Sudan University of Science and Technology

College of Graduate Studies

Investigating Intentional Vocabulary Learning Strategies

تقصي استراتيجيات تعلم المفردات اللفظية المعنية بذاتها

A case study of second year students in the college of Languages, Sudan University of Science and Technology

A Thesis Submitted in Fulfillment of the Requirements for the Degree of Ph.D. in English (Applied Linguistics)

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بسم الله الرحمن الرحيم

Dedication

I

This work is dedicated to my dearest husband Omer Salih Osman . I give my deepest expression of love and appreciation for the encouragement and assistance you gave me.

I would like to thank my Family: My parents for their endless love and support . Thank you for giving me chance to prove myself; and my elegant sisters for their love, care, and understanding and for my lovely brother Yassir for his great support and encouragement in my PhD journey.

I have a pleasure also to dedicate this thesis to my uncle Mansour Ahmed Al Awad for believing in me for encourages me to further my studies.

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First of all, I thank Allah the Almighty from the depth of my heart for guiding and inspiring me all through this hectic work. All good and nice things that I have had in my life are due to His help, love and mercy.

Again, it is a pleasure to thank many people who made the writing of this thesis possible. In this respect, I would like, particularly to thank my supervisor Dr. Mahmoud Ali Ahmed for his support and constructive guidance that he always accorded to me quite willingly whenever I felt the need to. Really his support has been immense enough to help make this work see the light of day.

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Abstract

This study seeks to explore the role played by strategies for effective intentional vocabulary learning. The study also considered briefly the role of unintentional strategies but the focal point has been the investigation of the intentional strategies. A pre and post test have been

conducted to categorize the participants into two groups. A questionnaire was also administered to the tutor at Sudan University of Science and Technology. The research has more exactly addressed the use of dictionaries and authentic materials to maximize the lot of the students of word power. The present research is significant as it bridges the gap created by previous studies in the area in question in respect to the method of analysis and the size of the sample. The sample has been taken from 2nd year of Sudan University, College of Languages.

The research poses certain questions in connection with the role of intentional vocabulary learning strategies and how the strategies can be developed and incorporated into teaching plans to further be used in classroom settings. A triplet set of approaches has been advocated. The first one is incidental learning (i.e., learning vocabularies that come up as a result of other activities in the other skills of reading...), and the second is intentional or explicit instruction, while the third set is independent strategy development. Furthermore, the study assumed that there is a relationship between the vocabularies that come up as a result of other activities in other skills of reading and those vocabularies taught intentionally.

The statistical and historical approach has been adopted in the present research. One of the most important findings is that there is a direct correlation between intentional vocabulary learning and understanding of English texts.

المستخلص

تهدف هذه الدراسة إلى استكشاف الدور الذي تلعبه استراتيجيات تعلم المفردات المستهدف و الفعال. و ايضاً اهتمت الدراسة بإيجاز دور الاستراتيجيات غير المستهدفة رغم ان الموضوع المحوري هو دراسة الاستراتيجيات المستعدفة .تم إجراء اختبارين قبل و بعد لتصنيف المشاركين إلى مجموعتين . تم توزيع استبيان على مدرسين بجامعة السودان للعلوم

والتكنولوجيا . عالج البحث أكثر بالضبط استخدام القواميس ومواد أصلية لتحقيق أقصى قدر من الزخيرة اللغوية للطلاب .هذا البحث مهم لأنه يسد الفجوة الناجمة عن الدراسات السابقة في المنطقة المعنية فيما يتعلق بطريقة التحليل وحجم العينة .وقد تم اختيار العينة من طلاب المستوى الثاني بكلية اللغات, جامعة السودان.

تطرح الدراسة بعض الأسئلة البحثية في تخص دور استراتيجيات تعلم المفردات المستهدف، وكيف يمكن تطوير الاستراتيجيات ودمجها في خطط التدريس لاستخدامها مرة أخرى في الفصول المدرسية .وقد تم تأيد مجموعة ثلاثية من الطرق. أولا التعلم العرضي (وهي تعلم المفردات التعلم التي تأتي نتيجة لأنشطة أخرى من مهارات القراءة ...)، والثاني هو التعليم عن قصد أو صريح، في حين أن المجموعة الثالثة هي وضع استراتيجية مستقلة .وعلاوة على ذلك، افترضت الدراسة أن هناك علاقة بين المفردات التي تأتي نتيجة لأنشطة أخرى لمهارات القراءة وتلك المفردات التي تدرس عمدا.

اعتمد الدراسة المنهج الإحصائي والتاريخي في هذا البحث . من احدى أهم النتائج هو أن هناك علاقة مباشرة بين تعلم المفردات المستهدف وفهم النصوص الإنجليزية.

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Chapter One

Introduction

Chapter one

1.1 Introduction

Vocabulary learning is one of the areas of language which enjoyed very little attention compared by other language branches. This is greatly so, as Jo Moir and Nation (2008) once remarked that learners did not have to worry about learning lexical items as the learning of new words would take place by itself (Nation, 1990). Consequently, teaching and learning of vocabulary was not popular.

Conversely, the significance of vocabulary in language learning is currently very much recognized pedagogical circles. Language proficiency is very much linked with the size of word-repertoire a language learner has, which is also responsible for the learner's success in all language. Gass (1999), likewise, states that learning a second language essentially means having a good knowledge of its vocabulary, which in turn means maximizing one's knowledge of the world. Gass further mentions that Paribakht and Wesche (1999) note that acquisition of vocabulary is an "incremental" and perhaps "recursive" process which can be applied quite fruitfully in an integrated manner to enhance and reinforce other areas and be used in effective communication.

It was held that some focused and deliberate learning strategies such as the use of word cards, word lists tables, dictionaries and word part analysis are immensely helpful narrow path for learning and improving one's vocabulary (Nation, 2001). Again, Nation stresses the importance of learning some valuable vocabulary learning strategies by learners such as guessing from context, using word parts, mnemonics techniques, among others.

Even though traditional methodology is remarkably robust in this connection, Hedge (2000) demonstrates how current research has focused on **focused** on vocabulary learning and teaching paying special attention to factors including the strategies learners use to acquire vocabulary, how learners' mental is organized and that some words are easier to learn.

Hedge (2000) upholds a dichotomous view to the question of vocabulary learning and teaching. He states that linguistic studies take as their focal point the examination of the linguistic system, whereas acquisition focuses on how vocabulary is learnt and developed. However, the major unsettled question in the area of vocabulary instruction and learning is the identification of momentous approaches and strategies geared to the

field of vocabulary learning and instruction with the result of easier and fairly longer remembrance of recently learned lexical items.

To obtain a better look at the issue, taxonomy has to be adhered to. In this connection, a triplet set of approaches has been advocated.

- Incidental learning (i.e., learning vocabularies that come up as a result of other activities in the other skills of reading...)
- Intentional or explicit instruction
- Independent strategy development (Hunt and Beglar, 1998)

Learners' performance, as was proved by numerous studies is essentially influenced by a couple of principal factors namely, teaching approaches and learning strategies. Exploring the influence of diverse types of vocabulary instruction on learners' acquisition of new vocabulary, whether the effect is incidental or intentional, can have useful and considerable pedagogical implications on vocabulary teaching and learning. According to Hedge (2000) such learning strategies can viewed as either cognitive which are direct mental processes leading to understanding and storing of new lexical items or meta-cognitive, indirect strategies smoothening the progress of the conscious efforts to remember the new words.

Second language learning as Hulstijn (2003) holds is a rather longish process which can extend to years of deliberate studies memorizing huge numbers of words, grammatical words and structures or it can be incidental learning by picking up words and structures as learners get involved in various communicative acts not with the intention of learning the forms but the meaning.

Incidental and intentional learning mainly appear in the field of vocabulary. This is largely true as incidental learning applies to both abstract and factual declarative knowledge, while intentional is only effective with factual knowledge (Hulstijn, 2003).

Hunt and Beglar (1998) agreed that countless vocabularies are committed to memory quite incidentally through extensive reading and listening. In view of that, encouraging learners to read and listen lengthily can provide them with great opportunities to learn new vocabularies. As determined by Huckin and Coady (1999), too, with the exception of the first few thousand most common words, vocabulary learning chiefly occurs through extensive reading with the learner figuring out the meaning of unknown words. This process is incidental learning of vocabulary for the acquisition of new words and is the by-product of the reading (i.e., not the main focus of the cognitive activity, reading). However, this process

of incidental learning of vocabularies occurs gradually as Anderson (1985; cited in Richards and Renandya, 2002) claims. The incidental vocabulary learning, as Hunt and Beglar (1998) stated, can be a practical and constructive approach for a wider segment of learners.

The role of vocabulary in promoting the different language learning skills and reading is a complex one, as language researchers have long recognized. In 1925, Whipple described the fundamental role of vocabulary thus: "Growth in reading power means, therefore, continuous enriching and enlarging of the reading vocabulary and increasing clarity of discrimination in appreciation of word values" (p. 76). In 1942, Davis described comprehension as made up of two skills: word knowledge, or vocabulary, and reasoning.

Words can have very complex and, frequently, manifold meanings. Furthermore, this complicated phenomenon concerning multiple meanings of words needs to be understood in the context of other words in the sentences and paragraphs of texts. Students have to understand texts with numerous new words, and the very same texts will continue to bombard them with multiple new words, even more. The vocabulary of written language is much more extensive and diverse than the vocabulary of oral language (Hayes, Wolfer, & Wolfe, 1996).

Generically, vocabulary is the knowledge of meanings of words. What complicates this definition is the fact that words come in at least two forms: oral and print. Knowledge of words also comes in at least two forms, receptive—that which we can understand or recognize—and productive—the vocabulary we use when we write or speak.

Oral vocabulary is the set of words for which we know the meanings when we speak or read orally. Print vocabulary consists of those words for which the meaning is known when we write or read silently. These are important distinctions because the set of words that beginning readers know are mainly oral representations. *As* they learn to read, print vocabulary comes to play an increasingly larger role in literacy than does the oral vocabulary.

Productive vocabulary is an individual's word power to which they resort upon speaking or writing. They are words that are well-known, familiar, and used frequently. On the other hand, *receptive, or recognition, vocabulary* is that set of words for which an individual can assign meanings when listening or reading.

These are words that are often less well known to students and less frequent in use. Individuals may be able assign some sort of meaning to them, even though they may not know the full subtleties of the distinction.

Typically, these are also words that individuals do not use spontaneously. However, when individuals encounter these words, they recognize them, even if imperfectly.

1.2 Statement of the problem

Though our students have been exposed during their basic and secondary education to a surprisingly high dose of numerous vocabularies they still noticeably crippled in using their words to construct sentences or even understand reading texts. Undeniably, having a good vocabulary can account to good comprehension and ability to express oneself. One of the main goals of vocabulary instruction, therefore, is to help students improve their comprehension. This can be achieved through adoption of a clear defined goal of vocabulary instruction.

This choice of goals is central because of its implications for both the content and the methods of instruction. If the goal were to teach words in a way that would improve students' performance on multiple-choice vocabulary tests, the goal could be realized through many simple and moderately unchallenging methods. However, if the goal is to teach words in a way that will improve students' comprehension of text that contains these words, the methods become more labor- and time-intensive (McKeown, Beck, Omanson, & Pople, 1985).

We already know perfectly well the proper kind of vocabulary teaching especially useful for improving reading comprehension. (e.g., Stahl, 1986; Stahl & Fairbanks, 1986). However, the relationship between vocabulary knowledge and reading comprehension is complex (e.g., Anderson & Freebody, 1981; RAND Reading Study Group, 2002). If instruction is to further the goal of improved comprehension, we need to take into account the complexities of this relationship. Indeed, every bit in the vocabulary- comprehension relationship suggests something about what might make vocabulary more effective for the purpose of promoting reading comprehension.

The goal is to adopt an instruction strategy which can help our students build up strong kind of vocabulary useful for reading comprehension and all other communicative skills.

