The challenges of learning academic vocabulary among postgraduate Saudi students at New Zealand universities

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LIST OF ABBREVIATIONS

AWL(s)	Academic Word List(s)
EAL	English as an Additional Language
EAP	English for Academic Purposes
FGI	Focus Group Interviews
L1	First Language
L2	Second Language
P	Participant
RQ	Research Question
SLA	Second Language Acquisition

Attestation of authorship

I hereby declare that this thesis submitted for the Masters degree is the result of my own study, except for where due acknowledgment is made. To the best of my knowledge and belief it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the qualification of any other degree or diploma of a university or other institution of higher learning.

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Abstract

The acquisition and use of academic vocabulary has a direct impact on educational outcomes for L2 students, in academic preparation programmes, undergraduate studies and postgraduate work. This study investigated the challenges of learning academic vocabulary among 16 postgraduate Saudi students who are studying in New Zealand universities. The study takes the position that students' perspectives of the challenges they face in acquiring academic vocabulary can offer an alternative perspective to existing research on academic vocabulary. The study asked four research questions: 1) In which aspects of postgraduate studies are the challenges of learning academic vocabulary mostly found? 2) What are the challenges that postgraduate Saudi students face in acquiring academic vocabulary? 3) What strategies do these postgraduate Saudi students use to learn academic vocabulary? and 4) Do students who report the most challenges tend to have the least vocabulary learning strategies? To answer these research questions a qualitative case study approach was adopted and data were collected through an initial survey, individual face-to-face interviews, and a focus group interview. The findings show that every one of the 16 participants struggled with academic vocabulary, variously in a number of academic settings and across all four language skills. Reading to write (Hirvela, 2016) was of particular challenge due to the extensive need to paraphrase from original texts. Additionally, the study found that participants had little prior knowledge of how to acquire academic vocabulary and had few learning strategies to address their difficulties. The findings of this study did not lead to a conclusion that simple exposure to academic vocabulary can increase the chance of incidental vocabulary acquisition but rather, on the contrary, suggests that purposeful vocabulary learning is needed and that such learning needs to be grounded in sound learning strategies, including the use of vocabulary learning tools. Moreover, the study revealed that inappropriate vocabulary learning strategies can cause frustration and loss of motivation. The study has implications for EAP preparation programmes in Saudi Arabia (and indeed elsewhere) and for postgraduate support in New Zealand universities.

CHAPTER 1

INTRODUCTION

1.1   Background to the study

This study aims to investigate the challenges of learning academic vocabulary among postgraduate Saudi students who are studying in New Zealand universities. The study is situated in the field of English for Academic Purposes (EAP), where the acquisition and use of academic vocabulary has a direct impact on educational outcomes. It takes the position that students' perspectives of the challenges they face in acquiring academic vocabulary can offer an alternative perspective to much of the existing research on academic vocabulary.

Taking a broad view, L2 vocabulary research can be usefully categorized into three themes: selection (or prioritization), acquisition (and instruction), and testing (or assessment) (Bogaards & Laufer, 2004; Laufer, 2014) .The current study, focused on academic vocabulary, is best situated in the second of these research areas: acquisition and teaching/learning. However, the study differs from much of the research in this area in that it seeks to uncover students' perceptions of the challenges they face and identity the vocabulary learning strategies they use while studying for postgraduate qualifications across a number of disciplines. However, reflecting the overlap between vocabulary acquisition (and teaching and learning) and the selection/ prioritization of academic vocabulary for pedagogical purposes, the inquiry

also acknowledges the key role played by Academic Word Lists (AWLs) in helping university students with English as an additional Language (EAL) to acquire academic vocabulary (Coxhead, 2000, 2011, 2016a; Gardner & Davis, 2014). Accordingly, the study also recognizes the debate in the academic vocabulary literature around giving greater attention to discipline specific vocabulary as opposed to a more a general academic vocabulary as reflected in the AWLs (Hyland & Tse, 2007).

Viewing the study through a broad lens, a wide-spread phenomenon in the 21st Century is the desire of international L2 students to pursue their tertiary education in English-speaking countries. While some L2 students do not meet the English language entry requirements of universities and initially enrol in academic preparation courses, others enrol directly into programmes where English is used as the medium of instruction, mostly in England, the USA, Canada, Australia and New Zealand. Many of these students, however, struggle not only with socialization into the university and its expectations but also with academic literacy practices (Wingate, 2015), and importantly for the current study, face challenges with acquiring the academic vocabulary needed for their studies. This is the case for many undergraduate students but increasingly also for those doing postgraduate studies, who may be studying in an English medium university for the first time.

This situation brings into focus recent changes in the teaching and learning of English. Firstly, the field of second language acquisition (SLA), which was traditionally concerned with the acquisition of spoken language in both natural and instructed settings (Ellis, 1997, 2008), should now deal with language problems that L2 learners face in academic environments. These issues

include the acquisition of vocabulary required for the reading and writing of academic texts, as well as for understanding and delivering oral presentations. Language issues in academic settings are so diverse that a new field, EAP, has emerged in order to understand the needs of L2 learners in academic settings and to provide support for building academic language (Basturkman, 2010; Basturkman & Wette, 2016; Coxhead, 2016b; Hyland, 2006; Hyland & Shaw, 2016). While SLA is generally concerned with understanding the cognitive and sociocultural aspects of learning to speak English as an additional language, the main concern of EAP is the linguistic issues that L2 students experience in academic environments, including those related to academic vocabulary.

Accordingly, EAP research has begun to specifically suggest guidance to support the language development of L2 students at university. These L2 students, many of them international students, may be in need of extra help because they need to develop their academic English while they are still in the long-term process of learning general English. The challenge for these students when considering general and academic language development is that there is too much to learn, but they have too little time and there are few explicit and robust instructional opportunities available to them unless enrolled in academic preparation courses which specifically prepare students for mainstream studies. In the case where students have fully met the entry criteria (e.g., by passing the International English Language Test – IELTS – at the required levels across all four language skills: see Read, 2015) they enrol directly in mainstream studies and are immediately confronted with the demands of academic vocabulary as well as the wider demands of academic

literacy. While academic support is generally available through on-campus Learning Centres, for most students in such circumstances, despite having met university entry requirements, the acquisition of academic vocabulary related to their studies becomes an independent and ongoing pursuit.

What then is academic vocabulary? According to Coxhead (2011, 2016b), general academic vocabulary items are frequently used across all academic discourses and specialized texts while subject-specific vocabulary items, or technical vocabulary, are frequently used by the members of particular discourse communities. For instance, while Coxhead's AWL can be used to address the general academic vocabulary needs of university students, Ward (2009) has compiled a specialized list of vocabulary for engineering. Coxhead (2016b) concludes that specialized vocabulary is easier to define and contextualize. Her rationale is that the specialized words of a discipline appear frequently in the discourse of that discipline, which is fairly limited to the publications in a specific field.

These word lists have been used in EAP classes to facilitate academic vocabulary learning of students. In addition, Reichle and Perfettie's (2003) word experience model and Perfetti's Lexical Quality Hypothesis (Perfetti, 2007) can explain the usefulness and necessity of supporting academic vocabulary learning in EAP courses. This work theorizes that a wide experience with vocabulary can help learners to build abstract representations of the meanings of words. Hyland and Tse (2007), however, argue that in addition to a discipline specific vocabulary some academic words may have different meanings in different contexts. Therefore, EAP instructors not only need to provide ample opportunities for learners to use

academic vocabulary, they should also help learners to develop a rich understanding of academic words by directing their attention to the definitional and contextual information related to such vocabulary.

A key challenge in front of L2 university students, then, is that English vocabulary is enormously wide (both general and academic) and even though researchers have tried to suggest essential English vocabulary lists (e.g., Coxhead, 2000; Gardner & Davies, 2014, 2016), students may not be able to master these words. This can be, in part, due to the ineffective use of vocabulary-learning strategies (Schmitt, 1997). Researchers suggest that while EAP instructors may not be able to discuss all the academic vocabulary in for example, Coxhead's (2000) Academic Word List, they can model effective strategies of academic vocabulary-learning (Coxhead, 2006b; Folse, 2004; Zimmerman, 2009). This would help the students to self-build their academic vocabulary knowledge on an ongoing basis even after the EAP ends. Therefore, it is imaginable that students who have attended EAP classes and received such information can develop their academic vocabulary further. However, students, who did not have such opportunities may find learning academic vocabulary challenging. This is particularly because of 1) their shallow understanding of the kind of words that are commonly used in academic discourse (Coxhead, 2000), and 2) the ineffective use of general vocabulary learning strategies for the learning of academic vocabulary, which is often more abstract and conceptual in nature.

1.2   Rationale for the study

The current study seeks to understand the experiences of postgraduate Saudi students in New Zealand universities with regard to the acquisition and use of academic vocabulary. This understanding invariably connects with prior students' prior English language learning. Despite a willingness to learn English as a second language, the Saudi Arabian educational system generally provides students with limited second language acquisition opportunities (Saadi, 2012). Historically, Saudi students have had little opportunity to develop their English language skills while in domestic schooling, although adult Saudi Arabians have started to learn English because of the opportunities provided by commerce and business (Qobo & Soko, 2010). However, it could be argued that Saudi students at school or at university level get the opportunities to fully develop their English language skills and therefore they do not achieve desirable English language outcomes in the Saudi Arabian context (Grami & Alzughaibi, 2012). In addition, there is some evidence to suggest that students' attitudes towards learning English are somewhat negative, at least for engineering students (Alqahtani, 2015).

With increased opportunities to study abroad, Saudi students now attend English medium universities as international students, such as those the focus in the current study in New Zealand. Mohamed-Sayidina (2010) has found however that a good many Saudi students suffer from lack of reading comprehension skills while Gelb (2012) also claims that Saudi students face severe difficulties with academic English when it comes to reading and writing in English. In the Zealand context, Ankawi (2015) investigated the academic writing challenges facing Saudi Arabian students in mainstream programmes

at one New Zealand university. Semi-structured interviews with 10 students found that Students' attitudes towards learning and using English was not positive, largely resulting from being ill-prepared for the demands of study through the medium of English. Recommendations from this study sought to benefit Saudi students, particularly in regard to academic literacy, and to inform the relevant government departments in Saudi Arabia as well as the English medium universities that recruit these students. While evidence points to a paucity of domestic opportunities to learn English and gain exposure to academic language, which impacts on study aboard outcomes in English medium universities, it seems there is space for more detailed investigations of Saudi students' academic English challenges and the causes of their difficulties. This study of students' perceptions of acquiring academic vocabulary for their postgraduate studies seeks to address this gap.

The study also has a personal rationale. The need for this kind of research is strengthened by the researcher's own experience as an international postgraduate student. In my experience, many postgraduate international students struggle to understand the lexical complexity and sophistication of academic texts, and therefore they face daunting challenges when it comes to preparing for and writing up course work assignments, and in particular, the thesis or dissertation. These purposes suggest that research on the acquisition of academic vocabulary needs to be situated in the concerns of academic literacy practices (Hyland, 2006; Wingate, 2015).

While considerable research exists in the three areas of academic vocabulary, as noted above, little research to date has attempted to understand students' perspectives of the challenges they face. In addition,

while there is evidence of the wider challenges that L2 students face in English-medium university studies (e.g., Wu & Hammond, 2011), including the acquisition of academic vocabulary, there is a paucity of research on the specific challenges of acquiring academic vocabulary in tertiary settings.

The current study thus aims to investigate the challenges of learning academic vocabulary among postgraduate Saudi students who are studying at New Zealand universities. The inquiry takes the position that student perspectives, although needing to be treated with some caution, provide an insider view that can complement existing research. It is recognized that these challenges are likely to relate to two main areas:

1.   The effective use of vocabulary learning strategies (Schmitt, 1997, 2007)

2.   The need to engage with the academic literacy practices (Hyland, 2006; Wingate, 2015) associated with postgraduate studies in the university, which are argued to differ depending on the discipline (Hyland & Tse, 2007).

1.3   The research questions

In order to understand students' challenges of learning academic vocabulary and to contextualize the learning of academic vocabulary in the wider concerns of postgraduate students, this research asks the following questions:

1)   In which aspects of postgraduate studies are the challenges of learning academic vocabulary mostly found?

2)   What are the challenges that postgraduate Saudi students face in acquiring academic vocabulary?

Additionally, it will also be useful to know how these postgraduate students cope with the challenges of acquiring new vocabulary items. Therefore, the other questions that this study will investigate are:

3)   What strategies do these postgraduate Saudi students use to learn academic vocabulary?

4)   Do students who report the most challenges tend to have the least vocabulary learning strategies?

These four questions bring the objectives of this study into focus, which leads to selecting an appropriate research methodology and methods (Nunan, 1992). A qualitative case study design has been adopted to systematically investigate the research problem, and analyse the collected data (Merriam, 2009). It is expected that a qualitative case study design, consisting of a qualitative online survey followed by semi-structured interviews and a focus group interview, will help me to investigate the challenges of learning academic vocabulary for Saudi postgraduate students.

1.4   Possible implications of the study

While a small qualitative case study cannot be easily generalized to wider populations (Merriam, 2009) the study may have implications for teaching academic vocabulary in EAP courses and also for addressing academic English studies in general. Postgraduate students' remarks may provide genuine information about the academic vocabulary needs of students during

their postgraduate studies when preparing for and writing up their assignments and theses. Such information may give insights to course lecturers to design instructional materials and courses assignments in such a way that facilitate their students' explicit and implicit learning of academic vocabulary. The findings may provide information on how postgraduate students handle the difficulties of reading academic texts and composing academic texts in English. Such information may assist academic language advisors to help postgraduate students survive the challenges of academic study. This support is particularly essential for postgraduate students who did not get the chance to acquire a full range of academic English skills during their undergraduate studies, despite having met the entry criteria for postgraduate studies in English medium universities.

1.5   Outline of the thesis

This thesis contains 5 chapters. The introductory chapter has outlined the background to the research, provided a rationale for the study, identified the research questions and research approach, and outlined possible implications.

Expanding on the introductory chapter, Chapter 2 reviews the literature that underpins the study, including the acquisition of, and teaching / learning of academic vocabulary, and the importance of academic vocabulary in the development of academic literacy. A case is made for research that captures students' perspectives.

Chapter 3 outlines the research design and methodology in detail, focusing on the design of the study. Participants are described together with the ethical

considerations and the procedures used to show how these were managed. The data collection instruments used and the rationale that justifies their use will be explained along with procedures associated with data analysis.

Chapter 4 presents the data gained from the interviews of the participants and provides a discussion of the findings.

The final chapter, in way of conclusion, highlights the significance of the findings, identifies the limitations of the research, notes the implications and provides suggestions for further research.

