) using them</p> <p>c) making them famous</p> <p>d) revealing their secrets</p>	<p>22. Submit : I had to <u>submit</u> to that.</p> <p>a) allow it even though I didn't want to</p> <p>b) promise to do something</p> <p>c) hide something shameful</p> <p>d) admit something shameful</p>

<p>23. Classic: This is a <u>classic</u> play.</p> <p>a) a boring play b) it has as been popular for a long time c) a long play d) it is a big hit</p>	<p>24. Nuclear: is this <u>nuclear</u> energy?</p> <p>a) dangerous b) newly found c) atomic d) electric</p>
<p>25. Highlight: Can you find a way to <u>highlight</u> this?</p> <p>a) do it at the end b) make it funny c) show it is important d) make sure nobody knows about it</p>	<p>26. Intense: He is often <u>intense</u>.</p> <p>a) difficult b) mysterious c) shy and unwilling to communicate d) shows strong emotion</p>
<p>27. Currency: what <u>currency</u> do they use?</p> <p>a) money system b) equipment c) form of communication d) agency</p>	<p>28. Definite: His answer was <u>definite</u>.</p> <p>a) loud b) silent c) threatening d) clear</p>
<p>29. Schedule : Can you show me your <u>schedule</u>?</p> <p>a) method b)map c) route d) plan</p>	<p>30. Practitioner: what are you a <u>practitioner</u> of?</p> <p>a) training b) expert c) actor d) searcher</p>
<p>31. Advocate: We need an <u>advocate</u>.</p> <p>a) Someone who will speak for our cause b) a solution to a specific problem c) a specialist in politics d) a very precise microscope</p>	<p>32. Empirical: This is <u>empirical</u> evidence.</p> <p>a) the most important b) scientific c) falsified d) unbelievable</p>
<p>33. Induce: What are you trying to <u>induce</u>?</p> <p>a) say b) hide c) run away from d) cause to happen</p>	<p>34. Comprise: What is it <u>comprised</u> of?</p> <p>a) afraid of b) made of c) how much is it worth d) sure of</p>

<p>35. Hierarchy: are you ok with this <u>hierarchy</u>?</p> <p>a) group of employees b) confusion c) system of power d) investment portfolio</p>	<p>36. Arbitrary: This is too <u>arbitrary</u> for me</p> <p>a) decided by coincidence b) expensive c) difficult d) vulgar or offensive</p>
<p>37. Paradigm: This is a <u>paradigm</u>.</p> <p>a) a difficult or unsolvable problem b) the way between two destinations c) a strong argument or evidence d) an example serving as a model</p>	<p>38. Infer: How did you <u>infer</u> that?</p> <p>a) make it b) come to that conclusion c) get away with it d) imply something</p>
<p>39. Convert: What are you going to <u>convert</u>?</p> <p>a) cover up b) trade for something else c) accomplish without being noticed d) change into something else</p>	<p>40. Implicit: Her arguments are often <u>implicit</u>.</p> <p>a) complicated b) negative c) unreliable d) indirect</p>

<p>41. Successor: who is my <u>successor</u>?</p> <p>a) someone who gives me money b) assassin c) secret admirer d) the person who will take my place</p>	<p>42. Infrastructure: What did he say about the <u>infrastructure</u>?</p> <p>a) problems in the building b) damage because of too much light c) framework d) rebuilding</p>
<p>43. Innovate : We need to <u>innovate</u>.</p> <p>a) introduce something new b) leave the building c) terminate a problem d) meet</p>	<p>44. Denote: What does that <u>denote</u>?</p> <p>a) indicate b) prove c) stop us from doing d) change</p>

<p>45. Predominant: What is the <u>predominant</u> species in Africa?</p> <ul style="list-style-type: none"> a) the most dangerous species b) the species with the highest population c) the most endangered species d) the most expensive or desired 	<p>46. Differentiate: Can you <u>differentiate</u> between these two?</p> <ul style="list-style-type: none"> a) see the difference b) make peace c) make them look different d) tell them to step away from each other
<p>47. Reinforce: We need to <u>reinforce</u> our teaching staff.</p> <ul style="list-style-type: none"> a) make the teachers better b) fire some teachers d) tell the teachers about their mistakes d) hire more teachers 	<p>48. Deviate : Do not <u>deviate</u>!</p> <ul style="list-style-type: none"> a) make a mistake b) try to escape c) do something else than what was planned d) do something harmful to yourself
<p>49. Offset: We need an <u>offset</u>.</p> <ul style="list-style-type: none"> a) box of tools b) something to cause balance c) a head start d) a place for actors to get ready for stage 	<p>50. Conform: How can I make this <u>conform</u>?</p> <ul style="list-style-type: none"> a) stop b) stay in one place c) be suitable d) be entertaining

Appendix H: T-test results for the study

		Mean diff.	Std. Dev.	T	df	Sig (2-tailed)
Study group	Pre 1 – Post 1	-41.2000	26.2943	-11.080	49	.000
	Pre_2 - Post2	-39.8600	20.8160	-13.540	49	.000
	Pre3a - Post3	-25.4902	18.1178	-10.047	50	.000
	Pre4a - Post4	-15.0588	14.9150	-7.210	50	.000
Control group 1	Pre1a - Post1	-3.1818	7.3266	-2.037	21	.054
	Pre2 - Post2	-.2727	8.1134	-.158	21	.876
	Pre3 - Post3	.9091	14.9313	.286	21	.778
	Pre4 - Post4	7.3636	16.6777	2.071	21	.051
Control group 2	Pre1 - Post1	.6000	14.7422	.203	24	.840
	Pre2 - Post2	-7.2000	49.0544	-.734	24	.470
	Pre3 - Post3	-1.8000	32.2387	-.279	24	.783
	Pre4 - Post4	-3.7600	29.1680	-.645	24	.525

Appendix I: Comparison of standard deviation in pre- and post-tests

	Study group		Control group 1		Control group 2	
	Before	After	Before	After	Before	After
Productive test						
total average	0,14	0,25	0,12	0,15	0,15	0,18
Productive <i>specific selection</i>	0,08	0,30	0,05	0,10	0,09	0,10
Productive <i>random selection</i>	0,25	0,22	0,25	0,25	0,28	0,32
Receptive test						
total average	0,20	0,15	0,17	0,23	0,21	0,17
Receptive <i>specific selection</i>	0,20	0,20	0,19	0,25	0,24	0,20
Receptive <i>random selection</i>	0,21	0,13	0,19	0,24	0,22	0,17