Now, the English language situation at universities is deplorably painful. Tutors, educators and classroom practitioners keep complaining all the time about the rapidly and awfully deteriorating standards which call for swift intervention. Undergraduate students are completely incapable of neither producing nor constructing good intelligible sentences either in terms of writing or speaking. What blurs the image even more is the reality of education at universities. These colleges are stuffed with tutors hardly received the slightest type of training particularly at preliminary

level. Moreover, the kind of English syllabuses followed at universities is no longer the type that promotes the different skills required for effective communication. This horrible situation has had very terrible effect on students who, unable to use their language to perform the simplest communicative tasks, have completely given up every attempt to improve.

So for a quick and effective remedy, the researcher suggests a long-term comprehensive approach to promote reading comprehension first and then improve the other skills.

Effective vocabulary instruction is a long-term plan. Attention to vocabulary expansion and development has to start early, at the lower levels of education where English is first introduced and continue all the way through the school years. Despite the fact that the modes of effective instruction keeps changing through the years, grades and levels Although the exact nature of effective instruction changes across grade levels, pledge to effective vocabulary teaching should continue to be the unchanging goal. Effective instruction must also be many-sided, as to include the following elements: teaching individual words; extensive exposure to rich language, both oral and written; and building generative word knowledge.

When we talk about vocabulary instruction, the teaching of individual words readily comes to our minds. According to numerous studies carried out in the field of vocabulary instruction, that in order for teaching vocabulary to be effective enough to amplify the comprehension of the texts, it must be fairly intensive (e.g., McKeown et al., 1985; Stahl & Fairbanks, 1986). Intensive or rich vocabulary instruction requires giving students both definitional and contextual information (i.e., information about what a word means and about how it is used), and providing them with opportunities to process this information deeply by applying it in ways that require creativity and connections with their existing knowledge. Furthermore, a number of instructional encounters—somewhere between 7 and 12—are necessary if students are to achieve real ownership of the instructed words (Stahl, 1986).

The kind of vocabulary instruction that can noticeably boost reading comprehension is thus rather labor intensive. Barely a small segment of the words that students require to learn can be covered with such instruction. Some words must essentially be dealt with more outwardly, although there is little research that documents under what conditions less intensive instruction would be effective. But to promote the large-scale, long-term vocabulary growth that is necessary for academic success, we are called for to perform such task.

1.3 Rationale

The rationale behind extensive exposure to both verbal and written language is similarly vital to valuable instruction. Wide reading is the magical and effective tool that propel successfully vocabulary growth for older and more able readers. However for younger and for less able readers, experiences with rich oral language are critical for vocabulary growth (Beck & McKeown, 1991; Beck, McKeown, & Kucan, 2002; Biemiller, 1999). Consequently, should young learners have access to sufficient vocabulary knowledge to help them arrive at the meaning from the texts , their teachers should equally well exploit every classroom activities such as reading aloud, storytelling, pretend play, and even routine classroom conversations, to promote oral vocabulary growth.

The need for exposure to rich language is especially advantageous for older, less able readers—students with relatively poor word-power. It is improbable that these students will (or can) read extensively enough to make a difference to their vocabulary growth. Although enhancing such students' ability and motivation to read is indispensable. Tutors should do everything in their power to make use of classroom language as effective and useful in a way that ultimately be directed towards increasing their vocabulary. Maximizing discussion is perhaps a key instrument in this direction, but reading aloud to older students should present and even augmented.

A good host of researchers consider that a sizeable proportion of vocabulary growth occurs as children gradually learn the meanings of new words through repeated encounters with the words in text or in conversation. A review of the research on learning words from context indicates that the chances of learning the meaning of a particular word after encountering it once in context are relatively low, somewhere around 15% (Swanborn & de Glopper, 1999). Exposure to rich language is crucial for increasing vocabulary growth, but the benefits of such exposure amass little by little.

Therefore, an effective approach to vocabulary instruction should concentrate on all three of these components—teaching individual words, exposure to rich language, and generative word knowledge (Graves, 2000).

1.4 Significance of the study

The significance of this study arises out of the simple fact that the area of vocabulary learning has long been neglected in the literature of second language learning and acquisition. Linguists and educators have

concentrated mainly on handling the four skills paying very little attention if ever to vocabulary learning. Paul Nation (2000) wrote that at one time, it was widely assumed that lexical instruction is not essential as it can happen by itself; therefore, the teaching of vocabulary was not popular.

However, nowadays, the significance of vocabulary and its significance in learning a language have become more accepted. Vocabulary is a basic component of language proficiency which provides the basis for learners'performance in other skills, such as speaking, reading, listening and writing. Griffiths (2003, 2006) points out, for example, that recently the significance of teaching vocabulary has been acknowledged. Gass (1999), similarly, states that learning a second language means learning.

Now, the field of English for Specific purposes has witnessed such a revolution in the light of the current numerous disciplines. It is this situation which has actually boosted the issue of vocabulary research.

1.5 Research objectives

This research sets out to examine the strategies learners employ to acquire vocabulary quite intentionally as opposed to incidental or implicit learning. In that the following will be taken into consideration as prime objectives of the study:

1. Strategies learners use to acquire vocabularies.
2. Organization of the learner's mental lexicon.
3. Pinpointing the kind of lexical items which are comparatively easier to learn than others to propose to educators, course designers and classroom practitioners to be given adequate attention and preference in vocabulary instruction.

1.6 Questions

1. To what extent can the teaching of individual words as an intentional vocabulary learning strategy help promote learners' vocabulary?
2. Will exposure to rich language help improve learners' vocabulary and that learned vocabulary is sustained long enough to be used when required?
3. Can generative word knowledge as a vocabulary learning strategy be advantageous as a long-term learning strategy?

1.7 Hypotheses

1. Teaching of individual words as an intentional vocabulary learning strategy, particularly those words which are easier to learn, helps promote learners' vocabulary.
2. Exposure to rich language helps improve learners' vocabulary and that learned vocabulary is sustained long enough to be used when required.
3. Generative word knowledge as a vocabulary learning strategy is advantageous as a long-term learning strategy.

1.8 Methodology

Largely the present study is a classroom research for which quantitative research paradigm is by and large not advantageous or conducive. Classroom with its uncontrollable variables cannot be subjected to numbers as is the case of quantitative research. Therefore, researchers, and especially the teacher/researcher generally adopt the qualitative research paradigm. Rather than to predict (as in quantitative) the aim is to explain and interpret. The quantitative approach is not only mostly not practicable, but also not desirable. Research should be conducted to find out and help. Interpretive classroom research is probably the one branch that 'speaks' directly to the teacher (van Lier, 1988: 31).

Upon designing the experiments, the question had to be dealt with which type of vocabulary test would be suitable for the task. Depending on the particular part of L2 acquisition the researcher concentrates on, the objective can be to find out:

1. How wide and profound learners' vocabulary knowledge is.
2. How effective different methods of systematic vocabulary learning are.
3. How incidental learning occurs through reading and listening activities
4. Whether and how learners can infer the meaning of unknown words encountered in context.
5. How learners manage to address gaps in their vocabulary knowledge.

A number of data collection tools will be employed here to gather the desirable information. This will include: post and pre-test, questionnaire, multiple choice questions and translation.

Sudan University of Science and Technology, first year students, will be the targeted group for this study.

1.9 Limitations of the study

The condition of the study will undeniably be affected by a number of factors which are disadvantageous to the overall outcome of the research. The study will be restricted to a certain group of students at a certain university. This has the effect that the outcome of such study will not be generalized as is the case in any scientific research.

Chapter Two

Theoretical Framework and Literature Review

Chapter two

Theoretical Framework

2.0 Introduction

This chapter reviews the literature related to the topic in question, namely intentional vocabulary learning as opposed to incidental learning. It also includes a review of some global works and theories closely connected to the topic such as knowledge of vocabulary, vocabulary memorization and mnemonics among others

2.1 Theoretical Background

It is generally observed that vocabulary learning, in much of the literature on second language acquisition has not received the adequate attention it deserves (e.g. Mitchell & Myles, 2004; Lightbown & Spada, 1999).Certainly, this is not a current or passing observation. O'Dell (1997: 258) comments that vocabulary and lexis are not present in major books on the syllabus and theory of language teaching throughout the 1970s and 1980s. Its absence may have an even longer history. Wilkins (1972: 109), writing at the beginning of the 1970s, suggests it dates from the development of structural linguistics. For much of the last half century or so, therefore, the consideration of vocabulary in the process of language learning, testing and teaching appears to have been neglected and, as Meara (1980) describes it, turned into a Cinderella subject or a neglected subject.

It is believed that there are three underlying reasons for the occurrence of this phenomenon. The first reason is chiefly attributable to the dominance of the structural and other approaches to language teaching. The second reason is that learning of words would come by itself and the whole process does not worth the trouble of designing a specific theory or approach or even a strategy for the learners to use with learning vocabulary. The whole process of learning was viewed as unmethodical. Accordingly, vocabulary as a pedagogical or an academic issue poses no challenge for the learners as some other skills might be. Structuralists are mainly concerned with the rules and systems that govern language learning and hence paying no heed to the question of words with which the very rules and systems were made and apply. It is assumed that these rules would develop regardless of which words, or how many words, were being used to form them. Commonly, a structural linguistic approach to teaching purposely lowers the amount of vocabulary input at the initial stages of learning to only what is necessary for the presentation of language structures, or what is necessary to motivate learners. The

structural approach was so strong that it overwhelmed all even the later approaches to the extent that it banished the appearance of greater vocabularies. So powerful has this approach been that it has pervaded later approaches where a greater emphasis on vocabulary ought to be apparent. Notional/functional and, in the UK, communicative approaches have likewise seen vocabulary learning sidelined.

The second aspect is the persistent belief among teachers, learners and educational administrators, that it is possible to become highly skillful in a foreign language, and even a sophisticated user, with only very limited vocabulary resources. I am constantly surprised, for example, by the number of teachers who quote Ogden's (1930) Simple English at me, apparently in all seriousness, and are under the impression that they can teach a complete western European language with only 850 words. Ogden's Simple English even continues to crop up in the most recent academic literature, for example in Ha¨cker's (2008) examination of the vocabulary loading of German course books. While Ha¨cker recognises that Ogden's 850 words cannot form a fully communicative lexicon for a modern European language, the idea that it can do so is widespread and even occurs in otherwise reputable media. A recent BBC news article by Alex Kirby (2004), for example, suggested that since only 'about 100 words are needed for half of all reading in English' it would follow that a parrot with 950 words should cope 'with a wide range of [English] material'. Ogden's work, and structural linguistics, pre-date modern corpus analysis that gives a much better idea of the kind of vocabulary resources that learners need.

These can tell us about the occurrence and frequency of words in language, and this provides reliable information on which words, and how many, are really used by normal speakers. It turns out that thousands of words are needed even for basic communication, let alone for fluency. But the idea that teaching modern foreign languages requires only a handful of words persists, probably because it is also a product of wishful thinking. Learning a language is an enormous task. To perform like a native speaker you need to learn thousands of words. You need to discover which words can be combined and which cannot, and master many rules of language. It can take years of effort to achieve even basic levels of command and understanding. Teachers have to try to fit all of this into a restricted timetable and maintain the motivation of learners at all times. Everyone would like to believe that you can reduce the burden of learning to something much smaller, say, a few hundred words instead of many thousands, and still achieve worthwhile results.

The third reason is the widely held belief that time spent in explicit vocabulary teaching is wasted because 'few words are retained from

those which are ‘‘learned’’ or ‘‘taught’’ by direct instruction’ (Harris & Snow, 2004: 55), and ‘most L2 vocabulary is learned incidentally, much of it from oral input’ (Ellis, R., 1994: 24). The best way to deal with vocabulary, therefore, is not to teach it at all because learners will soak it up as though by osmosis from the language which surrounds them inside or outside class. This is also wishful thinking. The evidence suggests that the vocabulary uptake from truly incidental language exposure is usually negligible and that successful learners acquire large volumes of vocabulary from the words explicitly taught in the classroom and supplement their learning by targeting vocabulary in activities, like learning the words of songs, outside of class.