CHAPTER 2

LITERATURE REVIEW

2.1   Introduction

This chapter discusses a number of areas important to the current study. Firstly, academic vocabulary is defined and contrasted with a more general lexicon used in everyday language, in particular for second language (L2) learners of English. As a part of this discussion the scope of the research is introduced and the development of the Academic Word List (AWL) is identified. A critical review of research on second language vocabulary is then presented and the importance of acquiring academic vocabulary for L2 learners engaged with tertiary studies. Since the acquisition of academic vocabulary is, in part, reliant on successful learning strategies, Vocabulary learning strategies are then discussed. The challenges of learning academic vocabulary are then identified. As a means of identifying the niche for the current study the discussion then turns to students' own perceptions of acquiring academic vocabulary. It is argued that students' perspectives on the challenges they face – in the case of the current study, for postgraduate studies – is largely absent from the literature. The chapter ends by reiterating the purpose of the current study.

2.2   Defining academic vocabulary

In the context of EAP, academic vocabulary can be described as "a rich and fast-moving endeavour" (Coxhead, 2016b, p.177) which has implications for

numerous students in a number of academic contexts. Categorizing academic vocabulary is not an easy task but according to Coxhead (2016b) in general it can be seen "as a layer of vocabulary that occurs across a range of academic subject areas" (p. 11), meaning that students will encounter these words irrespective of their particular area of study.

Academic vocabulary can also usefully be seen as a subset of a much wider and more general lexicon and overlaps with the term technical vocabulary, which refers to the specialized words and collocations related to specific fields of study, such as biology, engineering, and computer science (Coxhead, 2000; Nation, 2013). Nation (2013) explains that words like *accumulate*, *achieve*, *compound*, *complex*, and *proportion* are academic words, which can be typically found in academic texts rather than general texts. According to Nation (2013), technical words are the vocabulary that is used in particular disciplines. While there are some general technical words, many technical words are subject specific and have meanings that only make sense to the practitioners of particular disciplines. As a result, the frequency of such technical vocabulary is higher in particular fields than in others. Chung and Nation's (2003, 2004) studies have shown that many discipline specific texts contain a substantial amount of technical vocabulary and that some of these words are listed on the AWL. While an overlap thus exists between technical and academic vocabulary, a way of distinguishing the two domains is to reflect on "the degree of relatedness of a particular word to the subject matter of the field" (Nation, 2013, p. 304). As a rule of thumb, if a particular word in the context of a certain discipline is key to understanding a particular concept in a text, then it is technical vocabulary (Beck, McKeown, & Kucan, 2013).

Research has tried to describe the general characteristics of academic words. For instance, Corson (1997) says these words are abstract and cannot be imagined easily, and their frequency of appearance in non-academic texts and everyday conversations is low. Corson (1997) also argues that many L2 learners may acquire good speaking skills, drawing on a more general lexicon, but find academic texts hard to understand. This is because in their L2 learning while exposed to conversational English, and to everyday vocabulary, they do not have many opportunities to deal with academic texts, and with academic vocabulary. Subsequent studies support the idea that reading comprehension can be problematic for non-native English speaking students, because of their limited knowledge of academic vocabulary (e.g., Geva, Yaghoub-Zadeh, & Schuster, 2000) and suggest a strong relationship between knowledge of academic vocabulary and successful reading comprehension in academic settings.

In academic settings scientists, researchers, and textbook writers use abstract, low-frequency English vocabulary to explain knowledge and scientific concepts within their disciplines (Fang, Schleppegrell, & Cox, 2006). Although meeting entry criteria, many novice university students with non-English speaking backgrounds may not be fully adept in academic discourse, and subsequently may need explicit instruction in acquiring academic language. Particularly, academic vocabulary may impose a burden on international students, who are registered at English-medium universities. At universities in New Zealand, while substantial effort has been made to provide academic language support for undergraduate students (Benzie, 2010), teaching academic vocabulary techniques to undergraduate students

is one aspect of such support. Nevertheless, it would seem that similar language support is not provided by universities for postgraduate students, who arguably have the most pressing need. This absence could be explained by the fact that postgraduate students are usually involved in an individualized pathway related to research and an assumption that gaining access to this level of study is accompanied by an extensive knowledge of academic vocabulary. The paucity of studies on the challenges that postgraduate students may face with regard to acquiring academic vocabulary is reflected in this view. In the experience of this researcher, however, this is not necessarily the case and many L2 postgraduate students face a number of challenges with acquiring academic vocabulary. Considering that, the study of the challenges that L2 postgraduate students may face in learning academic vocabulary can provide the basis for designing special language support at postgraduate level.

2.3   The scope of research on academic vocabulary

Research on second language vocabulary in general is extensive, but as noted earlier, can usefully be categorized into three themes: selection (or prioritization), acquisition (and instruction), and testing (or assessment) (Bogaards & Laufer, 2004; Coxhead, 2015; Laufer, 2014). These three themes can equally be applied to research into academic vocabulary. Related to academic vocabulary, the first of the three research areas, selection (or prioritization), primarily concerns the development of Academic Word Lists (AWLs) (Coxhead, 2000, 2011, 2016a; Gardener & Davis, 2014) and subsequent research on their pedagogical use in the teaching of vocabulary, including materials development. The second area involves the acquisition of

academic vocabulary and how it is best taught, an area that clearly overlaps with selection and prioritization (e.g., Coxhead & Nation, 2001). The third area involves research on assessment and testing. The current study in this thesis is best situated in the second of these research areas: acquisition and teaching. Necessarily, however, reflecting the overlap between vocabulary acquisition, teaching/ learning, and selection/ prioritization, the inquiry also acknowledges the key role the AWL plays in helping students to acquire academic vocabulary. Recognition is also given counter arguments which suggest the learning and teaching of academic vocabulary needs to be discipline specific and needs to consider the technical vocabulary associated with the discipline (Hyland & Tse, 2007; Nagy & Townsend, 2012).

While primarily focused on the acquisition/ learning of academic vocabulary, the current study differs to most research in this area in that it seeks to uncover postgraduate students' perceptions of the challenges they face in acquiring academic vocabulary. This perspective has implications for how academic vocabulary is best acquired independently as part of students' postgraduate studies.

2.4   The acquisition of L2 vocabulary

Generally, learning the vocabulary of another language may be a slow and complicated process. In this process, the learners first need to understand the word that they intend to memorize. Then, they should memorize the new word. In the next step, which is the production phase, they should be able to retrieve and use the new word appropriately and effectively (Hu & Nassaji, 2016). However, learning vocabulary is not as straightforward as this learning

process suggests. Given the theoretical arguments on the process of learning vocabulary, learners may learn words incidentally (Nagy, Herman, & Anderson, 1985) or intentionally (Laufer, 2003). During incidental vocabulary learning, a learner picks up a word without awareness, while intentional learning happens consciously (Laufer, 2003). It is believed, however, that while many general words may be learned incidentally, academic vocabulary is most often learned intentionally (Sanko, 2006). Some studies, however, argue that English teachers most often design vocabulary learning tasks for L2 learners to help them understand general English conversations and non-academic texts. While these tasks provide opportunities for processing words in meaningful contexts and are aimed at helping learners to acquire a vocabulary for general language learning they do not focus particularly on academic words needed for advanced studies (Guerrero, 2004).

2.5   Academic Word List (AWL)

In the context of university studies, as noted previously, academic vocabulary relates to both general academic vocabulary common to all disciplines (Coxhead, 2000, 2011, 2016a, 2016b) as well as specialized technical words and terminology frequently used by specific disciplines (Hyland & Tse, 2007; Nagy & Townsend, 2012). An important contribution to the field of academic vocabulary learning has been the Academic Word List (Coxhead, 2000, 2011, 2016a, 2016b) and subsequent work on selection and prioritization (Coxhead & Hirsh, 2007; Greene & Coxhead, 2015). Coxhead's list is a selection of 570 general academic word families that can be frequently found across all academic disciplines. According to Coxhead and Nation (2001), this list accounts for 10 per cent of the words used in academic texts. This is while

Coxhead and Hirsh's (2007) list is made of 318 word families, which cover 4 per cent of a science corpus that was not included in AWL.

In developing a general academic word list (AWL), Coxhead (2000) refers to 570 word families originating in a corpus of 3.3 million words from a range of academic disciplines and genres. These words do not occur in the 2000 most frequent words in general English and are grouped into ten sub-lists that capture word frequency and range.

Although Coxhead (2011) reports that a wide range of research has been done using AWL and considerable material has been developed based on her academic word list, Hyland and Tse (2007), Chen and Ge (2007), and Hyland (2008) argue that the words on this list have different frequencies, senses and collocations in different fields of studies and therefore this list should be recommended with caution to students. Hyland and Tse (2007) further explain that such academic vocabulary can be viewed a key element of a general essayist literacy and argue that "individual lexical items on the list often occur and behave in different ways across disciplines in terms of range, frequency, collocation, and meaning" (p. 235). Their argument brings into question a single core vocabulary needed for academic study and posits that "different practices and discourses of disciplinary communities undermine the usefulness of such lists" (p. 235). Given this cautionary note L2 learners are advised to prepare for the discipline they would like to study by revising the texts written by the experts of that discipline. Such a strategy would give them the chance to acquire both a more general academic vocabulary and the specific features of their discipline discourse.

Summing up the debate, Eldridge (2008) notes that while there are issues of emphasis and balance with the AWL, it "may yet continue for a while longer to be of more practical service than the specialized approach suggested by Hyland and Tse" (p.111). This is particularly because the AWL introduces common features and communicative items across a wide range of disciplines. With this regard Hirsh (2004) explains that scientific articles generally are made of different sections, the literature review, methodology, findings, and discussion, and in each of these sections particular vocabulary is used to perform specific functions. This suggests that academics in different disciplines, outside the literature review, use similar vocabulary to report on research. The debates around what constitutes academic vocabulary and whether having a general academic word list is necessary are especially relevant for pedagogy but how it might relate to students' perceptions of the challenges of acquiring academic vocabulary is unclear. The current study attempts to provide some clarity in this area.

2.6   Research on second language academic vocabulary

In the 1970s and 1980s, research on second/ foreign language instruction was widely focused on establishing a framework for the integration of language and content. This tendency reflected the problems that content teachers would face in classrooms with an increasing number of limited English proficient immigrant students at schools in English-speaking countries. This line of research has shown that this target group of students would learn the academic content of the school curriculum and acquire English language simultaneously (Genesee, 1987; Lambert & Tucker, 1972).

Snow, Met, and Genesee (1989), for instance, proposed a conceptual framework that needed language and content teachers to collaborate on specifying the objectives of ESL classrooms. Teachers had to facilitate cognitive and language development to help their limited English proficient immigrant students understand the subject matter of school such as maths, science, history, and so on. Snow and her colleagues specified two types of language: 1) content-obligatory language, and 2) content-compatible language. They define content-obligatory language as "the [essential] language required for students to develop, master, and communicate about a given content material" (p. 206). According to Snow and colleagues, the knowledge of content-obligatory language gives the students structural and functional knowledge of language. As a result, they gradually learn the specifications of parts of speech and understand how to use rhetorical devices to perform specific language functions such as persuading, narrating, and so on. Snow and colleagues then explain that content-compatible language "can be taught within the context of a given content but are not required for successful content mastery" (p. 206). Content-compatible language may be taught or reviewed depending on the language needs of the students. For instance, in order for students to discuss a cause and effect relationship, the teacher may review the function of conjunction 'because' and 'if-then clause'.

Since early 1970s, a closely related line of research to what has been discussed in the previous paragraph has also been done. These studies, which are more of interest of the current study, have investigated the vocabulary needed for academic studies at university level. Studies such as

Campion and Elley (1971), Praninskas (1972), Lynn (1973), Ghadessy (1979), Xue and Nation (1984), Hwang and Nation (1989) represent valuable attempts to compile lists of high-frequency vocabulary in an academic context. However, despite the effort invested, the proposed lists had considerable limitations such as questionable criteria for inclusion of words, and the use of corpora that did not cover a wide range of academic texts. Subsequently, as noted above, Coxhead (2000) provided a list of 570-word families that was compiled based on a large corpus of academic English in Arts, Science, Law, and Commerce to address the limitations of the previously provided academic word lists. A specific aspect of Coxhead's (2000) list was that the words on the list had a wide range of frequencies across a number of disciplines.

All these attempts to compile an academic words list were made, because academic vocabulary plays a crucial role in academic texts. As Meyer (1990) explains, these words serve language functions specific to these texts that reflect and convey the different typical genres that academics generally produce such as criticism, procedures, analyses, evaluations and so on. Meyer then classifies academic vocabulary into three listings: 1) words that inform readers what the writers did in the text that is being read. These words relate to the linguistic acts that were performed in a particular text or a particular section of it, for examples: argue, examine, and so on; 2) words that inform readers what scientific activities have been done, for example: analyse, survey, and so on; 3) words that refer to the subject matter and are further categorized into three sub-groups: a) describe tense, aspect, and modality such as: present, recent, seem, likely; b) describe states and play

the role of classifiers such as: process, development; and c) describe states such as, arising, decline, increase.

These different types of academic vocabulary are used to explain, describe, and justify scientific activities. Meyer (1990) argues that many of these words are context independent and scientists and authors across a range of disciplines use them. This academic generality is in fact the major purpose of Coxhead's (2000) AWL. From this perspective, L2 postgraduate students and non-English speaking scientists and researchers can use the AWL as a guide for understanding what they need to read and understand as well as writing what they need to produce in written form. Therefore, the AWL can be a useful tool for non-English speaking novices that can help them to acquire disciplinary knowledge and put their knowledge on display.

2.7 Academic vocabulary and academic achievement

Unsurprisingly, the literature highlights the importance of academic vocabulary for academic achievement (Short & Fitzsimmons, 2007; Gardener & Davis, 2014) and research has found a strong correlation between the ability to read and comprehend a great deal of published material and academic success. The development of academic vocabulary is an essential aspect of learning academic language (Snow & Kim, 2007) and successful reading comprehension (Pulido, 2009) while a limited academic vocabulary causes inability to comprehend academic texts and discussions, and impedes reading large quantities of materials in English (Shen, 2013). In fact, university students, especially at postgraduate level, can achieve desirable results if they can comprehend ideas, understand arguments and realize the

implications of their studies (Basturkmen & von Randow, 2014), which are the key cognitive activities that are not possible without having a broad knowledge of academic vocabulary.

Gardener and Davis (2014, p. 305) further claim that "control of academic vocabulary, or the lack thereof, may be the single most important discriminator in the 'gate-keeping' tests of education", and that academic vocabulary knowledge, at both school level and in higher education, can be directly linked to academic success since it is recognized as "an indispensable component" (p. 305) of academic reading abilities. To this might be added the crucial role academic vocabulary plays in academic writing (Coxhead, 2012), and for 'reading to write' (Hirvela, 2016), although knowledge of academic genres and of discipline specific practices are equally important factors (Hyland, 2006; Wingate, 2015). Clearly, the evidence supports the claim that a broad knowledge of academic vocabulary is essential for comprehending ideas, understanding arguments, realizing the implications of research as well as for academic writing (Coxhead, 2012).

2.8   Vocabulary learning strategies

Research shows that many learners use strategies for learning vocabulary, with some of the more common strategies being simple memorization, repetition, and taking notes on vocabulary (Schmitt, 2007). Schmitt (2007, pp. 838-39) further classifies vocabulary learning strategies into five categories, most of which also apply to learning academic vocabulary: (1) determination strategies, such as guessing meaning from textual context or using a dictionary (bilingual or monolingual); (2) social strategies involving interaction

with other people; (3) memory strategies, such as the keyword method or associate a new word with already known synonyms and antonyms; (4) cognitive strategies, such as keeping a vocabulary notebook; and (5) metacognitive strategies involving purposeful and conscious overview of the learning process. This section discusses vocabulary learning strategies and reports on some studies of vocabulary learning strategies used by different groups of learners of English. This section also focuses on the methodology used by other researchers to test and identify vocabulary learning strategies and measure the frequency of the strategies used by learners. These discussions are presented under two headings of 'general vocabulary learning strategies' and 'academic vocabulary learning strategies'. In the summary section that follows these two, the differences between strategic approaches to learning the two types of vocabulary will be discussed.

2.8.1 General vocabulary learning strategies

Takač (2008) designed a questionnaire to measure the frequency of using specific sets of vocabulary learning strategies. She categorized different strategies into three groups of: 1) formal vocabulary learning, 2) self-initiated independent vocabulary learning, and 3) spontaneous or incidental vocabulary learning.

The first category includes strategies like rote vocabulary memorization, reliance on the first language, planned reviewing, such as: repeating new words, repeating words mentally, writing down words repeatedly to remember them, testing oneself, testing oneself with word list, regular reviewing outside classroom, remembering words if they are written down, planning for

vocabulary learning, making word list, using spaced word practice, and translating words into L1.

The second group included strategies like exposure to the target language, and explicit learning strategies that were related to memory, such as taking notes when watching films and TV programs, taking notes while reading for pleasure, imagining word's orthographical form, grouping words to study them, connecting words to physical objects, imagining word's meaning, associating words with the context, reading and leafing through dictionary, and using new words in sentences.

The third group encompassed strategies that were related to learning words through communication and in real situations, such as remembering words from books and magazines, using circumlocution, listening to songs in target language, remembering words from the Internet, associating new words with already known, using synonyms in conversations, and remembering words from films and TV programs (Takač, 2008, pp. 101 & 102). In what follows some of these strategies are further described in relation to the available literature.

One of the oldest strategies of learning new vocabularies is memorization. In the context of second language learning, teachers used to make their students memorize L1-L2 words pairs. This was the major vocabulary learning practice in Grammar Translation era. Coxhead (2015) believes this and similar methods of learning new words (e.g., study semantically related sets of words, like vegetables) are deliberate learning. More recently, new methods of language teaching have been introduced, and vocabulary researchers have identified additional strategies of vocabulary learning. The

following paragraphs introduce some of these methods and discuss their efficiencies.

Reading has been found as an effective way to learn vocabulary in both L1 and L2. The findings of the studies that show that reading contributes positively to vocabulary acquisition have supported Nagy, Anderson, and Herman's (1987) theory of incidental vocabulary learning. Based on this theory, reading gradually and incidentally develops learners' knowledge of meaning, form, syntax, and grammatical functions. Webb's (2007) study on incidental vocabulary learning from reading has found repetition as a crucial factor in this process.

Closely related to reading and learning vocabulary in context is the technique of inferring meaning from context while reading. These studies are based on this assumption that native speakers can guess the meaning of the words that they do not know from the passage that they read. Inferring meaning from context can be a practical skill for L2 learners. Teaching this skill to L2 learners has gained considerable attention and some studies tried to find a method that can efficiently help learners to acquire this skill (Walters, 2004). In one study, Walters (2006) compared the effectiveness of three methods of teaching how to infer meaning from context and reading comprehension. These methods were: a general method, recognition and interpretation of specific context clues, and practice with feedback with cloze exercises. The first one is a simple strategy through which students had to look for more information in the passage that provided more information about the target word. The context clue strategy includes analysis of textual clues such as word definitions, synonyms, appositives, antonyms, examples, summary,

figurative language, mood, tone, and setting. The third strategy includes practicing some cloze exercises chosen from academic and newspaper texts followed by teacher feedback. The results of this study showed a wide variation between the performances of different participants. It showed that proficient participants benefited from the context clue strategy and beginning learners benefited most from the general method.

An important finding that many vocabulary learning researchers have encountered is the significance of repeated exposure to new vocabulary items in learning. This finding suggests that instructors and teachers should give plenty of opportunities to learners for practicing new words (Grabe, 2009). Repetition and adequate exercises give a chance to learners to learn form, meaning, and different collocations of a new word (Nation, 2011). Although research evidence shows that repetition is important, scholars such as Schmitt (2008) and Webb (2007) argue that it is not possible to suggest an exact number of repetitions for learning a word. In this regard Webb (2007) suggests learners need between 6 to 20 repetitions to learn a new vocabulary.

With the introduction of new technologies, some innovative strategies have been introduced for expanding the knowledge of vocabulary. For instance, Munir (2016) has investigated the effectiveness of watching animations as a vocabulary teaching tool. This study pre-test/post-test experimental research found that cartoon films could significantly influenced the students' achievement in mastering vocabulary. Although this study revealed some evidence that audio-visual media cartoon films are effective vocabulary teaching tools, it may not be as effective as this study shows when learners

are doing intensive programs, such as postgraduate work with an academic focus.

The emergence of technology has affected teaching and learning to a great extent (Stockwell, 2010). Some studies have suggested using mobile phones in facilitating vocabulary acquisition. A comparative study done by Lu (2008) has shown that short message service (SMS) messages contributed to vocabulary learning more than printed materials. An experimental study by Suwantarathip and Orawiwatnakul (2015) has shown that students who received new vocabularies via SMS messages over 6-weeks were more successful in learning vocabularies compared to those students in the control group who did some vocabulary exercises in class. Then, as technology advanced, scholars have proposed new ways of utilizing technology in teaching vocabulary. For instance, Basal, Yilmaz, Tanriverdi, and Sari (2016) investigated the effectiveness of a mobile application in teaching idioms. This experimental study showed that students who worked with the vocabulary learning application performed better in the post test.

2.8.2   Academic vocabulary learning strategies

A number of studies on the opportunities of learning academic vocabulary while reading texts in English suggest that teaching new words in context facilitates the achievement of two goals: teaching comprehension and coping with new words in a text. This technique focuses learners' attention on the morphological role of words. Morphology is concerned with units of meanings within a word, like the root of the word, affixes and prefixes (Nagy, Carlisle, & Goodwin, 2014). Typically, academic words are made of roots and suffixes

(Nippold & Sun, 2008). As a way of comprehension and vocabulary learning instruction, Lesaux, Keiffer, Kelley, and Harris (2014) taught their learners morphological analysis. This study showed that learners could improve their comprehension by guessing the meaning of new words within a text. Although this technique seems effective, as described earlier a process of learning vocabulary is a complex one. In this process, understanding the new word is only the first step with the word learned in full when the learner is able to use the new vocabulary item in another context, such as in a conversation or in the writing of a text. When learners are not given appropriate and sufficient opportunities to practice using the new words that they are exposed to during a reading comprehension task, they may not be able to gain productive control of new words and syntactically complex language (Lesaux et al., 2014). This is also the case for students at tertiary level. In other words, tertiary students may be able to score a high grade for their reading comprehension tasks by guessing the meanings of unknown words from the context, however, they may forget the new vocabulary items right after doing the task or they may remember the word without being able to use it in their own text production activities.

In order to facilitate academic vocabulary learning, Archer and Hughes (2011) have proposed an explicit academic vocabulary learning approach. This five-step instructional approach includes: 1) pronouncing the new word, 2) explaining the new word, 3) providing examples so that students see the new word in context, 4) making students elaborate on the new word and make them use the word in authentic sentences, and 5) assessing the students' understanding of the new vocabulary item and provide feedback if necessary.

Sencibaugh (2014) calls Archer and Hughes (2011) vocabulary instructional approach "a layered approach to vocabulary instruction" (p. NA) and notes that this explicit introduction of academic vocabulary can be more effective if the new words are reviewed several times after the first exposure. He explains that while Archer and Hughes' steps give the chance to students to build a background of new words, reviewing the words helps the students to acquire the words and expand their receptive and expressive vocabulary. He also suggests that visual aid should be provided whenever possible to facilitate better learning and understanding.

While Sencibaugh (2014) emphasizes the role of visual aid in acquiring academic vocabulary, we should consider that a typical feature of academic words is their abstractness. Academic language contains more abstract words than spoken language. This feature makes academic vocabulary learning tedious and challenging for novice academic language users. This is particularly because abstract words convey general ideas and principles rather than examples and real things. This means while many words can be learned through visual imagery (Cohen, 1987; Sencibaugh, 2014), abstract words are difficult to learn because "there is no concrete image" for them (Tsou, Wang, & Li, 2002).

While there is considerable strategy related research on learning general vocabulary, surprisingly in the field of EAP there are few studies on academic vocabulary learning strategies. Apparently, there is this general belief that at this level students are advanced learners and they have already developed their own vocabulary learning strategies (Alothman, 2011). Benzie (2010), however, explains that in recent years Australian and New Zealand academic

contexts have improved their learning support systems to a great extent. While such support systems most often target undergraduate students, language-related challenges for postgraduate students remain largely neglected.

2.9   The challenges of learning academic vocabulary

From the research reviewed thus far, understanding and being able to use academic vocabulary in academic literacy contexts are key factors in academic success yet L2 students, particularly at postgraduate level, face a number of challenges often in the absence of targeted support. My own experience as a L2 postgraduate student suggests that academic vocabulary generally does not appear in conversational language and social texts, frequently the first step in L2 learning, and learners therefore are not exposed to academic texts, written or spoken, and have minimal opportunities to develop their academic vocabulary knowledge. Moreover, academic words have an abstract nature; so, learners cannot use a full range of effective vocabulary learning strategies to learn them. As a result of these two issues, acquiring academic words may be challenging for students.

Vocabulary learning, as noted previously, is a complex procedure and generally targeted vocabulary interventions are not enough to cover enough academic words (e.g., all the words in Coxhead's (2000) word list) and increase the vocabulary knowledge of the learners (Nagy & Townsend, 2012). For instance, a study done by Nadarajan (2011) investigated the ability of learners to use newly learned academic words after a meaning-based instruction. A meaning-based instruction provides writing, listening and

speaking activities by facilitating multiple opportunities for using the new words in different contexts. This study concluded that L2 learners can expand their knowledge of academic vocabulary and use these new words accurately in their writings over time. However, this study was not a longitudinal study and the claim may not be valid.

Moreover, at tertiary level there is little vocabulary instruction available for international students and students may not get multiple chances to see and use new vocabulary items. It is therefore worth investigating how international students cope with the challenges of academic vocabulary development.

To effectively learn a word, a learner should retain and store it their long-term memory. It is argued that this process of learning new words has two stages: first L2 learners need to pay close attention to the new word, and then they need to process the different features of that word (Hu & Nassaji, 2012). This two-stage activity is called elaborate processing (Pulido, 2009). According to Eckerth and Tavakoli (2012), the first stage is called the input analysis stage and the second stage is called the retrieval stage. In the input analysis stage, the learners learn some information about the orthographic and phonological characteristics of a new word, while in the retrieval stage they go through a deep analysis of the semantic and conceptual characteristics of that new word (Eckerth & Tavakoli, 2012). Studies such as Pulido's (2009) suggest that teachers need to provide ample learning tasks for learners to help them focus on new words and then provide opportunities for retention of the new words. Their rationale is that when learners see and use new words in several reading comprehension tasks, gap filling activities and essay writing

assignments using the new words, they can retain and store them in their long-term memory.

While much research on L2 vocabulary has been devoted to identifying effective vocabulary teaching methods, learning strategies and teaching the learners how to use new vocabulary items (Oxford, 1986; Schmitt, 2007), only a few research studies have focused on academic vocabulary acquisition among postgraduate students.

Challenges with academic vocabulary relate to a number of areas, not least the very nature of academic language. The evidence (including my own experience) suggests that while international students have the opportunity to pick up general English words during their repeated daily conversations they may face considerable difficulties when it comes to comprehending textbooks and classroom discussions and arguments (although there is a chance that international students may initially face difficulties in understanding spoken language because of the speed of oral conversations, an unfamiliar accent and the use of local, colloquial language (Wu & Hammond, 2011)).

Research in the academic space points to the fact that disciplinary content is challenging because academic vocabulary has lower frequency rates than found in everyday language (Evans & Morrison, 2011; Heppt, Henschel, & Haag, 2016; Nagy & Townsend, 2012). This difference between academic language and everyday language is because every-day spoken language uses short sentences and often involves personal points of view, but academic language, which often appears in written form, carries in-depth information and has an argumentative structure made of general and specialized/technical academic words (Quiroz, Snow, Zhao, 2010). These

differences between general and academic language make learning general words easier than learning academic words, since conversations on one hand provide opportunities for extensive use of new words in context, and on the other hand motivate learners to take an active part in learning and using new words (Rupley, Logan, & Nichols, 1999).

A further challenge is the sheer amount of academic vocabulary needed by students. In a review article, Schmitt (2008) discusses the challenges of vocabulary learning and identifies the most important challenge in vocabulary learning is 'vocabulary size'. He argues that thinking about the size of vocabulary knowledge is an important issue in language learning. This is because the number of vocabulary items that we know determines the depth of a learner's understanding of spoken and written language and his/her ability to engage in conversations. Nevertheless, as Schmitt (2008) explains, the number of words that an English learner needs to acquire cannot be clearly determined. While studies such as Goulden, Nation, and Read (1990) and Nagy and Anderson (1984) suggested 114,000 and 88,500 word families respectively, Schmitt (2008) suggests that an L2 learner with a knowledge of 10,000 word families can handle different language related situations easily. This amount of vocabulary is considered wide enough to handle the language challenges and requirements of studying at tertiary level. If we assume that this amount of vocabulary is sufficient for academic success, then studies such as Laufer (as cited in Schmitt, 2008) clearly show that many students fail to learn even a good percentage of this number.

Another challenge in front of vocabulary learners is the need to improve the quality of their vocabulary knowledge. Schmitt (2008) explains that this need

is as important as the need to learn a large number of lexical items. According to Schmitt the quality of vocabulary knowledge will improve if a learner knows the form, meaning, usage, and other words that can be collocated with that word. However, apart from the massive amount of information a learner needs to acquire, these features are also hard to teach. Teachers and instructors need to consider the fact that acquisition is the ability of their students to actively use these vocabulary items in their speaking and writing. If learners simply memorize short-term these vocabulary items and the forms, usage, and collocations associated with them, these words remain inactivated, and will be easily forgotten.