2.2 Vocabulary and foreign language teaching and learning

Though vocabulary studies have only recently greatly revived, yet this trend has obviously remained far away from foreign language teaching mainstream. The most recent appearance of the Common European Framework of Reference for Languages (The Council of Europe, 2001), for example, has omitted its early work on vocabulary lists, and concentrates on descriptions of skills and knowledge, almost entirely free of vocabulary. Groups of exams, such as UCLES’s First Certificate in English and Proficiency in English, retain specific papers on Use of English, which concentrate on knowledge of language structures, but have no equivalent papers on vocabulary knowledge. This knowledge must be assessed coincidentally through skills assessment in reading, speaking and writing. In the UK, our national Centre for Information on Learning and Teaching recently hosted a seminar ‘steering teachers away from the dangers of purely vocabulary based teaching and towards a methodology that focuses on the development of skills and transferable language’. The implication is that an emphasis on vocabulary is still thought to be damaging to learners and it could and should be avoided, even where communication is the principal goal of language learning. The effect in UK schools seems to be a reduction both in the volumes of vocabulary presented to learners (Ha¨cker, 2008) and in the volumes of vocabulary learned (Milton, 2008).

Of course, vocabulary is not an optional or unimportant part of a foreign language. Still less is it an aspect of knowledge that can be disposed of without much effect on the language being learned. Words are the building blocks of language and without them there is no language. As Wilkins succinctly notes (1972: 111), ‘without grammar very little can be conveyed, without vocabulary nothing can be conveyed’. Recent language learning theory suggests that reducing the volumes of vocabulary acquired by learners may actually harm the development of other aspects of language; for example, word learning may actually drive

the development of structural knowledge. It is possible, then, to challenge at a theoretical level the approaches to learning that sideline vocabulary or reduce it to minuscule levels. It is possible too, to use recent work on comprehension and coverage, to provide a very practical justification for teaching vocabulary in greater volumes. The measurements we have of learners' vocabulary resources challenge the myth that it is possible to be an accurate and highly communicative language user with a very small vocabulary. The measurement of second language vocabulary knowledge is not a recondite area of study, therefore, interesting only to a handful of scholars. It should be of interest to everyone involved in the business of language education. It can help teachers and administrators set appropriate targets for learning so that learners can have the language skills that are expected. It can help teachers and learners monitor progress so they can tell whether they have achieved the kind of knowledge needed for an examination or a trip to a foreign country. It can even help academics to understand the nature of language knowledge and the learning process.

2.3 Effect of the dominant vocabulary teaching theories

Throughout the previous century several teaching methodologies/approaches were tried by educationalists for teaching foreign languages, of which the main were:

2.3.a The Grammar Translation Method

The medium of instruction in the class was the native language of the learners. Emphasis was given to explicit explanation of grammar, paradigms to memorize and bilingual vocabulary list to learn (rote learning-repetition). Activities mainly consisted of translating of long text passages. Vocabulary instruction took place only if it could be combined with grammar (Zimmerman, 1997: 5/6). Learners were expected to use the thus obtained skills to read either classic literature or literature that was connected with their future academic life. Accuracy took precedence over fluency since it was assumed that (oral) fluency in a language could only be achieved by exposure to language in a native country.

3.2.b The Direct Method

As the name implies, an effort was made to obtain meaning from a language direct without the mediator of translation. Consequently, the target language was also the language of instruction. Explicit grammar and vocabulary teaching was avoided, along with the use of the dictionary. Known words, mime, demonstration and pictures were used to teach vocabulary (Richards & Rodgers, 1995: 9/10)

3.2.c Situational Language Teaching

For the first time, vocabulary teaching received particular attention. Vocabulary was seen as one of the most important aspects of second language learning (Zimmerman, 1997: 10). As a result of the effort to provide a scientific and rational basis for selecting the vocabulary content of language courses, word-frequency lists were compiled such as *A General Service List of English Word.*

2.3.d Te Audio-lingual Method

Habit formation (from Behaviorism) was the main goal of this method, achieved mainly through drills. Language teaching started with grammar (structure) and vocabulary acquisition took second place. Vocabulary items were chosen according to their simplicity and familiarity (Zimmerman, 1997: 11) and their value in teaching structure through drills ((Hockett, 1959, reprinted 1969)); cited in Richards and Rodgers (1986: 46)). "The linguistic student should never make the mistake of identifying a language with its dictionary" (Sapir; cited in Zimmermann: 1997).

2.3.e Communicative Language Teaching

Under this term, several specific methods that concentrate on the teaching of communicative competence/proficiency are grouped, such as Krashen's Natural Approach (see below). Fluency is given precedence over accuracy. Vocabulary teaching does not occur per se, but it is assumed that vocabulary acquisition is achieved by frequent exposure to the target language. In its strong form, the explicit teaching of structure and vocabulary is seen as superfluous (Gray, 2001), hence the term *acquisition* rather than *learning.*

Teaching and learning of vocabulary "....have never aroused the same degree of interest within language teaching as have such issues as grammatical competence, contrastive analysis, reading or writing" (Richards, 1980). CLT with its emphasis on learning from/in context is still hugely influential in current teaching practice and the idea that lexical growth can best be achieved through extensive reading is central to this kind of input-dominant language acquisition theory. The most influential model in CLT is undoubtedly Krashen's Monitor Model (Krashen & Terrell, 1984; Krashen & Terrell, 1983). McLaughlin, who is very critical of it, explains Krashen' popularity among language teachers with its accessibility to these practitioners. ".... moreover, he has captured the *Zeitgeist* – the movement in the field away from grammar-based to communicatively oriented language instruction" (McLaughlin, 1995).

2.4 Intentional vs. incidental learning

The pure form has given way to the realization that some explicit teaching has to take place; hence the recent focus on grammar teaching. There seems to be a trend now to complement this with explicit vocabulary teaching (Dubin, 1989; Meara, 1980; Nation, 2001), not least because some research has shown that learners who receive formal instruction, generally do better than those who do not (Ellis, 1985; Long, 1983), which would confirm common sense. "Incidental learning via guessing from context is the most important of all sources of vocabulary learning. This is particularly true for native speakers learning their first language. It should also be true for second language learners, but many do not experience the conditions that are needed for this kind of learning to occur" (Nation, 2001: 234). Leaving the native speaker aside, this short sentence demonstrates the problems with learning in context in the classroom. Incidental learning is seen as learning of vocabulary from reading or listening .....while the main focus of the learner's attention is on the text and that the learner either does not sit a test or exam later or is not aware of it. Itbasically means the learner acquires knowledge without thinking. Intentional learning, on the other hand, is seen as the direct study of language items and the learner is aware of a future test/exam (Hulstijn, 2001: 266-7; Nation, 2001: 232). The learner thinks about learning.

Judging by the above definition follows that incidental learning rarely takes place in the classroom since the learners normally expect to sit a test/exam. Moreover, the distinction between the two concepts is blurred (Hulstijn, 2001). More importantly, the vast majority who learn a foreign language in the classroom do so in monolingual classes, with their teacher a non-native speaker of English and with no English speaking environment outside it. The result is that the learners almost always learn vocabulary intentionally. When they encounter a new word in the text, they ask for the translation, either from their teacher or from their fellow learners. When there is no success because the other learners do not know the word either and the teacher refuses to translate, they use a dictionary. Whatever the rational behind incidental learning is, the teacher rarely refuses to translate. This can be observed even in multilingual classrooms, if the teacher speaks the language(s) of some of his/her learners. Learners will always find a way to translate, although in modern L2 pedagogy translating has been given a bad name. It has always been the 'whipping boy' for complaints about language learning and teaching (Heltai, 1989). But if rote learning is the 'hidden agenda' in the classroom (Sommer, 1978), translation also falls under this category (Bensoussan, 1992) .

There is also the problem of misunderstanding in incidental learning from texts. Idioms, 'false friends' and words with multiple meanings etc. are prime candidates for misunderstandings. It is extremely difficult to 'unlearn' these false meanings (Hulstijn, 1992). It is even more difficult to 'unlearn' wrong pronunciation of a word that has only been read in context and not heard. These problems cause uncertainty with the learner (Eliy, 1995). An even more severe problem occurs when learners deduce wrong meanings from context but do not realize it, i.e. they are sure they have the correct one. This can have unfortunate results in later communication. Schatz & Baldwin state as early as 1986 that context clues are unreliable predictors of word meanings and that "some of the traditional assumptions about the teaching of context clues should be rigorously re-examined. There appears to be no alternative to intentional learning of a great many new words in a relatively short period of time (Groot, 2000).

Nevertheless, guessing from context is still a popular way of teaching vocabulary. It ties in with the concept of elaboration. Concentration on features of the new word and its text environment (the company it keeps) is supposed to facilitate retention. Learning-in-context relies heavily on recycling, re-presenting of vocabulary items by the teacher, and therefore re-noticing of them by the learner. For meaningful recycling to take place, a vast amount of vocabulary has to be encountered for particular words to occur again and again. In one semester (36 hours exposure to the target language – and only a fraction of this for reading), this is clearly limited and inadequate. There is another problem regarding the language teacher's/learner's point of view. The texts used in the classroom are preferably authentic (literature, newspaper articles etc.) and it is precisely the skill of a good writer to use *different* words to describe the same concept. This diminishes the opportunity for recycling further. Instruction compensates for this by adding an additional element. The *iKWM* is one of these instruction tools.

From the discussion above it can easily be seen why teachers regard the issue of intentional/incidental learning as mainly irrelevant and a matter that is only of passing interest outside the scientific domain. The very moment a teacher is involved in language learning, the issue of incidental learning largely disappears. This leaves the question of why the debate about intentional/incidental learning receives such dominance in educational literature. Still, the question remains of just how effective vocabulary learning from a written context is. Although there is some research on vocabulary acquisition through reading, to date there is, surprisingly, no empirical data available about the effectiveness of learning-in-context in the classroom over a longer period (at least one

semester). SLA research on incidental learning through reading has not provided any insights regarding factors that facilitated successful incidental learning (Rott, 1999). A great proportion of it is concerned with the acquisition of vocabulary in the native language of the learners, and not with that of foreign vocabulary.

> Although this may come as a surprise to teachers, many strategies endorsed by curriculum and instruction publications represent only conventional wisdom about the nature of teaching and learning and have never demonstrated their worth in objective experimental evaluations. Take, for example, the presumed benefits of semantic-context strategies for acquisition of vocabulary-definition associations. Teachers are typically advised to teach students to use new words in context, that is, to construct meaningful sentences containing new vocabulary, to generate synonyms, or to practice semantic mapping of a word, including specifications of related terms and opposites. These methods of vocabulary acquisition share one problem, however. They do not work. Quite a few experiments conducted during the last 15 years compared these methods to that of simply giving student's words and their meanings to study. None of the semantic-context procedures produced better learning of vocabulary-meaning associations than the no-strategy control procedures (see Pressley, Levin, & McDaniel, 1987). Many strategies that have traditionally been recommended simply lack research support (Pressley & Harris, 1993).

The situation has not changed much since then. The way vocabulary is learnt is still a mystery (Coady, 1993). In this context it should be mentioned that teachers are rarely asked to participate in decisions concerning the curriculum. Most take it on trust that the teaching method as demanded from their authorities has been rigorously tested and found effective Literature on vocabulary acquisition through learning-in-context mainly avoids the issue. This is probably due to the multitude of

uncontrollable variables in such research, which, in some researchers view leaves them exposed to criticism on grounds of validity. Some writers have conducted short-term experiments and the results are not encouraging for the language teacher. The vocabulary retention of new words ranges from 5.88% (Pitts, White, & Krashen, 1989), 7.69% (Hulstijn, 1992), 6,66% (Day, Omura, & Hiramatsu, 1991) to approx. 20% (Dupuy & Krashen, 1993; Horst, Cobb, & Meara, 1998, using the novel 'Clockwork Orange' as text.