Last but not least, the actual acquisition of academic vocabulary presents its own challenges. As noted earlier, the literature suggests that academic vocabulary is particularly difficult to memorize since these words do not generally appear in conversational language and learners have minimal opportunities to develop their academic vocabulary knowledge (Evans & Morrison, 2011; Heppt et al., 2016; Nagy & Townsend, 2012). Moreover, academic words have an abstract nature and in many instances consist of multi-words units, collocations and metaphor (Coxhead, 2016b). As noted above, a range of strategies are best used to learn academic vocabulary.

2.10   Two gaps in the literature

As noted in the Introduction chapter a limited amount of research has found that Saudi students studying in English medium universities face a number of challenges with their studies, in large part due to limited opportunities in Saudi Arabia to acquire English. This is particularly the case for those with

disciplines not related to English or education. The current thesis study adds to this research.

In addition, specifically related to research on academic vocabulary in tertiary settings, while there is evidence of the wider challenges that L2 learners' face in their university studies (eg., Wu & Hammond, 2011) there is a paucity of research on the specific challenges of acquiring academic vocabulary in these tertiary settings. Furthermore, little research to date has attempted to understand students' perspectives of the challenges they face in acquiring academic vocabulary. While not specifically related to challenges, Coxhead (2012) is one of the few studies that have examined student perceptions on learning and using academic vocabulary. Interviews with 14 EAL university students about the vocabulary–related decisions they made when reading for and writing essays found that students clearly understood the importance of academic vocabulary and used a variety of techniques to integrate academic or technical words from their reading into their essays.

Additional insights on students' perceptions of vocabulary acquisition and instruction have come from studies with a wider focus on academic learning. For instance, Leki and Carson (1994) investigated the perceptions of students of academic writing, finding that students considered improving their knowledge of vocabulary as their most urgent need. Two other studies done by Siebert (2003) and Bernat (2006) have found that students considered learning the vocabulary of a new language as the most important part of their learning process.

The need for research grounded in students' perspectives of the challenges they face is strengthened by my own experience as an international

postgraduate student. In my experience, many postgraduate international students struggle to understand the lexical complexity and sophistication of academic texts. Thus they face daunting challenges when it comes to the extensive reading of academic texts, oral presentations, the writing of course work assignments, research proposals and ethics applications, and in particular, the writing up of a thesis or dissertation. This suggests that the acquisition of academic vocabulary relates not only to student goals but at the more practical level directly relates to the academic literacy practices (Hyland, 2006; Wingate, 2015) required of postgraduate students in the university.

The gaps that the current study attempts to address are then two-fold. First, it add to the growing research related to Saudi students in English medium universities and second, there is a need to 'look beyond frequency counts' to consider matters of 'learnability and teachability' (Flowerdew cited in Coxhead, 2016b, p177), an argument that could be well applied to research on academic vocabulary. Students' perspectives on acquiring academic vocabulary in the context of their studies is largely absent from the literature yet these kinds of studies are important since they provide a number of insights, for teachers and researchers about the importance of learning vocabulary and the challenges learners face, and have the potential to inform vocabulary teaching methods.

2.11 Chapter summary

This chapter has highlighted the need for clear evidence on the academic vocabulary learning processes that L2 postgraduate students go through in order to complete their studies. The main purpose of the current study is to

identify the challenges that such students face with regard to acquiring academic vocabulary. To this end, a qualitative case study was designed, limited to Saudi Arabian postgraduate students studying at New Zealand universities, and following a short online survey to collect biodata and guide the inquiry, individual interviews were conducted with a follow-up focus group discussion. The following chapter provides an explanation of how the study was conducted and how data were collected and analysed.

CHAPTER 3

RESEARCH APPROACH AND METHODS

3.1   Introduction

The research problem that this study is interested in is the challenges of learning academic vocabulary among Saudi Arabian postgraduate students studying in New Zealand universities. This particular focus led to selecting an appropriate research methodology and methods for the study (Nunan, 1992). As identified in Chapter 1, a qualitative case study design (Merriam, 2009) was chosen to empirically investigate the research problem. Chapter 3 presents a detailed account of the research approach and the methods employed to collect and analyse the data, touches on the ethical considerations and identifies the limitations associated with qualitative case study research.

3.2   Research questions

As identified in Chapter 1, this research initially asked two questions to understand students' challenges of learning academic vocabulary and to help contextualize the learning of academic vocabulary in the wider concerns of postgraduate students. These questions were:

1)   In which aspects of postgraduate studies are the challenges of learning academic vocabulary mostly found?

2)   What are the challenges that postgraduate Saudi Arabian students face in acquiring academic vocabulary?

Two additional questions were set to investigate how these postgraduate students cope with the challenges of acquiring new vocabulary items:

3) What strategies do these postgraduate Saudi students use to learn academic vocabulary?

4) Do students who report the most challenges tend to have the least vocabulary learning strategies?

These research questions were investigated using a qualitative case study design (Merriam, 2009), consisting of an initial online survey which collected background information followed by individual semi-structured interviews and a focus group interview.

3.3 Participants of the study

Postgraduate Saudi Arabian students registered at New Zealand Universities to were invited to participate in the study. 16 participants volunteered for the study. Since qualitative research does not depend on sample size, the number of participants is not a significant issue (Englander, 2012). As Mackey and Gass (2015) argue, the number of the participants should "be identified as a part of determining the feasibility of the study" (p. 19) and not because of the issue of generalizability of the findings. Participants were recruited for the study by posting a letter of invitation to participate on the 'Saudi Students in New Zealand' club page on Facebook, on university notice boards where Saudi Students Association meetings are usually held, and on notice boards in public areas, where Saudi students usually gather (e.g., cafés, mosques, etc.). Table 3.1 presents the demographic information of the 16 participants.

Table 3.1: Background information of participants

	Pseudonym	Age	Duration of living in NZ	Current Program	Place of previous tertiary education and medium of instruction	Duration of studying English before coming to NZ
1	Participant 1	26	8 years	PG diploma in Engineering	New Zealand/ English	7 years
2	Participant 2	34	2 years	Master of Business studies	Saudi Arabia/ Arabic	7 years at school and 2 months right before coming to NZ
3	Participant 3	25	3 years	Master of Biomedical Science	Saudi Arabia/ English	7 years at school and 4 years during undergraduate studies
4	Participant 4	30	1 year	PG diploma in Engineering	Saudi Arabia/Arabic	7 years at school and 2 months right before coming to NZ
5	Participant 5	35	3 years	PhD management	Saudi Arabia/ Arabic	7 years at school and 1 year before coming to NZ
6	Participant 6	26	3.5 years	PhD management	Saudi Arabia/ Arabic and basic English	7 years at school and 6 months before coming to NZ
7	Participant 7	27	1 year and 10 months	Graduate Diploma	Saudi Arabia/ Arabic	7 years at school
8	Participant 8	32	6 years	Master of Business studies	New Zealand/ English	7 years at school
9	Participant 9	32	4 years	PhD program	Saudi Arabia/ Arabic	7 years at school and 2 months before coming to NZ
10	Participant 10	34	2 years	Master of Engineering	Saudi Arabia/ Arabic	7 years at school and 1 year before coming to NZ
11	Participant 11	27	2 years	Master of linguistics	Saudi Arabia/ English	7 years at school and 4 years during undergraduate studies
12	Participant 12	28	2 years	Master of Business	Saudi Arabia/ Arabic	7 years at school
13	Participant 13	25	2.5 years	Master of Science	Saudi Arabia/ Arabic	7 years at school and 3 months before coming to NZ
14	Participant 14	26	2.5 years	Master of management	Saudi Arabia/ Arabic	7 years at school
15	Participant 15	31	1 year	Master's Clinical Psychology	Saudi Arabia/ Arabic	7 years at school and 2 months before coming to NZ
16	Participant 16		1 year	PhD Agriculture	Saudi Arabia/ Arabic	7 years at school and 2 months before coming to NZ

All participants were on student visas and considered international students.

Table 3.1 shows that two of the participants of the study spent 6 and 8 years

respectively in the New Zealand context. This rather long duration of time was

because these participants had completed their undergraduate studies in

New Zealand and had subsequently enrolled in postgraduate studies. These two participants could not be considered as immigrants, because they were in New Zealand on student visas at the time of conducting this study. The other 15 participants received their undergraduate degrees from universities inside Saudi Arabia and were relative new comers to tertiary studies in New Zealand. The participants were enrolled in a range of discipline areas with business/management and engineering the most prominent. Interestingly, although participants had on average studied English for 7 years in the Saudi Arabia education system prior to coming to New Zealand, and had met respective IELTS requirements for postgraduate study in NZ universities, time spent on tuition targeted at academic study immediately before coming to New Zealand varied. Regarding gender, 12 males and 4 females participated in the study.

With regard to the relationship of the researcher with the participants of the study, it should be acknowledged that the researcher did not have any close relationship/friendship with the participants of the study, other than being a postgraduate student of the same ethnicity. Participation was completely based on their own free will with no monetary incentive other than a small gift of appreciation once the interviews were completed. Moreover, since the researcher did not have any authority or superior position, participation in this research study did not have any adverse effects on their studies. It was pointed out, however, that participation could benefit their studies by raising awareness of the challenges surrounding academic vocabulary and the use of vocabulary learning strategies.

3.4   Study design

The process of collecting the data included four different stages. In the first stage, as noted above, the research study was advertised and subjects were invited to participate in the study by emailing the researcher with their intention to volunteer. In the second stage, the participants of the study were emailed the Consent Form and the Participant Information Form (see Appendices A and B) and were asked to fill in an online survey (see Appendix E) that was created using Google Forms. The survey was made of demographic inquiries and questions about their educational background. Specifically, the survey questions were interested to know about the length of staying in NZ, the country they completed their undergraduate studies, the length of studying English, their challenges of learning English language, the importance of learning academic vocabulary from their point of view, their strategies of learning English vocabulary, their reasons for choosing NZ for pursuing a postgraduate degree, and their concerns about their knowledge of English vocabulary at the time of travelling to NZ (see Table 3.1). This background information helped with Stage Three of the study, semi-structured interviews with individual participants.

At the end of the survey, participants were invited to an individual interview (see Appendix C) session lasting approximately one hour. The interviews were conducted at a university library as agreed by individual participants. Open ended questions allowed the researcher to guide the interview and ask further questions when a new direction emerged during the interview. The guiding questions targeted 1) vocabulary learning strategies, 2) special vocabulary leaning strategies for learning academic vocabulary, 3) reading

comprehension strategies, and 4) the impact of studying and living in an English-medium environment on learning academic vocabulary.

Since the main aim of this research was to investigate the challenges of acquiring and using academic vocabulary and the strategies participants used, a consciousness raising task was also designed and used in the interview sessions to direct the focus of the students to academic vocabulary (see Appendix D), since it was considered important to the validity and reliability of the study that the researcher and the participant were talking about the same phenomena, academic vocabulary as opposed to general vocabulary found in everyday texts or conversational English. It should be stressed that the task was not an evaluative task but rather facilitated a common focus during the interviews. The task was made of three sections. Participants were given a list of vocabulary chosen randomly from the Academic Word List (Coxhead, 2000 cited in Richards, 2015, p306). In the initial stages of the interview participants were asked to highlight the words that they knew or had seen them before in academic texts but did not recall their meaning. Participants were also asked to look at a number of technical words specific to a range of disciplines, including biology and education and were asked to select those words they were familiar with.

The final stage of the study involved a focus group interview. The goal of the focus group was to identify any common challenges of learning academic vocabulary and helpful vocabulary learning strategies.

3.5   The research approach

As noted above, this study adopted a qualitative case study approach (Merriam, 2009). Case study approach, according to Yin (2015), has its roots in a constructivist paradigm. This paradigm says that the reality of a phenomenon is dependent on the perspective of the individual that experiences that phenomenon. It is a form of focused and niche-specific research, frequently involving only qualitative methods (Merriam, 2009). This research design helps researchers to study a particular phenomenon and particular individuals in a particular context. Accordingly, this study was interested in understanding the personal experiences of a group of postgraduate students regarding learning academic vocabulary. Therefore, a constructivist lens suits this investigation well and a qualitative case study approach was used. Through this approach, this study sought to understand the challenges of acquiring academic vocabulary from students' perspectives.

The inquiry was restricted to a number of Saudi Arabian postgraduate students studying in NZ universities and the challenges they faced in acquiring academic vocabulary for their studies. Such a case study is a 'bounded system' (Stake, 1995; Merriam, 2009) in that it limits the inquiry to Saudi participants acquiring academic vocabulary in the context of postgraduate studies in New Zealand. Stake (1995) further suggests that there are three types of case studies: an *intrinsic* case study, an *instrumental* case study, or a *multiple or collective* case study. This study adopted an *intrinsic* approach, since it concentrated on one particular case, where the challenge being researched was of interest to the researcher. Merriam (2009) explains that generalizing beyond a bounded case study is not advisable,

since only a limited number of participants are being queried and "[meaning] rather than frequencies assume paramount significance" (Kirk & Miller, 1986, p.5). Nevertheless, it could also be argued that case study research, especially in educational settings, can usefully inform interested stakeholders who share a similar concern (Edge & Richards, 1998, p. 345), in this case the challenges all postgraduate students face in acquiring academic vocabulary, in a range of settings, and indeed the challenges faced by the wider international student cohort studying through the medium of English.

3.6   Research methods

While the research approach refers to the philosophical background underpinning the study, research methods refer to the actual procedures of collecting and analysing the data.

3.6.1   Data collection

As noted in the section on the research design, to collect data and answer the research questions in a robust manner, three methods of data collection were utilized:

(1)   An online survey to obtain the participants' biodata and key information about prior studies before coming to New Zealand;

(2)   Semi-structured interviews to collect detailed information from my participants. More detailed questions were asked as the conversation and discussion progressed (Creswell, 2012). Each interview session took around 60 minutes to complete and the interviews were conducted in Arabic by the researcher, a native Arabic speaker, as

required by the participants. Although all the participants were bilingual, and as postgraduate students were expected to have a good command of spoken English, the opportunity to their first language in the interview was more natural and offered more nuanced data. As part of the semi-structured interview the researcher/interviewer also used a number of consciousness raising activities with the participants, taken from the Academic Word List (Coxhead 2000, cited in Richards 2015, p. 306). The aim of this task was to ensure that the meaning and scope of academic vocabulary was shared by both the researcher and the participants. To prepare the interview data for analysis, all the interview data were recorded and transcribed and those conducted in Arabic were translated into English by the researcher.

(3)   A follow-up focus group interview was conducted near the end of the study in order to ascertain if their involvement in the first interview was able to extend their use of vocabulary learning strategies and/or lessen the challenges. The focus group took around 30 minutes to complete and the discussions were conducted in Arabic to avoid language barriers. To prepare the focus group data for analysis, with the consent of the participants, the conversations were recorded, transcribed and translated into English by the researcher.

3.6.2   Data analysis

The data were analysed to describe the participants' challenges of learning vocabulary and their vocabulary learning strategies. The survey provided important background information (See Table 3.1). The survey question had

the potential to better inform the semi-structured interviews. The semi-structured interview and focus group interview drew on qualitative methods. Qualitative data analysis, according to Creswell (2014), is a complex practice because it involves several cycles of noticing significant information, collecting more data and thinking to find links between important pieces of information. I started the process of data analysis with careful reading of the interview and focus group transcripts to code the important pieces of information. Then, the coded data were categorized into themes. I collected and analysed the interview data simultaneously (Creswell, 2007). This was because the analysed interview data from the interviewed participants might demonstrate the need for conducting more interviews. To store and organize the analysed data, I initially proposed to use NVivo 10 software (Bazeley, 2013). NVivo is a qualitative research tool used to record, store and cluster qualitative data. However, after starting the analysis I decided to shift to manual coding as I found using colour coding and pen and paper strategies were more efficient. I used a 'member checking' technique to check my understanding of the collected data. Using this technique, I asked the participants to check my interpretations of their answers to the interview questions and confirm whether those interpretations reflected what they said (Creswell, 2012).

3.6.3 Coding scheme to answer research questions

To put the analysis of the qualitative data into context, procedures related to the research questions are provided. To answer these research questions the data were reviewed thoroughly and the related words, phrases, sentences and explanations were colour-coded. Following Creswell (2014), the codes

were then reviewed carefully and related and similar codes were grouped and categorized. Categories were further examined and put together to develop themes; for instance, sub-codes such as *inability to participate in and understand discussion in group work activities*, *inability to understand and participate in discussions with one-on-one supervisors, inability to understand and participate in face-to-face discussions with lecturers and tutors* were grouped together and developed a more general code named *problems in small group conversations*. This group then along with codes such as inability to understand lectures then developed a wide theme called *Challenges in Listening*.

The first research question asked: in which aspects of postgraduate studies are the challenges of learning academic vocabulary mostly found? Coded data were grouped and categorized. Eventually, the following four themes emerged: 1) academic vocabulary challenges in listening, 2) academic vocabulary challenges in reading, 3) academic vocabulary challenges in writing, and 4) academic vocabulary challenges in speaking.

The second question asked: What are the challenges that postgraduate Saudi Arabian students face in acquiring academic vocabulary? Coded data were grouped and categorized. Eventually, the following themes emerged: 1) learning enough vocabulary, 2) inefficient vocabulary learning strategies, and 3) lack of training and limited input.

The third question asked: "What strategies do postgraduate Saudi Arabian students use?" Coded data were grouped and categorized. Eventually, the following themes emerged: 1) looking up all the new words in the dictionary,

keeping the record of new words, and memorizing them, and 2) guessing the meanings of words from the context.

The fourth question asked: "Do students who report the most challenges tend to have the least vocabulary learning strategies?" Coded data were grouped and categorized under two main themes: 1) strategies, and 2) challenges. Under strategies there were 2 codes: 1) rote vocabulary learning of translated words from L1 or looked up words in the dictionary, and/or repeating those words mentally, and 2) guessing the meanings of words based on context. Under challenges there were: 1) attrition of memorized words, 2) not knowing how many words are enough, 3) inefficient strategies, 4) absence of formal instruction, 5) difficulty understanding interlocutors, 6) difficulty understanding texts, 7) difficulty paraphrasing texts, and 8) difficulty remembering words when speaking. In order to decide whether those participants who had the least vocabulary learning strategies had the most challenges or not, these themes and categories were compared with the data collected from each participant.

The above-mentioned themes are discussed in Chapter 4.

3.7   Ethical considerations

Auckland University of Technology Ethics Committee (AUTEC) approval was sought for the study and data collection began shortly after AUTEC approval. As explained in the Participant Information Sheet, Participation was completely voluntary. Recruitment was made through the Saudi Arabian students in New Zealand club page on Facebook and on notice boards where these Students Association meetings are held, plus put up at common areas

for students on campus. The advertisement explained the aim of the research and invited interested students to go to a link on the Internet where they could find more detailed information about the research. If agreeing to participate the link guided the volunteers to an online consent form and the online survey. The participants agreed to answer the survey questions by accepting the electronic consent form and doing the survey. On the last page of the survey, the respondents were asked to participate in an interview. The participants were asked to leave their contact details if agreeing to participate in the interviews and were contacted to arrange to interview at their earliest convenience. Before starting the interview, volunteers were given an information sheet about this study and the interview and were asked to sign a consent form, as per AUTEC regulations. For conducting the focus group, the volunteers were contacted to arrange a discussion session. They were informed about the nature of focus groups. At the beginning of the focus group session all the volunteers were given an information sheet about this study, were briefed about the focus group, and were asked to sign a consent form. I also expressed my responsibility for keeping my participants' privacy by using a pseudonym, or numerical code, when reporting the findings. Due to the size and nature of the postgraduate Saudi community in New Zealand the possibility that someone may be able to identify individuals was recognised, however confidentiality was addressed by assuring participants that findings would be reported in a careful manner that protected their anonymity.

3.8   Limitations of the study

It is important to acknowledge the limitations of this study. Those related to a qualitative case study approach have been identified but it is also suggested that case study has some merit in that it is often transferable to other similar contexts (Edge & Richards, 1998). There are limitations, however, around the use of interview data. The interview, for instance, is only a representation. Richards (2003) states that interview data are not always "the truth" about a phenomenon or issue under investigation, rather they can be what participants think is the truth. Moreover, interview data is very subjective and the utterances can be mixed with some emotional rather than pragmatic reasons (Merriam, 2009). With regard to the focus group interview, the researcher particularly faced difficulty in persuading the interviewees to participate in the discussion. The responses were rather short and the participants tended to confirm each other's' beliefs. Furthermore, although participants were not reluctant in the focus group, they pointed out that their beliefs and strategies had not changed after the interview sessions. This unquestionably was due to the short duration between the semi-structured interviews and the focus group, due to the logistics of the study: many of the students were leaving New Zealand over the summer break. Ideally, there needed to be a longer time lapse between the two interviews for participants to reflect more on the challenges they faced and if their views had changed.

3.9   Chapter Summary

This chapter has provided an overview of the methods and methodology, and acknowledged the necessity of using qualitative research to answer the

research questions. Descriptions of the method of recruiting participants and their demographic information are provided. This chapter also explained how the data were analysed. It also noted methodological limitations that relate to methods of data collection and considerations in order to make the study ethical and the findings trustworthy.

The next chapter is devoted to presentation of the findings of the study. The findings were analysed by means of the framework that has been explained in Method Chapter.

CHAPTER 4

FINDINGS

4.1   Introduction

This chapter presents the findings of this research study. The chapter is organised around the four research questions identified in the Methods chapter. Qualitative data from the participant interviews are used to support the findings with participants identified by number: P1-P16. Individual interviews and the focus group interview are identified by II and FGI respectively.

The chapter first outlines key challenges around postgraduate studies in general, as reported by participants in the initial survey. As previously mentioned, these insights were used to develop the guiding questions for the semi-structured interview which more specifically related to student perceptions of the challenges of learning and using academic vocabulary; however, the survey findings are interesting in their own right since they provide a broad overview of the language-related difficulties that participants faced.

Figure 4.1 indicates that the key difficulties participants faced in their studies were listening and oral communication, as well as reading comprehension. Interestingly, while mentioned, academic vocabulary was not highlighted as a particular challenge possibly because participants found the more communicative aspects of language of more immediate concern.
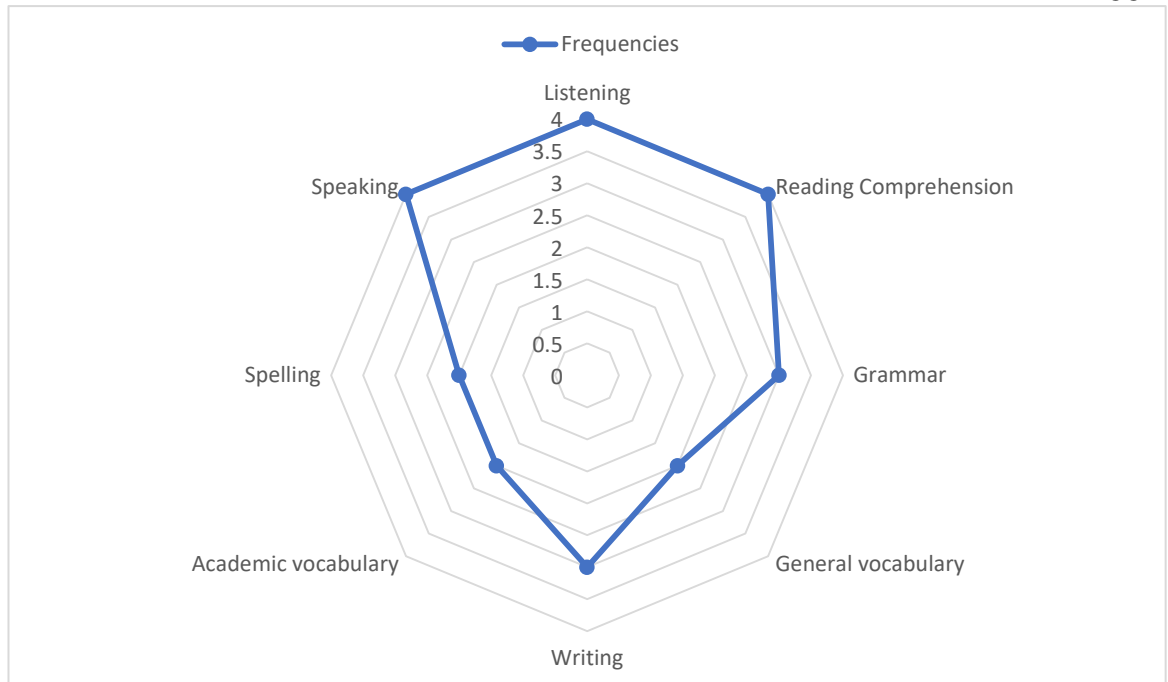
Figure 4.1:   Participants' linguistic challenges in academic contexts

Underpinning such concerns, however, academic vocabulary was implicated in all responses since without sufficient vocabulary desirable academic achievements cannot occur (Schmitt, 1997).

4.2   Research Question 1: In which aspects of postgraduate studies are the challenges of learning academic vocabulary mostly found?

Analysis of the interview data suggested RQ1 could be answered in relation to the four macro-skill areas of language, namely: 1) listening, 2) reading, 3) writing, and 4) speaking. The following four sub-sections identify the challenges participants faced in these four areas.

4.2.1 Listening: The unanticipated aspect

Twelve out of sixteen participants pointed out that they had not anticipated that listening would raise a serious challenge since in everyday settings they experienced few difficulties. Findings indicated that listening was a vocabulary-related challenge in a range of academic settings: 1) classrooms, 2) supervision sessions, 3) feedback sessions with tutors and lecturers, and 4) group discussions with peers.

The first context in which almost all participants faced challenges was in the classroom. Participants who were studying masters and postgraduate diploma courses, where course work was a part of their studies, pointed out that they had difficulty fully understanding lectures. They explained that this lack of understanding was because of the unfamiliar academic vocabulary that lecturers used. For instance, one participant explained that:

For a long time after I started my course in New Zealand, I was not able to understand lectures fully. I did not know many academic words, so understanding lectures was difficult for me. (II: P15)

This participant and others pointed out that lectures contained a great number of academic words, many of which they did not fully understand. All participants of the study indicated that from the very early stages of their studies in New Zealand they knew that they needed to expand their range of academic vocabulary, but as the findings of this study suggest, they were not successful in this regard (see the findings of RQ2 and RQ3 for more information).

The second context where listening was a challenge was in face-to-face and one-on-one discussions with lecturers and supervisors. Out of the sixteen participants in this study four were PhD students. All four participants found supervision sessions exceedingly difficult to follow when they first started their PhD studies. Two of these participants (P9 and P16) pointed out that they were not familiar with much of the vocabulary their supervisors used during supervision sessions. As a result, supervision sessions were always stressful for them. All four PhD candidates pointed out that they would voice record their discussions with their supervisors and subsequently would check the unknown vocabulary and try to learn the words. These four participants also mentioned that they were reluctant to ask their supervisors for explanations or clarification feeling that such questions might change their supervisors' attitudes toward them. One of these participants explained that:

Elite supervisors like to have good students. If I acknowledge that I don't understand my supervisor because of my small range of vocabulary, I would disappoint him. I tried to check the word that I did not understand later. (II: P5)

These findings indicate that all PhD candidates had vocabulary related problems that hindered discussion with their research supervisors. Two participants (P5 and P6) indicated that this lack of understanding negatively affected their research progress because they were not able to effectively discuss their research-related concerns with their supervisors.

Participants who were studying postgraduate diploma courses, or were enrolled in a master's programme, also explained that they faced difficulties with understanding oral language because of their limited knowledge of academic vocabulary. Of particular challenge was when they had feedback

sessions with their lecturers and tutors and when they had to pair up with a native speaker peer (or a non-native speaker peer) with a wider range of academic vocabulary to do group assignments. In either case, they found participating in these activities intimidating and stressful. They also stated that they would avoid these situations as much as possible. One participant noted that:

Sometimes I had to meet my lecturers to get some feedback on my assignments, but I usually did not understand what they said to me. And I always pretended that I understood. I did not want to lose my face. (II: P15)

Another participant with regard to discussions with native-speaker peers explained:

Asking a peer to re-word what he/she said is embarrassing. I always avoid it. I try to hide the fact that I did not understand what they said to me. (II: P10)

This comment is interesting in that it suggests that in higher education students with EAL may not talk with peers about the new words they encounter for fear of embarrassment.

While the findings indicate insufficient academic vocabulary resulted in challenges for understanding supervisors, lecturers and native English-speaking peers, all sixteen participants of the study claimed that listening challenges decreased as they spent more time in various academic contexts and got the chance to be repeatedly exposed to the same vocabulary. This finding is supported by Sankó (2006) and Takač (2008) who stated that academic vocabulary leaning is most frequently intentional. In other words, while it is possible to pick up general vocabulary incidentally during social

interaction, learning academic vocabulary requires particular attention and purposeful strategies.