Hermann (2003) found that ."...reading literature is at least as effective as – and perhaps is more effective than – rote memorisation for the purpose of promoting longer-term lexical retention". Saragi, Nation & Meister (1978) deduced that "extensive reading results in a substantial amount of vocabulary learning", aconclusion that is hardly surprising. Tudor & Hafiz (1989) and Hafiz and Tudor (1990) could not find better vocabulary retention compared with the control groups. It has to be said of these experiments that they have limited relevance to the classroom. The subjects were mainly university students. Researchers tend to work with small selected group of learners and they prefer to have time to "...refine their instruments and (to) undertake quite elaborate analyses of their test results" (Read, 2000: 151). Because of their short-term nature, there was no meaningful opportunity for recycling, as happens in the classroom. In addition, these experiments ignore several factors that influence the learner's performance in the classroom, such as background knowledge (the schema) (cf. p. 100), motivation depending on the texts, and not least the teacher, whose task it is to provide adequate texts which take into account the learners' level of proficiency and his/her general support. Longitudinal research in genuine classroom settings should therefore generate better results (cf. Ch. 8).

"The fact remains that little evidence is available so far to show the merits of incontext- learning relative to other forms of instruction. Data of this nature should prove especially useful in illuminating the debate between those at one end of the spectrum (e.g. Krashen, 1989, 1993) and others (e.g. Horst et al., 1998) who call for more direct, explicit instruction of high-frequency vocabulary words. Also of interest would be additional studies such as that of Joe (1998) which investigate hybrid approaches wherein vocabulary is taught through reading in conjunction with pre- or post-reading activities such as summary or root recognition" (Hermann, 2003). As Meara (1982:109), one of the earlier advocates of explicit vocabulary teaching, pointed out, vocabulary acquisition research "...concentrates on what is basically a problem to do with the management of learning, rather than with the learning process itself, i.e. the object of this type of research is to decide what words are to be

taught, not to find out how words are actually learned". "We cannot argue with the claim that for a given word the quickest way to impart thorough knowledge of its meaning is via direct instruction" (Nagy, Herman, & Anderson, 1985). Nagy et al. write mainly about learners trying to improve their *native* vocabulary. For the purpose of foreign language learning, it should not be forgotten that one form of direct instruction is translating, one element of the *KWM*. Explicit instruction *may* accelerate the *rate* of development and increase the learners' proficiency, although research on this matter is woefully inadequate. It seems that researchers have generally equated *effect* of instruction with *duration* of instruction (hence the issue of how often a learner has to re-notice a word to learn it), rather than with *quality* or *intensity* of instruction, or any number of other variables which might come to light if classroom instruction *itself* had been a source of data (van Lier, 1988: 25). The research project in this thesis tries to combine research and instruction in this vein.

Finally, the underlying rational of learning in context seems to be that understanding *is* remembering. This is a fallacy (Russel, 1979); and the (unsatisfactory) research so far tends to confirm this.

2.4 Vocabulary and text coverage

This chapter examines the relationship between the most frequent vocabulary and text coverage _ how much of a text a reader is likely to understand. It will introduce Zip's law, which allows the relationship between word frequency and coverage to be graphed. This will suggest:

. *How much vocabulary is needed to read a text for basic, gist understanding;*

. *How much vocabulary is needed in listening to normal spoken text;*

. *How much vocabulary is needed for full comprehension in both reading and writing;*

. *Whether specialist lexicons can reduce the learning burden and add to coverage and comprehension;*

. *Whether vocabulary measurements can be a good indicator of general foreign language level.*

In the above part of the present study, vocabulary has been considered with the particular concern that frequency can help explain much about which words are likely to be learned and when. By knowing the most frequent vocabulary in a language, we can construct well-directed vocabulary tests that can measure knowledge in an essential area of language. It was pointed out that this is not a new idea and that Harold

Palmer described this relationship between frequency and learning. But Palmer's (1917: 123) observation that the most frequent words will be learned earliest goes further and suggests that the most frequent words are also the most useful to the learner; they are the words that will enable the learner to understand and express himself/herself most efficiently. There is a second reason for wanting to test and measure knowledge of the most frequent words in a language, therefore, and that is that the information gained is likely to tell us about the learner's ability to function, and to communicate, in the foreign language. A learner who knows only highly infrequent words, it is suggested, will be less well equipped to function, than a learner who knows the most frequent words.

2.5 Word frequency and coverage

It has already been noted that the frequent words in a language, words like *the* and *and*, tend to be very frequent indeed and that there are comparatively few of these very highly frequent words. At the other end of the frequency scale, there are lots of words, like maunder, ecumenical and Zipf, which appear to be very infrequent and occur only a handful of times in a corpus of normal language. In between, there is a medium number of words with middle-of-the-road frequency scores somewhere between the two extremes. This kind of distribution is known as a Zipf distribution and has given rise to Zipf's law. Zipf's law allows the relationship between the rank of a word in a frequency list and the number of times it occurs, to be described more systematically and graphed up. Zipf's law states that in a corpus of natural language, the frequency of a word is roughly inversely proportional to its rank in the frequency table. So, the word that is ranked first in the table is likely to occur about twice as often as the word ranked second, which is likely to be twice as frequent as the word ranked fourth and so on. To help illustrate this, Table 3.1 shows the rank and frequencies of the eight most frequent words in both English and French corpora.

2.5. Taxonomy of learning strategies

In the literature there are several learning strategy taxonomies available. This part examines whether **mnemonics** are included as a memory strategy, and which place they occupy within these various taxonomies.

2.5.a Mnemonics: methods, strategies or techniques?

The term 'strategy' is notoriously difficult to define and is sufficiently vague to encompass a multitude of learners' cognitive activities (see below). It has no 'specificity' (Alexander & Judy, 1988) and is rather 'fuzzy' (Wellman, 1983: 31-51) Learners engage in strategic time-monitoring (e.g. Ceci & Bronfenbrenner, 1985), the time-honoured rehearsal (e.g. Ornstein, Stone, Medlin, & Naus, 1985), mnemonic

devices (e.g. McDaniel & Pressley, 1989), elaboration (e.g. Pressley, 1982), labeling (e,g. DeLoache, Cassidy, & Brown, 1985) and revision techniques (e.g. Beal, Garrod, & Bonitatibis, 1990).

The *KWM* has been called all manner of available classifications, such as 'strategy' (e.g. Ott, Butler, Blake, & Ball, 1973), 'procedure' (e.g. Raugh & Atkinson, 1975), 'method', (Pressley, Levin, Hall, Miller, & Berry, 1980), 'technique' (Paivio & Desrochers, 1981), and 'approach' (Stoller & Grabe, 1993). The picture is even more confusing when one considers that researchers use these terms interchangeably, often in one and the same paper. Kaminska (2002: 18) blames the confusion partly on the situation that psychologists and educationalists have different conceptions of these terms.

Since the subject of this thesis is the Keyword *Method*, emphasis has to be put on what these terms mean and how the *KWM* is placed within these frameworks. There are several suggestions about these terms. Anthony (1963), in Richards and Rodgers (1995: 15-16)), makes a distinction between approach, method and technique.

> *"[.....,] approach is the level at which assumptions and beliefs about language and language learning are specified; method is the level at which theory is put into practice and at which choices are made about the particular skills to be taught, the content to be taught, and the order in which the content will be presented; technique is the level at which classroom procedures are described" (ibid.).*

Others have criticized this as too narrow and imprecise (Larsen-Freeman, 1986; Richards & Rodgers, 1995) with Richards & Rodgers substituting *technique* with yet another term: *procedure*, to avoid Anderson's supposed narrowness. They also make a useful contribution by placing *approach* and *method* at the level of design. Here, objectives, syllabus and content are determined. Procedure encompasses classroom techniques, practices and behaviors observed when the method is used.

Hubbard et al. (1990) explain *technique* as a procedure used in the classroom, while a *method* is a *set* of procedures or a collection of techniques used in a systematic way. This is an important definition for the *KWM*. It could be argued that the use of mnemonic devices such as *keywords* by individual teachers in a nonsystematic and sometimes haphazard way and without deeper understanding of the machinations of mnemonics can be seen as t*echnique.* On the other hand, if the *keyword method* is used in a systematic way as described in this thesis and founded on systematic scientific inquiry (cf. Ch. 1), it can be seen as a

method. Theories of memory from psychology and evidence from the neurosciences justify, in my opinion, the name Keyword *Method.*

2.6 Learning strategies

While the questions as discussed above have mainly concerned psychologists and educationalists (and teachers), the question of strategy is in the domain of the learners, although the distinction is a blurred one. During the last decades there has been renewed interest in learners and learning, rather than in the teacher and teaching. Teachers suggest and impose strategies, learners use strategies they are used to or find useful (Grenfell & Harris, 1999: 87). If the latter happens with the Keyword Method, it is undoubtedly a strategy, a mnemonic strategy (Baddeley, 1985).

Not surprisingly, several definitions for the term *learning strategy* have been put forward. Learner strategies are the behaviour or actions that learners engage in, in order to learn or use the L2. They are generally considered to be conscious - or atleast potentially conscious - and, therefore, open to inspection (Ellis, 1994: 712). Some others have enlarged and embellished this definition to be more specific, e.g. Rubin (1975: 43; 1987: 23), Weinstein & Mayer (1986), Schmeck (1983: 234), Oxford (1990a: 8), Mayer (1998: 21), Stern (1992) etc.

3.7 Metacognitive learning strategies

To put it simply, knowing a language is to have it stored in memory, and to speak is to select data from memory on-line. Within the cognitive approach, the language system is treated and explored as a sub-domain of memory (e.g. Baddeley, 1982; Persson, 1995: 25). The language learner has to use strategies to commit new language(s) to memory, whether they are already existing ones or newly acquired ones (by one's own effort or that of the teacher or a combination of both).

When discussing these learning strategies below, it has to be acknowledged that it is extremely difficult and unclear how to explain the separation of one from the other (eg. Cavenaugh & Perlmutter, 1982; Garner & Alexander, 1989; Jacobs & Paris, 1987). Brown defines *metacognition* by its two components *knowledge about cognition* and *regulation of cognition* (Brown & DeLoache, 1983; Brown, 1975; 1977; Brown & Palincsar, 1982). However, in 1987, she asks herself whether the construct of metacognition merely describes a range of cognitive functions 'elevated and dignified with a new title' (p. 7). Others do not have these doubts.

According to O'Malley & Chamot (1990: 44), cognitive strategies are learning strategies that 'operate directly on incoming information,

manipulating it in ways that enhance learning'. They involve such operations as rehearsal, organizing information, inferencing, while metacognitive strategies enable the learner to think consciously how they learn and how successfully they are learning. Metacognitive strategies involve planning, learning, monitoring the process of learning, and evaluating how successful a particular strategy is (Ellis, 1994: 696/714).

Some authors are in favour of a third 'executive' strategy, *metamemorial* strategy (Flavell, 1971, 1978, 1981). The learner is conscious of the shortcomings of memory in general and his/hers in particular, especially in adult education, where the complaint "my memory is not what it used to be" is familiar. Consequently, the learner selects the (individually) most useful and effective learning method/strategy, therebyself-monitoring cognition itself (Cavenaugh & Perlmutter, 1982). Tversky & Teiffer's (1976) opinion that memory strategies are used as a means of encoding material to enable later retrieval, is not helpful. Learners expect this from any teaching/learning strategy.

Whatever the cognitive *strategies* of the learners are, the adoption of these is a strong indicator of cognitive *performance* and skill in different situations such asrehearsal (e.g. Weinstein & Mayer, 1986), labelling (e.g. Vlietstra, 1982), organization (e.g. Bjorklund & Marchena, 1984), persistence at task (e.g. Corno, 1986), attention (e.g. Schiff & Knopf, 1985), motivation (e.g. Gottfried, 1990) and retrieval (e.g. Ornstein et al., 1985). Not surprisingly, since they are still at the developmental stage of cognitive strategies, most research has been carried out on children.