4.2.2 Reading: The tedious aspect

Findings also indicated that reading was also challenging for the participants, especially when they first started their studies. Looking up unfamiliar vocabulary while reading was a tedious and time-consuming task. Participants noted that although reading comprehension was a crucial part of their academic success, they always had difficulty managing their reading activities, in large part because of the extensive academic vocabulary needed. When the participants were asked to elaborate on the difficulties of managing their reading activities, it became clear that all their problems were related to their limited vocabulary knowledge. These challenges can be summarized as follows: Reading materials contained many new vocabulary items, which the participants needed to look up and attempt to learn for future encounters. Doing this task was however time-consuming and they struggled to manage their time and meet their deadlines. Since they were dealing with many reading materials and a huge amount of academic vocabulary, this situation and the pressures it involved often caused them stress. The explanations of the participants were very similar but the following comment provides an illustration:

Firstly, we are asked to read heaps of reading materials, like chapters, articles, books. These materials are full of unfamiliar words. I cannot understand the texts without knowing their meanings. So, I need to look them

up in the dictionary. Can you imagine how time-consuming it is? This is like a nightmare, because we don't have much time. (FGI: P3)

The challenges of understanding academic vocabulary during reading activities became more interesting when the PhD and master's students raised another challenging aspect of reading, which was not noted by Diploma course participants. They all noted the need to take notes from their reading and that those notes needed to be paraphrased. Here the problem of unfamiliar vocabulary became more complicated as they not only needed to look up unfamiliar words in the dictionary to understand the text but also needed to write the original text in their own words. In this regard, one participant noted:

The problem isn't that words should be checked and texts should be understood. The problem is more complicated than <u>this dull task</u>. We need to paraphrase texts that we don't understand. And the worst thing is that we haven't trained for doing such activities. (II: P6)

This participant described the task of looking up words in the dictionary as a tedious one (see the underlined phrase, *this dull task*, in the above excerpt). He then added that the real difficulty lay with the need to paraphrase texts based on reading materials he was unable to fully understand without a dictionary. What is more, he reported he had not received any formal instruction on how to paraphrase texts, either as part of his current studies or prior to postgraduate studies in New Zealand. This issue is further highlighted in the following section.

In summary, reading was seen as a tedious activity for participants in the study because of the challenges associated with insufficient academic vocabulary, the frequent need to check the meaning of words, and the frequent need to paraphrase a text into their own words without full comprehension of the text. These findings are supported by Geva, Yaghoub-Zadeh, and Schuster (2000), Pulido (2009) and Shen (2013) who claim that limited knowledge of vocabulary causes challenges for L2 learners when it comes to reading comprehension. While referring to non-academic texts, Hu and Nation (2000) argue that successful comprehension depends on an understanding of some 98% of words in the text (i.e. one unknown word in 50), so it is not unsurprising that reading was reported by participants as tedious due to the large number of unfamiliar academic words in the texts they needed to read.

4.2.3 Writing: The most challenging aspect

Writing was also a significant challenge and as noted previously, particularly, paraphrasing from reading materials. At least four of the participants in the initial survey stated that writing in English was challenging for them before coming to NZ, but the subsequent interview data indicated that all sixteen participants found writing for academic purposes hard. At the core of this difficultly was their limited range of academic vocabulary and interestingly, not being able to distinguish between academic and non-academic words. Comprehension issues while reading plus a lack of awareness of the difference between academic and non-academic words resulted in issues related to paraphrasing, including instances in which academic texts were inappropriately paraphrased using informal language. One of the participants

exemplified this issue by recalling one instance in which she paraphrased "for instance" as "like" only to be reminded by her and supervisor that "like" is extremely informal.

Participants found these reading-to-write tasks very difficult and stressful. All the Masters and PhD students pointed out that paraphrasing texts was the most challenging academic task they had to do in their entire studies and that this was directly related to an unfamiliarity with much of academic vocabulary needed. During the focus group interview one of the participants, who was a PhD student, explained that:

To write a literature review, one must comprehend scientific texts like journal articles and then paraphrase them. Understanding texts is not easy because there are new words that we need to check their meanings or guess their meanings. After understanding the text, it should be paraphrased. Paraphrasing is very hard. One should know synonyms that mean exactly the same or when checking synonyms dictionary or the internet, could recognize what words are synonyms with the exact meanings. (FGI: P11)

Although all participants of the study claimed that academic writing was challenging for them, in general, because of their limited academic vocabulary, they pointed out that paraphrasing was the most difficult task for them, for two reasons: 1) the original text needed to be fully comprehended in order to rephrase it and 2) for rewriting the text synonyms needed to be found. The challenges of reading to write and of paraphrasing from original texts has been identified in the EAP literature (Hirvela, 2016).

To illustrate the difficult and time-consuming nature of finding synonyms one participant mentioned:

I needed to check the definitions of all the synonyms that were suggested for a word. And then check whether that synonyms were formal or not. It took me a long time to do that, because I needed to check the meanings of many words. Because I did not know many words. (II: P15)

In addition, as noted at the end of the previous section, some of the participants of the study reported that they had not received any formal instruction as on how to paraphrase texts, a finding supported by Pecorari (2003, 2008), who found that L2 students pursuing postgraduate degrees in British universities also faced significant challenges in the process of paraphrasing original texts.

In summary, the findings in this section shed more light on the challenges of academic writing for postgraduate students who have completed their undergraduate studies in Saudi Arabia (except for one) and are currently enrolled as international students in New Zealand universities. The findings suggest that it should not be assumed that all EAL postgraduate students, at least those from Saudi Arabia, even though they may meet IELTS requirements, know how to paraphrase an academic text, with implications for an explicit focus in the postgraduate curriculum alongside discipline-related studies.

4.2.4 Speaking: The least challenging aspect

While speaking was seen as the least challenging aspect of their studies, findings indicate that giving oral presentations presented a particular challenge. All participants pointed out that they faced difficulty remembering academic words when they had to give a presentation. One participant explained that:

I memorized new words before my presentations, but when I was presenting I forgot them and I had to read from my notes. (II: P1)

One participant had lived in New Zealand for 8 years and had completed his undergraduate studies in this country but he also reported challenges with regard to remembering academic vocabulary when doing presentations, suggesting a lengthy period in English-medium education may not necessarily lead to the acquisition of academic words. As noted earlier, academic vocabulary needs to be purposively acquired and requires intentional strategies (Sanko, 2006). One possible reason for forgetting memorized words could be that the memorized words were only in short term memory and not activated vocabulary in the mind of this participant, a point well-cited in the literature (e.g., Nation, 2013, Takač, 2008; Schmitt, 1997). This finding also chimes with what one of the PhD students stated:

I had difficulty remembering new academic words that I memorized when I had discussions with my supervisors. It happened many times that I was speaking and suddenly I forgot words and weren't able to use them. (II: P9)

While participants considered memorization as a useful learning strategy they could not activate those words when required and thus tended to forget them when they were speaking.

4.3 Research Question 2: What are the challenges that postgraduate Saudi Arabian students face in acquiring academic vocabulary?

This section presents the findings of RQ2. While the findings of RQ1 were able to situate the challenges associated with academic vocabulary in the four language macro-skills, and the academic tasks and activities required, RQ2 looks more specifically at the challenges of acquiring academic vocabulary. While there is some overlap with the findings of RQ1, this section is organized around three themes: 1) the amount of academic vocabulary required, 2) inefficient vocabulary learning strategies, and 3) lack of training and limited input.

4.3.1 The amount of academic vocabulary required

With regard to general English vocabulary, all of the participants of the study stated that learning the vocabulary of English language is ongoing and continues even after being able to speak and write in English fluently. They also had the similar beliefs about the acquisition of academic English vocabulary. For instance, one participant stated that:

many academic words have several synonyms and learning all of them takes a very long time. Maybe even after I finish my studies. (FGI: P14).

Despite this recognition, all participants of the study were overwhelmed by the ongoing task because they and did not know how many words they needed to learn. In this regard, one participant noted:

I do not have the patience and motivation to memorize all these words. They are too many; I don't even know how many they are, so how can I can plan to learn them. (II: P11)

Nation (2006) highlights this dilemma by arguing that without the use of a dictionary a 8,000 to 9,000 word-family vocabulary is needed for full comprehension of a written text. For all participants, finding a word list that contained all the necessary words for understanding lectures was the main challenge. Yet interestingly, all sixteen participants were unaware of Coxhead's (2000) Academic Word List, or any other Word List. Six of the participants mentioned, however, that they attempted to develop their own word lists based on the lectures. They described it as a tedious and formidable task, and unfortunately after a very short time they stopped this practice of taking notes of new words and leafing through dictionaries. For instance, one participant explained:

I wanted to improve my listening, so I started writing down the words that my lecturers used when teaching in a notebook. Every day, I went home, looked up the words in dictionary, and tried to memorize them. But there were many words. After a short time, I gave up memorizing those words. It was boring. It was hard. And I kept forgetting words that I memorized. (II: P1)

However, interestingly, all participants noted that the technical words of their different disciplines appeared comparatively limited (as opposed to both

general vocabulary and general academic vocabulary) and that they eventually learned these specialised words and terms after being exposed to them several times in different contexts and texts. This finding suggests that specialized, discipline specific vocabulary was easier to learn compared to general academic vocabulary.

The finding brings into focus the debate surrounding the value of general academic word lists, and more generally the teaching of English for Academic Purposes (Hyland & Tse, 2007; Wingate, 2015). Each distinct discipline, according to Nation (2001), has its own technical vocabulary which comprises 5% of most texts, equating to what Snow and colleagues' (1989) term content-obligatory language; in other words, the essential technical vocabulary postgraduate students need to acquire to make sense of their respective disciplines. The partly supports the argument of Hyland and Tse (2007) that vocabulary learning needs to be discipline specific. However, the finding in this section also suggests that students need to be equipped with a large amount of general academic vocabulary as well.

4.3.2   Inefficient vocabulary learning strategies

The findings indicate that all participants recognized the importance of learning strategies in vocabulary learning, a point clearly highlighted in the literature (e.g., Nation, 2013; Schmitt, 1997). Nation (2013, p. 326), for instance, states that there are different vocabulary learning strategies and language learners should acquire the skills of choosing the right strategy, sometimes combining them, and ultimately using them. Findings indicate, however, that participants had limited vocabulary learning strategies, namely:

1) rote memorization, 2) learning from context, 3) vocabulary note taking and bilingual dictionary use. Interestingly, these participants would use the same strategies for learning all the three types of vocabulary (i.e. general, academic, and technical).

All participants claimed that memory had a crucial role in all above-mentioned strategies, a finding supported by Takač (2008), among others. However, they were frustrated by the fact that they would forget many of the words learned through these strategies, as illustrated by one participant:

Reading scientific articles is the most difficult job as I need to look many words up. It is also disappointing because I often look up the same words that I memorized before. (II: P13)

The attrition of memorized words is highlighted by Schmitt (2000), who claims that vocabulary knowledge is more liable to be forgotten than other linguistic knowledge. Takač (2008) also in this regard suggests that learning vocabulary should be planned meticulously to be efficient.

A challenge that the participants identified was related to inaccurate guessing from the context. One participant noted:

Sometimes my guesses were wrong, so my understanding of the texts that I read was also wrong. So, whenever I had to do a light reading task, I looked the new words in the dictionary. (FGI: P8)

One possible reason for the inaccurate guessing of unfamiliar words from context could be unfamiliarity with this particular vocabulary learning strategy, which requires readers to use the surrounding text as a clue. Furthermore, as

noted earlier, for full comprehension of a text some 98% of words need to be known (Hu & Nation, 2000), making guessing meaning from context in an academic text very difficult for those challenged by academic vocabulary.

As noted previously, participants used vocabulary note taking and bilingual dictionary as vocabulary learning strategies. This strategy, and those mentioned above, will be explored in more depth under RQ3.

4.3.3   Lack of training and limited input

The third challenge that the participants frequently mentioned was being exposed to a limited range of academic learning contexts where they could repeatedly hear, read or use academic vocabulary. While some interaction occurs in postgraduate studies in New Zealand universities, as illustrated in participants' answers to RQ1, much postgraduate work is independent and solitary work, particularly for those enrolled in PhDs. In contrast to the limited opportunities in academic settings, participants noted that the primary source of learning general vocabulary was through daily conversation in social contexts, which exposed them to authentic vocabulary input, a claim which is supported by cognitive theories of second language acquisition (Ellis, 1997). As one participant explained:

Learning general words happens as you live your life. Whatever I do, wherever I go in an English-speaking context, I'm learning them. I don't need to try hard. (FGI: P3)

The above comment shows that general words may be picked up by learners incidentally. However, when being exposed to academic vocabulary input, learning requires a deliberate effort (Coxhead, 2014).

In addition, participants reported limited training and a general lack of knowledge related to vocabulary learning strategies. Learning new lexical items as noted by the participants most frequently happened by trying to guess the meaning of unfamiliar words from context, finding definitions in monolingual dictionaries and/or translating new items into Arabic, and by using rote memorization. As one participant pointed out:

The vocabulary learning strategies that I often use involve a lot of repetition and memorizing. I dislike it, because it is time consuming, boring and inefficient. [Although repetition was not efficient,] I used it anyways because nobody taught me any other learning strategies. (II: P9)

In summary, although research has shown that academic reading materials provide good lexical input (Nation, 2013) it seems that the participants of this study could not use this opportunity. While everyday vocabulary did not appear to pose challenges, it can be implied from the above comments that most if not all participants were not (or did not consider themselves as) successful academic vocabulary learners. This was basically due to the enormity of the task and not knowing a range of effective and efficient learning strategies which were able to highlight the explicit and intentional nature of learning academic vocabulary.

4.4 Research Question 3: What strategies do postgraduate Saudi Arabian students use to learn academic vocabulary?

As indicated in the findings for RQ2, findings for RQ3 show that the participants generally used three main vocabulary learning strategies: 1) the use of monolingual dictionaries and/or translating new items into Arabic, 2) guessing the meanings of vocabulary from the context and 3) rote memorization

4.4.1 Monolingual dictionaries and/or translating new items into L1

Participants reported most often using monolingual dictionaries, although they mentioned a few times that they would use bilingual dictionaries if the meaning of words was not clear in their L1. All participants of the study claimed that looking up new words in the dictionary depended on the amount of free time they had. One participant noted:

[…] whenever, I had to do a light reading task, I looked the new words in the dictionary (FGI: P8)

4.4.2 Guessing the meanings of vocabulary from the context

The second strategy used involved guessing the meanings of words from the context. While the participants found the former dictionary- related strategy tedious and time-consuming, they found that the guessing from context strategy could result in misinterpretation of the texts because of inaccurate guessing. Five of the sixteen participants reported use of this strategy and found it useful. One participant explained that while this strategy helped them

to understand lectures better it did not help them to expand their academic vocabulary since they did not follow up with additional strategies:

I listened carefully to the lecture and the lesson the lecturers were teaching and tried to understand the words that I did not know based on the contents of the lecture. I think it helped me a lot to understand lectures better. But it did not help me to improve my vocabulary. Because I did not look up the words in dictionary and memorize them. (II: P12)

Similarly, another participant explained that although they used the guessing from context strategy they did not have time to check words in the dictionary or commit them to long-term memory:

When I had to do intensive reading, I tried to guess the meaning of the new words, I did not have enough time to look up all of them in dictionary. (FGI: P8)

Some participants also seemed unfamiliar with the guessing from context strategy, or were unsuccessful because of generally weak vocabulary knowledge. The following comment suggests that a postgraduate diploma participant was not aware of when to use the guessing from meaning strategy and that only the meanings of important words needed to be guessed:

I try to guess the meaning of all the unknown words. (II: P4)

The comment suggests that this participant's vocabulary knowledge was well below the 98% threshold required for comprehension (Hu & Nation, 2000) and that trying to guess too many words in the text is unlikely to be successful.

4.4.3   Rote memorization of vocabulary

For improving listening memorizing new words was the main strategy. Participants reported that they tended to repeat words mentally rather than outloud. Most found memorization hard and time consuming. The findings also indicate that none of the participants undertook any planned review of the newly memorized words and because of this they would forget learned words after some time.

Another frequently mentioned challenge was recalling the meaning of words previously sighted. All participants explained that they could recognize by sight some words that they previously looked up in the dictionary, but they could not recall their meanings. One explanation is that some of the participants did not make any effort to put new vocabulary into long-term memory learned by using a range of strategies. An alternative explanation given by all but two of the sixteen participants was the belief they had poor memory.

When my supervisor used the words that I had memorized, I was able to recognize the words, but was not able to remember the meaning of the words. (II: P11)

In summary, short term memorization proved ineffective and inefficient as did dictionary use and guessing from context. The three strategies used by participants can be considered as determination strategies (Schmitt, 2007) and findings indicate that participants did not utilize any vocabulary learning strategies related to the social, cognitive and metacognitive categories, as identified in Schmitt's classification. This was possibly due to the absence of

any explicit vocabulary learning instruction, either prior to their postgraduate studies in New Zealand or during their postgraduate studies.

4.5   Research Question 4: Do students who report the most challenges tend to have the least vocabulary learning strategies?

To answer this research question, only the strategies that the participants reported continuously using were considered and the strategies that they tried on occasion but stopped using were discounted (i.e., making their own word list). Table 4.1 summarizes the strategies used by participants along with the challenges they reported.

Table 4.1 Participants' Vocabulary Learning Strategies and Challenges.

Strategies	Challenges
The use of monolingual dictionaries and/or translating new items into L1	Attrition of words
	Not knowing how many words are enough
Guessing the meaning of words based on the context	Inefficient strategies
	Absence of formal instruction
Rote vocabulary memorization	Difficulty understanding interlocutors
	Difficulty understanding texts
	Difficulty paraphrasing texts
	Difficulty remembering words when speaking

The strateg ies and the challenges that emerged from the study and are presented in Table 4.1 were compared with the data gathered from each participant by going back over the individual interviews. A key finding was that the three strategies were identified by all sixteen participants of the study and the eight

challenges presented in the second column were also experienced by all sixteen participants. In other words, all participants of this study used similar vocabulary learning strategies – and were limited by these- and faced similar challenges. Since the participants of this study reported using a similar number of strategies and experienced the same challenges, it is not possible to decide whether learners with fewer vocabulary learning strategies experienced more challenges or not. What can be said in summary is that academic vocabulary presented all participants with significant challenges for similar reasons.

4.6   Chapter summary

This chapter has presented the findings of the study. Initially from the survey it became clear that the key difficulties participants faced in their studies were listening and oral communication in academic contexts, and reading comprehension. These areas were used as a basis to explore the challenges of learning academic vocabulary through individual interviews and a focus group interview. The findings of RQ1 indicate that participants' challenges were related to the four language macro-skills, namely listening, reading, speaking, and writing. RQ2 looked at the challenges of acquiring academic vocabulary and found that the vast amount of academic vocabulary required, as well as ineffective and inefficient vocabulary learning strategies, and a lack of explicit training related to vocabulary learning were key factors. Interestingly, however, discipline-related, technical vocabulary did not present the same challenges as more general academic vocabulary. The findings of RQ3 highlighted the use of three strategies: 1) the use of monolingual dictionaries and/or translating new items into L1, 2) guessing the meaning of

words from the context, and 3) rote memorization. Following Schmitt (2007) the findings highlight the limited number of strategies used and that these were largely ineffective in putting academic vocabulary into long-term memory. Lastly, RQ4 confirmed that all participants were limited to using similar strategies and encountered similar difficulties. The following chapter will discuss the significance of the findings in light of the literature.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1   Introduction

Chapter Five provides a discussion of the key findings, identifying not only what the study has found but what the findings mean. The chapter first provides some background information to the study as a means of contextualizing the subsequent discussion. The findings are then discussed with reference to the relevant literature reviewed in Chapters One and Two, including unexpected findings that emerged. Limitations of the study are acknowledged, implications are identified and recommendations for further research are made. The chapter ends with a brief conclusion.

5.2   Background information

This study aimed to investigate the challenges of learning academic vocabulary among postgraduate Saudi Arabian students at New Zealand universities. The rationale behind the study was to identify students' deliberate attempts to study and learn academic vocabulary while pursuing post graduate studies at universities of English-speaking countries. Saudi students were selected for this qualitative case study primarily because I am also a Saudi Arabian student and have faced challenges related to academic vocabulary during my studies and would like to know whether my peers had similar experiences as me. Interviews were conducted in Arabic to remove language barriers and elicit deep data and clear explanations.

As indicated in Chapter 1, vocabulary research can be categorized into three themes: 1) section or prioritization, 2) acquisition and instruction, and 3) testing and assessment. This study falls under the second theme, acquisition and instruction, and consequently sought to shed light on the acquisition of academic vocabulary among a particular group of post graduate students by gaining insights in the challenges they faced and the particular areas of their studies where these changes lay. In this regard, the study sought to fill a gap in the research literature by investigating students' perspectives. While students' perspectives on the vocabulary decisions made when writing academic texts have been investigated (Coxhead, 2012), the present study takes a broader view by embracing not only writing but all aspects of students' studies. Furthermore, as Flowerdew (cited in Coxhead 2016a, p. 177) argues, there is a paucity of studies in the EAP literature, including studies of academic vocabulary, that "go beyond simple frequency counts and also consider learnability and teachability". Investigating students' perspectives of the challenges of learning academic vocabulary, in the context of their studies, highlights issues of learnability and has clear implications for academic vocabulary instruction.

Although related to the wider field of second language acquisition the present study is best situated in the field of English for Academic Purposes (EAP). As Coxhead (2016) notes in a recent handbook of English for Academic Purposes, "[a]cquiring academic and disciplinary vocabulary is an important task of both first and second language learners of EAP" (p. 177). While it could be argued that postgraduate EAL students have moved beyond the

need for EAP instruction, it remains true that for many postgraduate students' numerous challenges associated with learning academic vocabulary remain.

5.3   The Challenges of Learning Academic Vocabulary

5.3.1   Difficulties with the four language skills

A key finding in this study was that challenges with learning academic vocabulary related to all four language skills in a number of academic contexts: conversation when meeting with supervisors, listening to lectures, reading academic texts, and with writing, particularly with 'reading to write' (Hirvela, 2016) and the need to paraphrase.

The participants of the study identified conversation with their supervisors during scheduled meetings as a problematic area due to what they identified as insufficient knowledge of academic vocabulary, although they also mentioned that everyday situations did not present a particular challenge for conversation. This suggests that the academic context was a key factor and not speaking skills per se. It also suggests that students faced challenges both in terms of understanding interlocutors (input) and responding to them (output). As widely argued in literature, spoken discourse gets easier if listeners know a higher percentage of the lexical words in what they are listening to (Bonk, 2000). Larson and Schmitt (2008) also claim that postgraduate students need to understand 90% of running words to fully comprehend their interlocutors. Clearly, insufficient academic vocabulary impacted negatively on comprehension and prevented participants from fully engaging with their supervisors.

For postgraduate students taking taught papers prior to their thesis studies understanding lectures was also a challenge, again reportedly due to the high occurrence of academic vocabulary and less-frequently used words and expressions in general English.

Reading comprehension was another problematic area for the participants of the study. Studies on reading comprehension suggest that huge figures of word families are necessary for good reading comprehension (e.g., Schmitt & Zimmerman, 2002). Learning such a great number of words is a huge obstacle in the path of mastery of a language. There are numerous studies that have shown that despite substantial hours of instruction, students' vocabulary size was far less than that needed for good reading comprehension (e.g., Laufer, 2000).

Writing also presented challenges to participants, primarily because of the need in academic settings 'to read to write' (Hirvela, 2016). While discourse and genre features of academic writing are difficult for all students and in particular EAL students (Shaw & Pecorari, 2013), Hirvela (2016) argues that 'reading to write' is the "bottom line" (p. 127) for successful academic achievement. Connected closely to reading to write is paraphrasing. Participants in the study reported immense difficulties with putting academic text that they had read into their own words. Poor paraphrasing or the use of other peoples' ideas and texts without recognition results in plagiarism (Pecorari, 2003). Oshima and Hogue (1999) claim that "a paraphrase is unacceptable when it contains the same vocabulary and sentence structure as the original" (p. 90). Plagiarism is thus a serious offence in academia and novice writers need to avoid plagiarism and maintain academic integrity.

According to Sun (2009), appropriate paraphrasing is an efficient way of avoiding plagiarism in writing. However, interpreting a text in one's own words demands high knowledge of English word families so that "no trace of direct borrowing of two or three consecutive words from source texts" (Shi, 2004; p. 178-179) remains in the produced text. It can be claimed that limited vocabulary size created serious difficulties for the participants of this study when it came to paraphrasing.

5.3.2 Academic vocabulary is vast

Vocabulary size has always been a critical issue in learning along with the related notion of 'vocabulary load' (Coxhead, 2016, p. 178). The findings of the current study suggest that the participants of the study did not have any firm idea of the percentage of lexical items that they needed to master. Nor did it appear participants had been introduced to word-list tools, such as the Academic Word List (e.g., Coxhead, 2000), which offer a principled method for acquiring a large and varied academic vocabulary. This lack of academic vocabulary knowledge very likely contributed to inefficient reading comprehension strategies, and therefore to issues around reading to write. Numerous studies suggest that there is a threshold of vocabulary knowledge required for text comprehension (Hu & Nation, 2000; Larson & smith, 2000); Nation, 2006). Based on Larson and Schmitt's (2000) claim that knowing less than 90% of the lexical words in a text results in poor reading comprehension, it can be argued that insufficient vocabulary knowledge was a major stumbling block to both reading academic texts and reading to write. Based on what many participants reported in the interviews these challenges may be due, in a large part, to the limited vocabulary instruction they had received

before entering postgraduate programs in New Zealand. Since the participants of this study met the entrance English requirements of the universities in New Zealand by providing an IELTS certificate which is usually higher that 6.5 in most cases, it also brings into question the usefulness of IELTS as a gate keeper for higher education in English medium universities.

5.3.3 Limited vocabulary learning strategies

Not only was the scope of academic vocabulary vast for all participants of the study they also had few effective learning strategies. The participants of the study frequently mentioned that one of their major reading comprehension strategies was guessing the meaning of unknown words. They also acknowledged that their guesses were not often precise. As mentioned earlier (e.g., Coxhead, 2016; Hu & Nation, 2000; Larson & Smith, 2000; Nation, 2006) good comprehension is not possible unless readers know a high percentage of the running lexical items in a text, including multi-words items associated with collocation. It is highly likely that inaccurate guessing was the result of overusing this strategy when only a small percentage of the vocabulary in the text was known by the participants.

Hyland and Tse (2007) have emphasized the importance of motivating learners to develop their own academic vocabulary lists, related to their own areas of study. A few participants of the study also mentioned that they started developing their own discipline specific word lists, but that they ceased the effort after a while. Schmitt (2008) argues that regardless of appropriate vocabulary instruction, learners need to stay motivated for a long

time to be able to achieve mastery of a considerable number of lexical items. In the case of these participants, it seems that they lost motivation to continue developing their lists, in part due to an absence of help in developing the list, ineffective learning techniques, and unclear learning goals. With regard to the absence of clear learning goals, Nation (2001) argues that setting clear learning goals determines learning approaches, which leads to motivation to devote attention to learning information about a word. This is a call for studying motivating factors that may lead to active vocabulary learning over a long period of time with or without instructional support.

Not surprisingly a frequently stated strategy was looking up the meaning of new vocabulary items in bilingual dictionaries. It is perhaps the most common strategy of all L2 learners. As Schmitt (1997, 2008) noted, the role of L1 in learning and using bilingual dictionaries learning L2 vocabulary is very noticeable. It seems that participants used this technique because of the link that they can easily establish between the new L2 lexical item and its activated equivalent in L1 (Sunderman & Kroll, 2006).

Repetition was the participants' long-term vocabulary learning strategy. While scholars such as Nation (2001) have emphasized the important role of repetition and constant exposure to newly learned vocabulary items, interestingly, the participants of this study reported it as being 'tedious'. This viewpoint can perhaps be explained by the fact that the participants of this study were not aware of any other vocabulary learning technique to put new vocabulary knowledge into long term memory.

5.3.4   Similar challenges related to the use of the same strategies

All participants in the study reported similar challenges and using very similar strategies. This may suggest that using the similar strategies lead to similar challenges. It is evident from the findings that the participants frequently forgot new lexical items that they had seen or heard several times, and had tried to put into long term memory. Interestingly, however many reported that the technical vocabulary related to their particular disciplines was easier to remember and learn, a finding that supports of the claim that much academic vocabulary – at least vocabulary that is characterized as technical vocabulary - is best learned in the context of discipline specific studies (Hyland & Tse, 2007). However, Coxhead (2016, p. 177) notes, disciplinary vocabulary has "a narrow range of occurrence within a particular subject area" and ironically this limited but situated occurrence of technical vocabulary, combined with the possibility students may have greater motivation to engage with ideas from their respective discipline areas, may make technical, discipline-specific vocabulary easier to learn.

Attrition of vocabulary is a common issue that is discussed in memory research (Schmitt, 2000). This problem can be due to incomplete or unplanned learning process. According to Nation (2001), a complete learning process results in a learned lexical item. It can be concluded that learning a large number of academic vocabulary has remained a great hurdle facing these postgraduate students.

5.3.5 The difference between general and academic vocabulary

One interesting and unexpected finding was that the participants did not know the difference between general and academic vocabulary. Generally, participants considered new words as 'academic' simply if they encountered them in academic texts. This perception was reinforced if the new lexical items were met several times in academic texts, giving rise to the belief they must be academic vocabulary. It is evident from the findings that this confusion was in larger part due to an unfamiliarly with vocabulary learning tools such as the Academic Word List (Coxhead, 2000; 2011a) and from limited exposure to general English texts found in community use. It could be argued that having an awareness of the AWL may provide more principled exposure to academic vocabulary, present students with focused vocabulary learning opportunities and support students in using academic register when composing academic texts.

5.3.6 Summary of the key findings

This case study contributes to our knowledge of the challenges faced by postgraduate students with limited academic vocabulary and limited vocabulary learning strategies. This study found that students commonly encountered various difficulties in a range of academic settings with regard to listening, speaking, reading, and writing. It was found that these difficulties had their roots in a limited knowledge of English vocabulary (both general and academic). Interestingly, it was found that the participants were not aware of the AWL although a few tried to develop their own word lists but did not persist.