3.7 Taxonomy of language learning strategies

After definition, attempts of classification followed (mainly by the same authors as above). The differences between these attempts at classification are minimal and mainly display different emphases. The broad agreement is that learning goes beyond mere cognitive processes and includes social and communicative strategies. (Hismanoglu, 2003). There is a plethora of strategy classification systems which can be divided into approx. 5 groups:

1. **Systems related to successful language learners (Rubin, 1975)**
2. **Systems based on psychological functions (O'Malley & Chamot, 1990)**
3. **Linguistically-based systems concerned with guessing, language monitoring, and formal and functional practice (Bialystok, 1981**
4. **Systems related to separate language skills (Cohen, 1990)**

5. Systems based on different styles or types of learners (Sutter, 1989) (Oxford, 1994).

Three taxonomies will be introduced here, with Oxford's in more detail since she is an influential figure and one who includes specific memory strategies. For the sake of completeness in this thesis, other learning strategies will be mentioned but not discussed further.

Weinstein & Mayer (1986) propose eight different learning strategies:

a) Basic rehearsal strategies

b) Complex rehearsal strategies

c) Basic elaboration strategies (includes the *KWM*)

d) Complex elaboration strategies (includes the *KWM*)

e) Basic organizational strategies

f) Complex organizational strategies

g) Comprehension monitoring strategies

h) Affective (motivational) strategies

Not surprisingly, the *KWM* was classified as being part of the elaboration strategies.

Rubin (1987) proposes three types of strategy that contribute directly or indirectly to language learning:

a) Learning strategies

b) Communication strategies

c) Social strategies

2.7.b Learning strategies are divided into:

I. Cognitive learning strategies

2.Clarification/ verification

3.Guessing/ inductive inferencing

4.Deductive reasoning

5.Practice

6.Monitoring

7.Memorisation strategies such as associations or grouping

(phonetic, semantic, visual, auditory, kinesic, olfactory, sensory)

1. the use of keywords

2.directed physical response (physical mnemonics)

3.mechanical storage of information (non-mnemonic)

4.selective attention (non-mnemonic)

2.7.b Metacognitive learning strategies

Oxford (1990a) distinguishes between direct learning strategies (1990b: p.71),

"which directly involve the subject matter" and indirect ones "which do not directly involve the subject matter itself, but are essential to language learning nonetheless".

2.7.c Direct strategies

- **Memory**

Creating mental links

Grouping

Associating/elaborating

Placing new words in context

Applying images and sound

Using imagery

Semantic mapping

Using keywords

Representing sounds in memory

Reviewing well

Employing action

Using physical response or sensation (physical mnemonics)

using mechanical techniques

- **Cognitive**

Practicing

Receiving and sending messages strategies

Analyzing and reasoning

Creating structure for input and output

• **Compensation**

Guessing intelligently

Overcoming limitations in speaking and writing

2.7.d Indirect strategies

- **Metacognitive**

Centering your learning

Arranging and planning your learning

Evaluating your learning

- **Affective**

Lowering your anxiety

Encouraging yourself

Taking your emotional temperature

- **Social**

Asking questions

Co-operating with others

Emphasizing with others

2.8 Measuring vocabulary breadth

Under this sub-heading the researcher seeks to examine how to measure vocabulary breadth, the number of words that a learner knows or recognizes, and what happens when these tests are used to collect measurements among learners at different levels of knowledge and in different learning environments. It will consider:

- . The volumes and regularity of vocabulary growth that might be expected;
- . The demands that examinations and syllabuses make;
- . Studies of vocabulary growth over the course of learning;
- . Time spent in class and vocabulary learning rates.

These measurements suggest that vocabulary breadth increases regularly and at a predictable rate in well-established systems.

Alderson (2005) has pointed out that we really know very little about what is normal and what is abnormal in foreign language development. If the process of foreign language is to be better understood, then the collection of normative data is essential. Only then can we begin to understand not only what is learned and when, but also how individuals and groups will vary. Measuring vocabulary knowledge in foreign language learners should be part of this process. It is possible to construct a well-directed test of vocabulary knowledge by targeting a learner's knowledge of the most frequently occurring words in a

language. This should allow an estimate to be formed of the words the learner is most likely to have encountered frequently, and is therefore likely to know. It should allow an estimate to be made of how useful the learner's vocabulary is for the purposes of comprehension and communication. What tests of vocabulary breadth are there, that conform to this specification and what measurements do they give us when they are applied to learners?

2.8. a Tests of Vocabulary Breadth

Some of the best-researched tests of vocabulary are checklist tests of passive vocabulary recognition, designed to give an estimate of vocabulary breadth or size. Passive recognition is likely to be the most basic, catch-all definition of word knowledge; the learner recognizes the form of a word and that it is a word rather than a meaningless jumble of symbols or sounds. Every other quality of knowing ought to fall within such an estimate, as you cannot translate or know details of collocation for a word you cannot even recognize as a word.

The format of checklist tests is deceptively simple. The learner is presented with a series of words and is asked to tick the ones they know or can use. Examples of this kind of test, in English, French and Greek, are provided in Appendix 1, and an example of the format is given in Figure 4.1.

There is no perfect testing method of course and this checklist method has its advantages and disadvantages. The advantages include the relative speed and ease with which these tests can be constructed provided a suitably constructed frequency list is available. It is possible to test a large number of words, compared to other testing methods, relatively quickly. The results are likely to be more reliable both because a larger sample size is always likely to give better results than a smaller sample, and because the test can be relatively brief and there is less opportunity for learners to become bored and lose concentration. The test usually selects words from across the frequency bands and this format also has an enormous benefit in that it is possible to quickly and easily create multiple versions of the test, with different words selected from the frequency bands, which should perform the same way. It is not uncommon for the correlations in the high 0.9's to emerge where scores taken from tests using different selections of words are compared (e.g. Adamopoulou, 2000). David (2008a) uses three versions of this test (with different words included) in her research in order to prevent students copying each other. She concluded there was no significant difference in the results obtained from the three versions (ANOVAresults: F(2, 480)_0.332, p_0.717).

The disadvantage is the degree to which learners are able to guess, when they do not really recognize a word or are not sure. Earlier,

Please look at these words. Some of these words are real French words and some

are invented but are made to look like real words. Please tick the words that you know

or can use. Here is an example.

Chien

Thank you for your help.

de distance abattre absurde
achevé manchir

Earlier, this type of text has been described as deceptively simple because, in these tests, learners are often faced with a tricky decision. If they think they recognize a word but are not sure, how is this to be scored? A straight Yes may result in words that are not known at all being included in the size estimate, resulting in over-estimation, but omission may cause underestimation, as words which are known, at least partially, are omitted. Some of these tests include a Not Sure category to help separate out words like this. More usually, false words are often included in such tests to allow compensation for this kind of uncertainty, and for outright guesswork. False words are words constructed to read and sound like real words, but which do not really exist. In Figure 4.1, manchir is such a false word. These are words which learners cannot have encountered and which they do not know and which they should not tick. The proportion of Yes responses, or ticks, to these false words allows an estimate to be made of the degree of over-estimation which a learner is making and scores can be adjusted on the basis of this.

The idea is very attractive and it might be thought that a system that allows you to make some kind of compensation for guesswork or overestimation would be a good thing. However, it appears that learners can respond very differently when faced with a checklist test. There are even national characteristics that tend to emerge. Shillaw (1999) reports, for example, that the Japanese learners he studied were so conservative in their estimates of their own knowledge that these false words were very rarely checked. Al-Hazemi (1993) and Vassiliu (1994) report that learners in Saudi Arabia and Greece can use rather larger amounts of guesswork in this type of test, perhaps because they are trained in examination technique, but that the tests appeared to work reliably nonetheless. Eyckmans et al. (2007), in a study of Belgian learners, reports huge amounts of over-estimation; up to 60% of false words were, on average, identified as real. Part of the problem identified is to do with response bias, which is the tendency for people, faced with Yes/No questions of this type, to answer Yes regardless of the question. But this cannot explain the tendency of this group to say Yes to almost everything and one wonders just how seriously the learners took the test. It provides a warning, however, that not all tests may work equally well with all learners, and if the learners are unwilling or unable to interact with the test in the way we expect, then the data they provide may be worthless.

Two of these tests are deliberately constructed to give an estimate of vocabulary size, within strict frequency limits, and would seem very suitable for measurements that seek to assess vocabulary growth over time. One is the Eurocentre's Vocabulary Size Test (Meara & Jones, 1990), which is auto-adaptive, tests about 150 words, and forms an estimate of a learner's knowledge of the most frequent 10,000 words. X-Lex (Meara & Milton, 2003) tests 120 words, 20 randomly selected words from each ofthe first five 1000 word frequency bands and a further 20 pseudo-words. The number of Yes responses to these pseudo-words allows the score on the real words to be adjusted for guessing and over-estimation of knowledge. A learner's vocabulary knowledge is calculated by counting the number of Yes responses to real words and by multiplying this by 50 to give a raw score out of 5000. The number of Yes responses to pseudo words is then calculated and multiplied by 250. This figure is deducted from the raw score to give an adjusted score, also out of 5000, which thus includes a compensation for guesswork. There is no time limit to the test, which generally takes only 5 or 10 minutes to complete.

A second, very widely used, type of test method in estimating vocabulary knowledge involves requiring learners to demonstrate that they know translations or explanations of foreign language words. Tests can be

passive, and provide learners with translations or explanations to choose from, or rather more productive in requiring the learner to produce a foreign language word in response to a native language stimulus. In the literature, these two tests are known as recognition and recall tests.

Nation's widely used Levels Test (Nation, 1990, revised Schmitt et al., 2001) is an example of this type of recognition test where learners are provided with test words in the foreign language and a selection of explanations which must be matched up. An example is given in Figure 4.2.

This format allows rather more than passive recognition for word form to be tested and this form of test should allow an estimate of knowledge of words and their meanings to be formed. It is quite a complex test, however, where success relies not just on learner's knowledge of the test words (on the left hand side), but also on knowledge of the words in the explanations (on the right hand side), and it is not completely clear which items are being tested. Further, each question contains multiple test items, and the learner's knowledge of some of the items is likely to have an impact on the ability to work out the answers to other items where these are not known. We know that learners often try to maximize their scores by making educated guesses in these circumstances, it is called economy of practice, but it is much less easy to work out the effects of guesswork in a test of this kind and there is no mechanism in the test for making this kind of calculation. Kamimoto (2005) recently reported speak aloud protocols conducted with learners taking this test. The feedback he received suggests that a considerable amount of guesswork and calculation goes on in answering this kind of question and that the learner's choice of guessing strategy can produce considerable differences in scores. The Levels Test might have much more variation according to guesswork than most users ever imagine. However, there is no explicit way in the test for taking account of this phenomenon or compensating for it.

2.9 Long term and comprehensive vocabulary instruction

Of the many benefits of having a large vocabulary, none is more valuable than the positive contribution that vocabulary size makes to reading comprehension. One of the main goals of vocabulary instruction, therefore, is to help students improve their comprehension. This choice of goals is important because of its implications for both the content and the methods of instruction. If the goal were to teach words in a way that would improve students' performance on multiple-choice vocabulary tests, the goal could be achieved through many simple and relatively undemanding methods. However, if the goal is to teach words in a way

that will improve students' comprehension oftext that contains these words, the methods become more labor- and time-intensive (McKeown, Beck, Omanson, & Pople, 1985).

We already know a fair amount about what kind of vocabulary instruction is most effective for improving reading comprehension (e.g., Stahl, 1986; Stahl & Fairbanks, 1986). However, the relationship between vocabulary knowledge and reading comprehension is complex (e.g., Anderson & Freebody, 1981; RAND Reading Study Group, 2002). If instruction is to further the goal of improved comprehension, we need to take into account the complexities of this relationship. Indeed, every wrinkle in the vocabulary- comprehension relationship suggests something about what might make vocabulary instruction more effective for the purpose of promoting reading comprehension. This chapter discusses specific examples of complexity in the vocabulary-comprehension relationship and explores some of the implications of these complexities for instruction.

2.10 Teaching individual words

Teaching individual words is what commonly comes to mind when we talk about vocabulary instruction. A number of studies have shown that for vocabulary instruction to increase the comprehension of texts that contain the instructed words, it must be fairly intensive (e.g., McKeown et al., 1985; Stahl & Fairbanks, 1986). Intensive or rich vocabulary instruction requires giving students both definitional and contextual information (i.e., information about what a word means and about how it is used), and providing them with opportunities to process this information deeply by applying it in ways that require creativity and connections with their existing knowledge. Furthermore, a number of instructional encounters—somewhere between 7 and 12—are necessary if students are to achieve real ownership of the instructed words (Stahl, 1986).

The kind of vocabulary instruction that can demonstrably increase reading comprehension is thus rather labor intensive. Only a portion of the words that students need to learn can be covered with such instruction. Some words must necessarily be dealt with more superficially, although there is little research that documents under what conditions less intensive instruction would be effective. But to promote the large-scale, long-term vocabulary growth that is necessary for academic success, we need to do more than teach individual words. This brings us to the other two components of effective vocabulary instruction, extensive exposure to rich language and building generative word knowledge.

2.9.a Exposure to rich vocabulary

Extensive exposure to both oral and written language is likewise essential to effective instruction. Wide reading, in my opinion, is the primary engine that drives vocabulary growth for older and more able readers. However for younger and for less able readers, experiences with rich oral language are critical for vocabulary growth (Beck & McKeown, 1991; Beck, McKeown, & Kucan, 2002; Biemiller, 1999). Therefore, if they are to have any chance of acquiring sufficient vocabulary knowledge to get meaning from text, their teachers must make effective use of classroom activities such as reading aloud, storytelling, pretend play, and even routine classroom conversations, to promote oral vocabulary growth.

The need for exposure to rich language is especially acute for older, less able readers—students who tend to have limited vocabularies. It is unlikely that these students will (or can) read widely enough to make a difference to their vocabulary growth. Although increasing such students' ability and motivation to read is essential, teachers must also find ways to use oral language as a means of increasing their vocabularies. Effective use of discussion is perhaps the most important tool, but reading aloud to older students should not be ruled out.

Many researchers believe that a substantial proportion of vocabulary growth occurs as children gradually learn the meanings of new words through repeated encounters with the words in text or in conversation. A review of the research on learning words from context indicates that the chances of learning the meaning of a particular word after encountering it once in context are relatively low, somewhere around 15% (Swanborn & de Glopper, 1999). Exposure to rich language is essential for promoting vocabulary growth, but the benefits of such exposure accumulate slowly.

2.9.b Generative word knowledge

Generative word knowledge is vocabulary knowledge that can transfer to the learning of new words. There is a tendency to think of vocabulary knowledge as consisting of isolated, memorized information about the meanings of specific words, but such a conception is clearly inadequate. A variety of types of knowledge about words contributes to word learning. Most obviously, there are word-learning strategies, such as the use of context and word parts, that can be taught to students to make them better word learners (e.g., Edwards, Font, Baumann, & Boland, 2004). Effective word learners also possess knowledge about what constitutes a possible word meaning, which helps them distinguish between relevant and irrelevant information in the context (Nagy & Gentner, 1990; Nagy& Scott, 1990). A number of researchers have

argued for the importance of word consciousness in word learning. I interpret the term word consciousness broadly, to include a interest in and awareness of various aspects of words—their meanings, their histories, relationships with other words, word parts, and most importantly, the way writers use words effectively to communicate (Blachowicz & Fisher, 2004; Graves & Watts-Taffe, 2002; Johnson, Johnson, & Schlichting, 2004; Scott & Nagy, 2004).

An effective approach to vocabulary instruction should address all three of these components—teaching individual words, exposure to rich language, and generative word knowledge (Graves, 2000). And in fact there are a number of instructional interventions that attempt to do so. For example, Beck and McKeown's Text Talk is a very promising example of a comprehensive approach to vocabulary growth for younger students (Beck & McKeown, 2001; McKeown & Beck, 2003; see also Beck, McKeown, & Kucan, chapter 10, this book). Likewise, the Vocabulary Enrichment Program described by Foorman, Seals, Anthony, and Pollard-Duradola (2003) is a comprehensive approach, as is the instructional program described in chapter 7 of this book by Carlo, August, and Snow.

The goal of this chapter, however, is not to describe programs of effective instruction but to provide a rationale for these programs. This rationale is predicated on the idea that when we understand the causal links between vocabulary knowledge and reading comprehension, it changes how we think about vocabulary instruction. A good place to begin is by examining several hypotheses that have been proposed previously about these causal links.

2.10 Vocabulary knowledge and reading comprehension

Vocabulary knowledge is correlated with reading comprehension, with the correlations tending to be around .6 to .7 (Anderson & Freebody, 1981). However, the existence of a correlation does not tell us anything specific about the nature, or the direction, of the causal relationships that may underlie it.

2.10 a. **The Instrumentalist Hypothesis**

The commonsense model of the relationship between vocabulary knowledge and reading comprehension is that knowing more words makes someone a better reader. That is, there is a causal connection between vocabulary size and the ability to comprehend text. Anderson and Freebody (1981) labeled this model the instrumentalist hypothesis.

One might wonder why this is called a hypothesis. It is obviously true—-just try to read a text that contains a lot of words that you do not know.

Indeed, a number of studies have demonstrated that teaching words can improve comprehension (Beck & McKeown, 1991; Stahl & Fairbanks, 1986).

The instrumentalist hypothesis seems perfectly reasonable until we realize that the correlation between vocabulary and comprehension might be the result of other factors.

The problem with the instrumentalist hypothesis is not that it is wrong, but that it is incomplete (and hence misleading, if one takes it to be the whole picture).

2.10.b **The Knowledge Hypothesis**

As one alternative to the instrumentalist hypothesis, Anderson and Freebody (1981) also proposed the knowledge hypothesis, which emphasizes the role of readers' background knowledge in comprehension. Simply put, it is not knowing the meanings of words that causes readers to understand what they read; rather, knowing the meanings of words is an indication of the readers' knowledge of a topic or concept. It is this knowledge that helps readers comprehend. This hypothesis can be illustrated by the following scenario:

Imagine that you have students read a passage about baseball and, after the reading, test their comprehension of the passage. Prior to their reading of the text, however, you had also given them a vocabulary test that contains baseball terminology not used in the passage. Think about the relationship between the scores on this vocabulary test and the passage comprehension test. Would you expect them to be correlated? Yes, because students who know more about baseball, and therefore know its special vocabulary, are likely to better understand a passage about baseball. The fact that the exact words from the vocabulary test were not in the comprehension passage does not matter. Knowledge about baseball is essential, and knowledge of specific baseball words is part of, and symptomatic of, that knowledge. But it does not just know the words that are essential for comprehension. It is knowing the concepts and their relationships. According to the knowledge hypothesis, then, there is a causal link from knowledge to comprehension, and vocabulary knowledge is only one small part of the knowledge base that contributes to reading comprehension.

2.10.c **The Aptitude Hypothesis**

The aptitude hypothesis offers yet another account of the correlation between vocabulary knowledge and reading comprehension. One reason that two variables may be correlated is that some third variable is linked causally to both of them. People who are 5 feet tall tend (in the majority

of cases, at least) to know more than people who are 3 feet tall. This is not because being tall makes people knowledgeable, nor because knowing things makes people tall, but because getting older (at least within a certain age range) tends to increase both height and knowledge.

The aptitude hypothesis suggests that people who have large vocabularies are better at understanding what they read because a third factor affects both vocabulary and comprehension, this third factor having something to do with verbal aptitude. For example, because having high verbal IQs makes for better readers and better word learners, people who have high verbal IQs would tend both to understand text better and to have acquired large vocabularies. Furthermore, this relationship could be true, at least in theory, even if no direct causal connection exists between vocabulary and comprehension.

Most second graders, for example, might have acquired all of their vocabulary knowledge through oral language rather than through reading. Yet their vocabulary size would still be correlated with their reading comprehension because the verbal abilities that make some children better word learners would also make them better comprehenders.

Specific versions of the aptitude hypothesis can be formulated, depending on the particular ability or abilities that are thought to make an especially important contribution to the vocabulary-comprehension relationship. Sternberg and Powell (1983), for example, suggest that the ability to make inferences is important both for reading comprehension and for learning the meanings of new words that readers encounter as they read.

A slightly different spin is suggested on the aptitude hypothesis, which could be called the metalinguistic hypothesis. According to this hypothesis, part of the correlation between tests of vocabulary knowledge and reading comprehension is due to the fact that both require metalinguistic awareness— that is, the ability to reflect on and manipulate language. Indeed, vocabulary learning can be a very metalinguistically demanding task (Nagy & Scott, 2000). Vocabulary instruction requires students to think about words and their meanings in relatively abstract ways.

Likewise, reading comprehension, in part, is also a metalinguistically demanding task. Written language is typically decontextualized. Unlike conversation, relatively few clues exist outside the language itself that aid us in constructing meaning. In conversation, we have intonation, gesture, facial expressions, the ability to ask questions when necessary, a shared physical environment, and, most of the time, large amounts of

shared knowledge that can be alluded to rather than stated explicitly. To take part in a conversation successfully, we have to attend to all these potential sources of information.

When reading, however, we are dependent on the text itself. When comprehension breaks down, we must be able to reflect on the language of the text if we want to make sense of it. Strategies for comprehension monitoring and repair almost invariably require some type of metalinguistic ability. Recognizing that we do not understand a passage because we do not know the meaning of a word, for example, involves metalinguistic as well as metacognitive skill.

The metalinguistic hypothesis, then, explains part of the correlation between vocabulary knowledge and reading comprehension by appealing to the fact that vocabulary tests, like reading comprehension tests, are tests of the ability to deal with decontextualized language, and both are therefore dependent on metalinguistic skill.

2.10.d **The Access Hypothesis**

The basic point of the access hypothesis (Mezynski, 1983) is that to be useful in comprehension, the words students are taught must become known well enough that they can be accessed quickly and easily. In other words, comprehension depends on depth of word knowledge as well as breadth. Of course, depth and breadth of word knowledge are correlated; people who know more words tend as well to know more about each of the words they know. As they read, they are able to come up with the correct meanings of words quickly, and it is this fluency that contributes most directly to their reading comprehension.

As Anderson and Freebody (1981) pointed out, these hypotheses are not mutually exclusive, and all are likely to be at least part of the truth. The problem arises in trying to determine their relative contribution to the vocabulary- comprehension correlation. The situation is further complicated, of course, by the fact that the relative contribution of these three hypotheses may be dependent on the particular combination of reader, text, and purpose for reading. For example, if I am an adult reading an article about a topic with which I am familiar but in a language that I do not know very well, my lack of vocabulary knowledge will be the primary source of my difficulty in understanding the text, thus making the instrumentalist hypothesis the best account of my comprehension problems. However, if I were to learn that language a little better, and then read an article in that language on a topic with which I am very familiar, the knowledge hypothesis might be a good explanation for the fact that my comprehension is much greater than would be expected on the basis of my linguistic competence.

2.10.e **The Reciprocal Hypothesis**

What are the instructional implications of a reciprocal relationship between vocabulary knowledge and reading comprehension? One obvious implication is to start some form of vocabulary instruction as early as possible. The causal relationship between vocabulary knowledge and reading comprehension starts early, before children are reading connected text. Thus, the correlation between vocabulary and reading comprehension for fifth graders is not just a matter of how much these students know about the meanings of the words in the text they are tested on. It reflects a long history of mutual facilitation between vocabulary knowledge, reading comprehension, and a variety of other literacy-related abilities. If the goal is to increase children's reading comprehension by teaching them vocabulary, it helps to start working on their vocabularies when they are in preschool.

The overriding implication of the reciprocal hypothesis, however, is the need to develop comprehensive literacy programs. "Balanced" is too weak a word because it implies that there are only two sides to be balanced. But in the cycle of learning that leads to vocabulary and comprehension growth, it is crucial to support students at each point in the cycle. Figure 2.3 illustrates some of the ways to make sure that each part of the cycle is functioning.