This study also found that the participants used limited vocabulary learning strategies, common to all participants. Their main strategy was looking up new words in a monolingual dictionary, suggesting that participants were more comfortable learning new vocabulary items with the use of L1 translation. Since these participants did not have a wide range of vocabulary knowledge and found looking up words in the dictionary tedious and time consuming when reading texts for meaning, they turned to guessing the meanings of new words from the context. This strategy however was rarely successful due to the high number of unknown words in the text. In order to learn the new items, i.e., to put them into long-term memory for future use, the participants used the technique of repetition and memorization. Yet using these techniques did not prove efficient. The main problem that the participants faced, universal to all, was attrition of newly learned words. Additionally, guessing from the context was often unreliable and caused misunderstanding. The study also found that participants had similar vocabulary learning strategies and faced similar challenges, possibly due to being of the same ethnic / language background and in all but a few instances, with similar experiences prior to enrolling in post graduate studies as international students in New Zealand.

5.4   Limitations of the study

Limitations relating to the methodology and methods used for this qualitative case study were identified in the methods chapter. Here it is worth reiterating concerns related to generalizability and trustworthiness. As with all case study research, the results of this study cannot be generalized to the wider populations outside those invited to participate (Merriam, 2009), in this case

postgraduate students from Saudi Arabia who are studying in New Zealand universities. However, qualitative case study research does seek to address transferability (Edge & Richards, 1998). That is to say, the findings of this study may be of interest to language teaching professionals who are involved with similar students in similar contexts. Similarly, all EAL students besides Arabic speaking students from Saudi Arabia, both undergraduate and postgraduate, may find the findings offer insights into their own experiences.

The study is small-scale consisting of just 16 participants, although in qualitative case study research participant numbers are not of concern (Merriam, 2009). What is important is to provide a sound outline of the context, to operationalize all key constructs, to consider the limitations of using interview data as evidence, and to provide detailed explanations of participants' experiences. While steps were taken to outline the context and procedures carefully, and to represent participants' comments accurately and truthfully, the study would have benefited from also interviewing lecturing staff and supervisors about their perceptions of the challenges faced by postgraduate students in regard to academic vocabulary. This kind of triangulation could have added to the trustworthiness of the study.

A further limitation concerns the operationalization of the key concept 'academic vocabulary'. While care was taken to alert participants to the differences between general vocabulary, general academic vocabulary and technical vocabulary, the study could have adopted a much broader view of academic vocabulary to include multi-word expressions and collocation. While collocations such as *global warming* or *formative assessment* are relatively straightforward, drawing on a study in a first-year accounting course,

Coxhead (2016, p. 185), uses the expression *'delayed payment to trades payable'* to highlight the importance of multi-word expressions, in the context they occur. While arguably in this case discipline specific, such multi-word expressions are just as important as single vocabulary items in academic texts. It is highly likely participants in this study were challenged not only with stand-alone academic vocabulary, but also by multi-words units and similar collocations.

Finally, it will be recalled that a consciousness raising task, using number of general academic words from the AWL, was used during the semi-structured interviews in order to ensure participants and the researcher were taking about the same construct, academic vocabulary. In hindsight data collected from the discussion around this task should have been clearly identified in the analysis, separate to data collected from the semi- structured interview questions asked. What was found in general however was that while participants knew many of the vocabulary items they were not familiar with the AWL.

5.5   Implications and recommendations

In general the findings of this study align with much of the previous research on Saudi students studying in English medium universities. Accordingly, there are two areas that the study speaks to: firstly, postgraduate programs in English medium tertiary institutions and secondly, academic preparation programs in Saudi Arabia.

In the first instance, postgraduate program providers need to be aware of the difficulties that EAL students commonly face and be prepared to support them

when they are in need of help. Since postgraduate students are expected to do much vocabulary learning independently, they need support to develop their self-study skills and to seek help from language experts when their previously learnt strategies are not working efficiently. There are, for example, academic vocabulary tools (such as the AWL) that can be introduced to students upon starting their courses at English medium universities. The AWL is applicable to a range of disciplines. Being aware of such tools, and knowing how to use them, can guide and support independent study.

The participants of this study seem to approach academic vocabulary in the same way they approached general vocabulary learning back in Saudi Arabia. Clearly this caused issues. It seems helpful if all international students are provided with study skills workshops with a focus on introducing the different ways of improving knowledge of vocabulary. Such non-credit bearing workshops may have a positive outcome for academic vocabulary learning. It would certainly benefit the Saudi students in this study.

Secondly, language preparation courses in Saudi Arabia should anticipate the challenges that international students may face during their postgraduate studies and try to equip them with useful coping strategies (e.g., variety of vocabulary learning strategies) and introduce them to appropriate resources such as AWL. At undergraduate level, Saudi tertiary institutions would benefit from the design and implementation of language support programs to develop and improve students' knowledge of academic vocabulary.

5.6   Further research

Although this study has found that knowledge of academic vocabulary clearly plays an important role in all aspects of academic life and addresses a number of issues regarding various vocabulary related challenges that postgraduate Saudi Arabian students face in English medium universities, further research will be able to provide more robust understandings.

Firstly the study is based on the reflective reports of 16 Saudi Arabian students at New Zealand universities. Although it is possible to build up knowledge from case study reports, further studies with a greater number of participants may gain a clearer picture of the challenges faced. Secondly, participants in the current study were both female and male. Further research might focus on one gender, or compare the gender factor, to ascertain any differences. Thirdly, the study invited master's and PhD students. Although findings suggested both group faced similar challenges it might be interesting to tease out the two groups to see if any qualitative differences exist. Finally, it would also be interesting to tease out those with a English language background, ie., English language majors, from those studying in other disciplines such as accounting or engineering, since my own experience suggests that English language majors may have greater proficiency in English to begin with and bring a wider range of vocabulary strategies.

5.7   Conclusions

This study has found that every one of the participants struggled with academic vocabulary in the course of their studies mainly because they did not have much prior knowledge about how to acquire academic vocabulary

and had few learning strategies to address their difficulties. The results of this study did not lead to a conclusion that exposure to academic vocabulary could increase the chance of incidental vocabulary acquisition. On the contrary, the study suggests that purposeful vocabulary learning is needed and that such learning needs to be grounded in sound learning strategies, including the use of vocabulary learning tools. Moreover, the study revealed that inappropriate vocabulary learning strategies can cause frustration and loss of motivation.

Although the study in large part was motivated by my own experiences as a postgraduate student, I did not expect to find that all participants would have very similar learning strategies and face similar academic vocabulary related challenges. As an EAL student I also have faced difficulties regarding academic vocabulary, particularly in writing. Nevertheless, I am able to cope better with those challenges perhaps because my undergraduate major was applied linguistics, am familiar with the AWL and have a range of vocabulary learning strategies in place. These three factors have given me the chance to have a better knowledge of English language and academic vocabulary compared with other Saudi students studying at postgraduate level in other discipline areas. The final note is that English vocabulary is immense and it is important that language teachers encourage EAL students to learn self-study strategies for ongoing and independent learning beyond language classrooms. This is simply because it is impossible to teach all English vocabulary inside the classroom. Postgraduate students need to work out ways of consolidating newly faced and learned vocabulary and need the tools and strategies to do so.

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Appendix A

Participant Information Sheet

12/7/2016

The Challenges and Strategies of Learning Academic Vocabulary among Postgraduate Saudi Students at New Zealand Universities

An invitation to Saudi Arabian Postgraduate Students

My name is Hadi Al-Dawsari and as part of my master's thesis, I am inviting you to partake in a study to better understand the challenges and strategies of learning academic vocabulary among postgraduate Saudi Arabian students. This research will involve a short survey, where you will be answering some questions about how you have learned English vocabulary before starting your postgraduate studies. At the end of the survey, you will be invited to an interview, if you wish to contribute you may leave your contact details, so you will be contacted to arrange an interview time. In the interview, you will be answering several questions on the topic of challenges and strategies of learning academic vocabulary, during the interview you may be asked to do a small academic vocabulary task. This is just to limit the scope of our discussion to 'academic vocabulary'. At the end of the interview, you will be asked if you wish to participate in a follow-up focus group, where you have the chance to meet other participants of the study and discuss the benefits of reflecting on your academic vocabulary learning. Participation is entirely voluntary and you may withdraw at any time prior to the completion of the data collection process.

What is the purpose of this research?

This study aims to to investigate the challenges of learning academic vocabulary among postgraduate Saudi students who are studying in New Zealand universities. This study is built on the belief that student perspectives provide an insider view that can contribute to existing knowledge.

How was I identified and why am I being invited to participate in this research?

You are invited to participate in this research if you are postgraduate student at a New Zealand university, self-identify yourself as a Saudi Arabian citizen.

What will happen in this research?

This research will involve a 15-minute survey, completed online through Google Form. A maximum 1-hour-long interview and a 30 to 25-minute focus group.

You will receive a voucher as a token of participation in this research.

What are the benefits?

You may benefit from thinking and talking about your challenges and strategies of learning academic vocabulary.

How will my privacy be protected?

I will assign a pseudonym for you and only my research supervisor and I will know your real identity.

What are the costs of participating in this research?

There will be no direct cost to you during the research. It will take up to 2 hours of your time.

What opportunity do I have to consider this invitation?

Participation is entirely voluntary and you may withdraw at any time prior to the completion of the data collection process. I will contact you if you do the initial survey and leave me your contact details.

How do I agree to participate in this research?

If you are interested in participating in the interview, please leave me your contact details. I will contact you at your convenience and invite you to the interview. You will be also asked to sign the consent form before your interview begins. At the end of the interview you will be invited to a focus group. If you agree to participate in the focus group, a suitable time for all the participants will be chosen. You will be asked to sign a consent form before the focus group begins too.

Will I receive feedback on the results of this research?

If you wish to, a summary of the findings will be emailed to you upon the completion of the study.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisors:

Kevin Roach, kevin.roach@aut.ac.nz +64 9 921 9999 ext 6050

Dr Lynn Grant, lynn.grant@aut.ac.nz +64 9 921 9999 ext 6826

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTEC, Kate O'Connor, ethics@aut.ac.nz +64 921 9999 ext 6038.

Whom do I contact for further information about this research?

Kevin Roach, Kevin.roach@aut.ac.nz, +64 9 921 9999 ext 6050

Dr Lynn Grant, lynn.grant@aut.ac.nz +64 9 921 9999 ext 6826

Researcher Contact Details:
Hadi Al-Dawsari, hadi_9992@hotmail.com

Project Supervisor Contact Details:
Kevin Roach, Kevin.roach@aut.ac.nz, +64 9 921 9999 ext 6050

Approved by the Auckland University of Technology Ethics Committee on *27 September 2016*, AUTEC Reference number *16/315*.

Appendix B

Consent Form (Interview)

Project title: **The challenges of learning academic vocabulary among postgraduate Saudi students at New Zealand universities**

Project Supervisor: **Kevin Roach**

Researcher: **Hadi Aldawsari**

○ I have read and understood the information provided about this research project in the Information Sheet dated 28 July 2016.

○ I have had an opportunity to ask questions and to have them answered.

○ I understand that notes will be taken during the interviews and that they will also be audio-taped and transcribed.

○ I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without being disadvantaged in any way.

○ I understand that if I withdraw from the study then I will be offered the choice between having any data that is identifiable as belonging to me removed or allowing it to continue to be used. However, once the findings have been produced, removal of my data may not be possible.

○ I agree to take part in this research.

○ I wish to receive a summary of the research findings (please tick one): Yes○ No○

Participant's signature and date:
....……………………………………………
……

Participant's name:
....……………………………………………
……

Participant's Contact Details (if appropriate):

………………………………………………………………………………..

………………………………………………………………………………..

***Approved by the Auckland University of Technology Ethics Committee on** 27 Sep 2016 **AUTEC Reference number** 16/315.*

Note: The Participant should retain a copy of this form.

Appendix C

Guiding questions for semi-structure interviews

1. What types of vocabulary learning strategies have you been using?

2. What type of vocabulary learning strategies do you feel helps you better in developing your academic English?

3. What do you see as the main skills for comprehending academic texts? Is it the main skill for writing at postgraduate level too?

4. What makes you learning vocabulary more quickly?

5. Does study in an English-medium university help you in any way with expanding your Academic English vocabulary knowledge?

Appendix D

INTERVIEW TASK

We are looking at academic vocabulary and I would like to share this task
with you, so that we are both talking about the same thing.

1.   Firstly, have you ever heard of the Academic Word List?
2.   Have you used it to learn academic vocabulary?

Now look at the academic vocabulary below. These vocabulary items are all
from the academic word list. Please look over them and <u>highligh</u>t any words
(a) you definitely do not know (b) you have seen before but are not sure if you
know them.

analyse, approach, area, assess, assume, authority, available, benefit, concept, consist, context, constitute, contract, data, define, derive, distribute, economy, environment, establish, estimate, evident, factor, finance, formula, function, income, indicate, individual, interpret, involve, issue, labour, legal, legislate, major, method, occur, percent, period, principle, proceed, process, policy, require, research, respond, role, section, sector, significant, similar, source, specific, structure, theory, vary

[from; Richards J. C. (2015). *Key issues in language teaching*, Cambridge, Eng: CUP. p306.

3.What about these technical words (from biology)? Highlight unknown words.

*Gene, organism, microbe, cell, photosynthesis, inflammation, pathogen,
immunity*

Or from Education? Highlight unknown words.

*Curriculum, syllabus, summative, enactment, pedagogy, constructivist,
formative*

Appendix E

Online Survey

Name:

Age:

1.   In what university are you enrolled in NZ?

2.   In what course/program are you enrolled?

3.   How long have you been living in NZ?

4.   In what country did you do your undergraduate study?

5.   What was the language of instruction in the classroom?

6.   How long had you studied English before coming to NZ?

7.   What was your biggest challenge when you were learning English? Why?

8.   How important did you think English vocabulary was in learning a language?

9.   How did you go about learning English vocabulary?

10. Why did you decide to come to NZ?

11. Did you have any concern about the range of English vocabulary that you
     knew when you decided to come to NZ?

Thank you for participating in this online survey. You are invited to an
individual interview, which will take up to an hour. If you would like to
participate in the individual interview please kindly leave your contact and
preferred contact time here. I will contact you soon to arrange a convenient
interview time. Your cooperation is highly appreciated.

Appendix F

Focus Group Questions

1. Have you recently thought about you biggest academic challenges?

2. Now that we discussed the issues surrounding learning academic vocabulary, how important do you think academic vocabulary is in you studies? Why?

3. Since we discuss the issues surrounding learning academic vocabulary in the interview session, tell me about your experiences of learning English. Has there something that really helped you to pick up English vocabulary?

4. How important is knowing a wide range of academic vocabulary important in postgraduate studies?

5. Is there anything you would like to add?