2.11 Learning vocabulary through exposure to language

The process of learning new words begins in infancy and continues throughout one's adult life. It has been estimated that an 18-month-old child needs to learn an average of 5 new words a day in order to have an average vocabulary of approximately 8,000 words by the time he or she is 6 years old (Senechal & Cornell, 1993). The average student graduating from high school is estimated to know approximately 40,000 words (Nagy & Herman, 1985). In order to increase one's vocabulary from 8,000 to 40,000in those 12 years, a child needs to learn a total of approximately 32,000 words between 1st grade and 12th grade, which translates to approximately 7 words a day. The research suggests that children typically learn approximately 3,000 words a year (over 8 words a day) between 3rd and 12th grades during the school year (Nagy & Anderson, 1984). On reflection, that seems like a lot of words each year.

These impressive statistics leave us wondering where our children are learning all of these words. Recent research suggests there is a developmental trajectory to vocabulary learning (Biemiller, 2001) and that when instruction exploits the morphophonemic nature of our orthography, children can acquire a multiplicity of word meanings (e.g., magic yields knowledge of magician, magical, magically) through direct

and systematic vocabulary instruction (Beck, McKeown, & McCaslin, 1983). However, when we consider that the average program of direct vocabulary instruction covers only a few hundred words and word parts per year, this type of vocabulary development just described seems to be beyond the scope of even the most intensive vocabulary instruction programs (Hiebert, chapter 12, this volume; Nagy & Herman, 1985). Even the most tailored and comprehensive instruction cannot shoulder all of the vocabulary learning that must take place in the school years and beyond. Thus, the argument is made that a substantial amount of vocabulary development occurs through incidental encounters with language (Sternberg, 1987). Not surprisingly, a convergent body of evidence supports this conclusion.

Much of the research investigating the role of incidental learning in vocabulary development has focused on words encountered in the context of reading. For example, Nagy, Herman, and Anderson (1985) attempted to determine the amount of knowledge children acquire about unfamiliar words during natural reading. They asked 57 eighth-grade students to read one of two excerpts (approximately 1,000 words) taken from a junior- high-level text. The students then completed a multiple-choice vocabulary test assessing their knowledge of 15 target words from the passage they read and 15 words from the alternative text. The multiple- choice test was designed to assess the amount or degree of knowledge about a word. Students were also asked to participate in an individual interview aimed at determining partial word knowledge. Results indicated that children made small but statistically reliable gains in word knowledge after reading words in context. Similar patterns have been found by Stahl (1999) and Sternberg & Powell (1983).

McKeown (1985) also investigated the process by which children acquire unfamiliar word meanings through exposure to written language. She argued that various cognitive functions underlie vocabulary learning and, as a result, children of high and low verbal ability experience varying levels of success in the process of acquiring word meaning from context. In order to test this hypothesis, McKeown (1985) assessed the ability of 30 fifth-grade children (15 high vocabulary ability, 15 low vocabulary ability) to derive the meaning of unfamiliar words from context by presenting them with 6 artificial words embedded in multiple sentences with varying levels of contextual support. Indeed, high vocabulary children were more successful in deriving the meaning of an unknown word from text and using the new word in subsequent contexts. In contrast, children of low verbal ability experienced a misunderstanding of the relationship between words and context and demonstrated a semantic interference when considering two contexts simultaneously.

McKeown's (1985) work, along with the work of other researchers (e.g., Daneman & Green, 1986; Sternberg & Powell, 1983), demonstrates that there are certain conditions under which reading promotes vocabulary learning.

2.12 Creating opportunities to learn word meanings from the text

An accumulation of research indicates that many words are learned incidentally through the independent reading of text, through oral language discussions, and through reading aloud to children (Elley, 1989; Nagy, Anderson, & Herman, 1987; Penno, Wilkinson, & Moore, 2002). Even a single incidental encounter with a word in text can facilitate word learning (Nagy et al., 1987; Schwanenflugel, Stahl, & McFalls, 1997; Swanborn & de Glopper, 1999). However, there is also evidence that children are exposed differentially to infrequent words both in independent reading and in their homes (Hart & Risley, 1995; Stanovich, 1986). Furthermore, recognition is increasing of the importance of informational literacy and students' knowledge of academic language (Duke, 2000; Hirsch, 2003). Every content area has a set of specific concepts and vocabulary. The National Reading Panel Report (NICHD, 2000) calls for an increased focus on vocabulary derived from content area materials. Yet, there appears to be little consensus on how vocabulary should be presented in informational texts and little regard given to factors that might facilitate students' word learning from such texts (Myerson, Ford, Jones, & Ward, 1991).

This chapter provides a review of research regarding word learning through text with a discussion of the implications of this research for teachers, publishers, and researchers. It then directs attention specifically to how this research pertains to the reading, understanding, and learning of new words from informational text. The intent is to spur discussion and interest in maximizing the odds that student, particularly those who depend on schools for exposure to academic language, will be able to read, understand, and learn new words from informational text.

2.12 The role of context and intentional vocabulary learning

The process of learning new vocabulary is often perceived as a reductionist activity in which words are learned and tested out of context. In the process of studying vocabulary, researchers often decompose a coherent text to examine a minute element of the text: its individual words. Decades of research indicate that reading comprehension requires more than knowledge of individual words (Beck & McKeown, 1991; Nagy & Scott, 2000). Reading comprehension involves the interplay of the reader, the text, the activity, and the sociocultural context of reading events (RAND Reading Study Group, 2002). In this process, a

transaction between the reader and the text must take place in which prior knowledge and the creation of a mental representation of meaning play a central role (Anderson & Pearson, 1984). This does not mean that individual words are unimportant; indeed, words are the central building blocks of communication (Clark, 1993). However, in studying the process of vocabulary acquisition, we need to ensure that we keep the complexity and transactional nature of the process in mind.

One factor that contributes to the complexity of studying word knowledge is the understanding of what it means to know a word. Knowing a word can range from being able to supply a definition to having a vague understanding of its semantic field. Furthermore, for each known word, there are numerous related facets of knowledge that are not captured by a typical definition. Definitions reduce word knowledge to decontextualized features, abstracted from the numerous ways that a word has been used in the past (Landau, 1984). However, a person's knowledge about words is expansive and involves interrelated connections that create networks of knowledge.

Such networks of knowledge can be considered word schemas for words (Nagy & Scott, 1990). Nation (1990) identified eight separate facets of knowledge surrounding a word, including knowledge of a word's spoken form, its written form, the way it behaves in sentences, words commonly found near the word, its frequency in oral and written language, its conceptual meaning, how and when it is commonly used, and its association with other words. These different aspects of word knowledge are at least partially independent. Thus, one person may know the definition of a word but not its frequency or how to use it, whereas another may be able to pronounce it but unable to distinguish it from similar words. Words are also polysemous—they often have multiple meanings (i.e., *dinner plate* vs. *home plate);* interrelated—one's knowledge of a given word is not independent from knowledge of other words (i.e., *magma*, *lava*, *and volcano);* and heterogeneous— what it means to know a word depends on the kind of word being learned (i.e., *the* vs. *hypotenuse;* Nagy & Scott, 2000).

Vocabulary researchers have long recognized such multiple dimensions of word knowledge. In addition, accumulated evidence indicates that word meanings are developed incrementally over time (Nagy & Scott, 2000; Schwanenflugel et al, 1997; Stahl, 2003). There appears to be an initial "fast mapping" of new words into general categories or associations, but it takes multiple exposures to a word to build up enough knowledge to be able to use it comfortably (Clark, 1993). As a word is encountered repeatedly over time, information about the word grows and it moves up the continuum toward "known." Dale (1965) proposed four

levels of word knowledge ranging from "I never saw it before" to "I know it." More recently, Paribakht and Wesche (1999) added a fifth level: "I can use it in a sentence." This word knowledge may often be subconscious. Adults have been found to have detectable word knowledge about words they claimed not to know (Durso & Shore, 1991). To complicate this further, a person's continuum of word knowledge is unique. For instance, one person may know that *taupe* is a color word, but not be able to pick out a taupe swatch in a paint store. Another may know that a *router* is some kind of tool, but not know how it might be used.

Understanding the transactional process of text comprehension, the complexity of word knowledge, and the incremental process of vocabulary acquisition has implications for understanding how one acquires information about words through the process of reading or hearing text. With this as a backdrop, I pooled information from studies of incidental learning of words from independent reading, studies of incidental learning of words from being read to, and studies on deriving word meanings from text. In the following review, I have organized the studies into those pertaining to "local context"—those having to do with factors within words and within texts—and those pertaining to global factors—those having to do with the purposes and background knowledge of readers. The purpose of this review is to identify factors that might contribute to vocabulary acquisition from text and to suggest generalizations that can be used to maximize opportunities for students to learn new words from context.

2.12.a Local context and intentional vocabulary learning

Local contexts refer to the features of words and to the context created by words and sentences within texts. In considering the local context, there are both within-word factors, such as the morphemes of a word, and the sentences and texts in which a word appears.

A number of features of a word can influence the attention that readers pay to it as well as the ease with which they remember it. Among those features identified by researchers are: (a) morphology,(b) a word's part of speech, (c) the vividness or concreteness of the word's meaning, and (d) frequency of appearance in written English.

When a person encounters a new word, its morphology is one of the main sources of information available to him or her. Morphemes are the smallest units of meaning, and "because they serve as phonological, orthographic, and semantic/syntactic units, they facilitate both word reading and understanding of words and texts" (Carlisle, 2003, p. 292). Morphemic analysis involves the derivation of a word's meaning by

examining and using its morphological structure, such as word roots, prefixes, suffixes, and inflected endings (Edwards, Font, Baumann, & Boland, 2004).

Knowledge of morphology plays a valuable role in word learning from context because of the way in which students can use knowledge of a word's morphological structure to hypothesize the meaning of a new word. If one knows that *botany* relates to the study of plants, and *-phobia* means "fear of," one might hypothesize that *botanophobia* means "fear of plants" (Nagy & Scott, 1990). More than 60% of the words students encounter have a relatively transparent morphological structure (Nagy & Anderson, 1984). Students can be taught to use both morphological analysis and contextual analysis to figure out the meanings of new words (Baumann, Edwards, Font, Tereshinski, Kame'enui, & Olejnik, 2002). Anglin (1993) found that students in all grade levels use some morphological problem solving, with relatively large increases in recognizing derived words between third and fifth grades. The vocabulary knowledge accounted for by derived words represented, on average, 16% of the recognition vocabulary of first graders, increasing to almost 40% by fifth grade (Anglin, 1993).

The ability to figure out a word's meaning by analyzing its component parts has been found to be significantly related to word-reading achievement (Carlisle, 1995, 2003; Champion, 1997), although instruction in morphological and contextual analysis does not necessarily lead to improved reading comprehension (Baumann et al., 2002). Many researchers call for more research in this area, as evidence to date suggests that morphological awareness is an aspect of learning words from context that should not be ignored (Carlisle, 2003).

A second within-word factor is a word's part of speech. It seems intuitively obvious that learning nouns would be easier than learning verbs. Seeing a picture of an aardvark with a brief description of its eating habits may give a reader enough information to know what it is (an animal) even if one does not have extensive background knowledge of African animals. In comparison, illustration of the meaning of the verb *discourage* seems much more difficult. Unfortunately, the research does not seem to support such an intuitively obvious conclusion.

Instead, the ease with which one learns nouns, verbs, adjectives, or adverbs from context seems to vary across studies, is confounded with concreteness of a word, and appears to depend, to a great extent, on the words chosen to represent each category. There seems to be no clear evidence that words in one category are learned more easily than words in another. In some studies, verbs, adjectives, and adverbs were learned

more easily than nouns, whereas in others, nouns were learned more frequently.

Schwanenflugel et al. (1997) found that the part-of-speech category positively influenced the gain scores with verbs, adjectives, and adverbs learned more easily than nouns. However, only some nouns in the study referred to distinct objects (i.e., *beacon, sorceress).* The others were either abstract nouns (i.e., *vicinity, tribute)* or mass nouns (i.e., *venom).* Robbins and Ehri (1994) also reported that, although there were too few instances to generalize, verbs and adjectives were learned more easily than nouns in their study. On the other hand, Elley (1989) found part of speech to be a significant factor in the opposite direction during a study of reading aloud to children. Nouns were learned more easily than other parts of speech, with mean gain scores of 24% versus 6%. The various findings regarding part of speech are consistent with Laufer's (1997) analysis of factors that affect word learning in a second language. She concluded that part of speech has no clear effect on learning words from context (Laufer, 1990, 1997). Overall, this factor does not seem to be highly significant when considering vocabulary acquisition from text. The results regarding the type of words learned most easily may depend more on the set of words chosen for a study than on a general factor.

A third feature of a word is its vividness or concreteness. There is substantial evidence that abstract words are harder to understand than words with concrete or vivid imagery (Schwanenflugel, 1991). In addition, Schwanenflugel et al. (1997) found that words' relative concreteness positively influenced students' gain scores in incidental word learning, concluding that individual characteristics of vocabulary words are more important than text features in determining which words are learned. However, Laufer (1990, 1997) claims that no such effect holds for second-language learners because many second-language learners have already developed abstract concepts in their native language, and the addition of a new label for a familiar concept is relatively easy.

If the ability to picture a concept is considered as a measure of concreteness, more studies can be included in this discussion. Elley (1989) found a significant correlation between gain scores and the number of pictorial occurrences, whereas Robbins and Ehri (1994) found no such correlation. Again, this may be due, at least in part, to the words being illustrated. The words pictured in the Elley study were not listed, although he indicated that "a simple count was made" of the number of times a word was pictured. Words in his study included *roadster, dingy, lolling, strewn, debonair, scheming, summoned, spin, outsmarted, redistributed, goner, pizzazz, reform, rapscallion,* and *startling.* The

words listed as illustrated in the Robbins and Ehri (1994) study were *irate, survey, toting, abode, decrepit, consume,* and *discard.* At this point, it seems safe to say that the concreteness of words is a factor that needs to be taken into account in research and is worth consideration when publishers and teachers are trying to optimize opportunities to learn words from context.

The fourth factor—that of frequency—is one that has not been well researched in vocabulary learning from context. When word frequency has been considered, the effects of substituting rare words with more common ones has been the focus (e.g., Marks, Doctorow, & Wittrock, 1974; Wittrock, Marks, & Doctorow, 1975). In the past few years, however, levels of word frequency have gained prominence in discussions of vocabulary acquisition.

Several researchers (Beck, McKeown, & Kucan, 2003; Hiebert, chapter 12, this volume; Nation, 2001) make compelling arguments for considering word frequency as a factor in choosing words to be taught explicitly in vocabulary programs. Hiebert (in this volume) has used a corpus of 150,000 words (Zeno, Ivens, Millard, & Duvvuri, 1995) to identify those that occur 10 or more times per million words of text, and she uses this criterion, in part, to develop zones of effective instruction. Beck et al. (2003) identify useful words, or Tier Two words, as those words "likely to appear frequently in a wide variety of texts and in the written and oral language of mature language users" (p. 16), and emphasize instruction on these words. Stahl and Stahl (2004) identify such words as "Goldilocks" words: words that are not too hard or too easy but just right. Although Biemiller (chapter 11, in this volume) discounts the use of printed word frequency in identifying words for instruction, he also expresses the importance of identifying and concentrating instruction on words that are "known at 40% to 80% by median children at a target grade" (p. 241).

The idea behind all of these measures is not that rare words should not be taught, but that it is less efficient to teach rare words than words that occur more commonly in English when developing an overall vocabulary program. This is an interesting point in thinking about word meanings that might be gleaned from texts, although the frequency of words has not been considered in most studies of learning from context.

Although other word-level factors have been studied, there appears to be little evidence that factors such as the length of a word or the number of syllables affect word learning from context (Laufer, 1990, 1997; Robbins &Ehri, 1994). Baker (1989) did find that younger readers paid more attention to word length and number of syllables than older readers did,

but her study focused on the evaluation of non-words rather than learning from context. In all, word length and number of syllables appear to be less important in determining which words will be learned from context than other factors identified within this chapter.

2.12 b Word presentation in text and vocabulary intentional learning

There are also factors that influence a word's understanding that have to do with the word's situation or relationship to other words in a text. Among these factors that have been identified in the research literature are: (a) helpfulness of the sentence and text context, (b) density of unknown words, and (c) word repetition.

The contexts in which unknown words are presented in text are not always helpful and, in some cases, can mislead students into making false inferences about word meanings. For instance, one might think that *grudgingly* means "to like or admire" in the sentence: "Every step she takes is so perfect and graceful," Ginny said grudgingly (Beck, McKeown, & Caslin, 1983, p. 178). Beck et al. (1983) identified a continuum of effectiveness of natural contexts for deriving the meanings of words and found some contexts to be so misleading that only 3% of the responses were correct. Negative learning probabilities have been attributed to misleading contexts within the stories read aloud to young children, and lack of contextual support hindered high school students who tried to derive the meaning of rare words in naturally occurring text (Robbins & Ehri, 1994; Schatz & Baldwin, 1986).

Rating of the context's helpfulness in naturally occurring texts had no significant effect in a study by Schwanenflugel et al. (1997), although it was significantly correlated with mean gain in Elley's study (1989). Manipulating the text to increase word learning has had mixed results. Some studies indicate that text revised to be more considerate, or to provide more useful contextual information, can produce significantly higher scores on measures of word learning (Gordon, Schumm, Coffland, & Doucette, 1992; Konopak, 1989). In these studies, fifth-grade through high school students were able to define more words more accurately when sentences were changed to convey more complete and explicit conceptual knowledge, when defining information was placed in close proximity to the unknown word, and when the clarity of connections between unknown words and those surrounding them was increased. Diakidoy (1998), however, reported that increased considerateness or the informativeness of local context did not affect word meaning acquisition from context in her study of sixth-grade students.

It seems plausible that students will learn more when they are given explicit clues to an unknown word in the surrounding context rather than

a natural, implicit context. Less skilled readers appear to have greater difficulty accessing word knowledge when the text is less supportive than more able readers. Among 7- and 8-year-olds, less skilled readers had particular difficulty inferring the meaning of novel vocabulary when the definitional information was removed in proximity from the word whose meaning it elucidated (Cain, Oakhill, & Elbro, 2003).

In a secondary analysis of the data collected by Nagy et al. (1987), Diakidoy and Anderson (1991) concluded:

> One thing that is apparent in this study is that factors representing contextual information have contingent rather than independent effects on learning word meanings from context. That is to say, they appear to interact with several other factors, and moreover, the type and nature of these interactions may depend on grade level, (p. 10)

A meta-analysis of 20 experimental studies indicates that grade and skill levels impact word learning from context (Swanborn & de Glopper, 1999), and perhaps factors such as the considerateness or helpfulness of sentences surrounding words impact such a finding.

Density of unknown words is another factor that influences the probability of learning a word. In the meta-analysis conducted by Swanborn and de Glopper (1999), text-target word ratio was the one predictor that explained variance. A high density of unknown words in a text was found to obstruct incidental word learning. If the density of unknown words in a text is 1 word per 150 words, the probability of learning the word is reported to be approximately 30%. However, if the ratio is 1 to 75, the chances of learning the word drop to 14% (Swanborn & de Glopper, 1999).

In early studies of the effect of vocabulary density and difficulty, Anderson and Freebody (1983) replaced content words with more difficult words and concluded that an increase in rare words leads to lower performance, although a large proportion of words needed to be changed in order to see reliable effects. One might conclude from their findings that students can tolerate a high percentage of rare words.

However, a study by Hu & Nation (2000) indicates that, when English is a second language, the majority of adult readers were limited in their comprehension of text when 5% or more of the text contained unfamiliar

words. This is similar to the rule-of-thumb of reading educators (e.g., Betts, 1946) that accurate reading of 95%-100% of the words in a text indicates that the text is easy enough to read independently. Nation (2001) suggests that, in developing reading materials for English-language learners, 4% or less of the words should be newly introduced.

For the factor of word repetition, research findings are quite robust. The repetition of a word supports students' understanding of it, whether texts are read aloud to them or are read by students on their own. As McKeown, Beck, Omanson, and Pople (1985) conclude, "For virtually every instructional goal, providing a moderately high number of encounters per word will yield better outcomes than only several encounters" (p. 534).

When words are repeated in stories read aloud to students, several researchers have found mean gains from pre to posttest scores (Elley, 1989; Penno et al., 2002; Robbins & Ehri, 1994). Penno et al. (2002) found a linear effect for three repetitions of stories, with each repetition adding to accuracy in the use of target words. Elley (1989) reported a gain score of 15% when the same story was read three times. A study of 5- and 6-year-old non reading kindergartners indicates that their recognition vocabularies expanded when they heard stories at least twice with unfamiliar words repeated in the stories (Robbins & Ehri, 1994). Those words repeated four times had a higher probability of being learned than those repeated two times, although some of the words repeated four times had a negative probability. The authors suggest that hearing words four times in stories may be necessary but not sufficient for establishing higher rates of acquisition. When teacher explanations and review were added, word learning was enhanced (Biemiller, 2003; Elley, 1989; Penno et al., 2002).

When words are encountered repeatedly in stories that students read on their own, there is also a greater probability that those words will be learned. Jenkins, Stein, and Wysocki (1984) found significant effects when words were encountered 6 or 10 times in context, but not with only 2 exposures. McKeown et al. (1985) found that a high frequency of exposure (12) resulted in greater learning gains than a low frequency of exposure (4), regardless of instruction type. They also found that it took 12 encounters with a word to reliably improve reading comprehension (McKeown et al., 1985). Although they did not report effects of repetition, Schwanenflugel et al. (1997) found that fourth-grade students gathered information about both unknown words and partially known words while reading texts independently, with similar gains for each.

To summarize, several characteristics of the local context of words have been identified as useful factors in increasing opportunities to learn words from context. Morphology, concreteness, the density of unknown words, the helpfulness of the sentences surrounding unknown words, and word repetition are all factors that appear to significantly influence vocabulary acquisition from text. Part of speech, length of words, and number of syllables do not appear to be significant factors by themselves. The relative frequency of a word is an interesting factor whose influence on word learning from context has yet to be explored.

2.13 Global context and intentional vocabulary learning

Students come to school with different types of knowledge about words, and some students are advantaged in their opportunities to learn words from context (Hart & Risley, 1995; Scott, 2004). In early grades (K-l), children are learning how to map sounds onto letters, with the expectation that the words that they read will map onto the oral vocabulary that they bring to the task. The system of using letter-sound correspondence to decode for meaning depends on recognizing a word once it is decoded. Thus, the size of one's oral vocabulary influences whether or not a word, once decoded, is known.

By the time children enter kindergarten, a conservative estimate is that native speakers know 4,000 to 5,000 word families, which include each word's inflected forms and regular derived forms. In addition, they know many compound words, proper names, and abbreviations not included in most estimates (Nation & Waring, 1997). Anglin (1993) estimates that 5-year-olds know closer to 10,000 words.

The range, however, among children in their exposure to academic or infrequent vocabulary is substantial. It has been estimated that, by age 4, the average child in an economically disadvantaged home might be exposed to 30 million fewer total words than the average child in an economically advantaged home (Hart & Risley, 1995, 2003). Other researchers have found similar gaps in word knowledge (Chall, Jacobs & Baldwin, 1990; White, Graves & Slater, 1990). Written text contains more complex language and more varied word choices than oral language, so the mismatch between school vocabulary and oral vocabulary can be found from the first texts encountered in school (Hiebert, in press). As students progress through the grades, texts become more complex in discourse style and in the number of words that are rarely encountered in everyday, out-of-school contexts (Cummins, 2000).

Students who are more skilled at reading and are more knowledgeable about word meanings are those most able to learn words from context. Swanborn and de Glopper's (1999) meta-analysis of research studies led

to the conclusion that the average probability of learning an unknown word while reading is 15%. Thus, for every 100 unknown words encountered, students appear to gain enough knowledge of about 15 words to enhance their scores on measures of word knowledge. Based on a multilevel regression analysis of the studies, grade and reading level were found to influence the probability of learning a word. Younger students showed a lower probability of learning words incidentally (Grade 4 probability was 8%; Grade 11 probability was 33%), and lower ability readers gained less than high ability readers (low ability average gain was 7%; high ability average gain was 19%).

Thus, as in other aspects of reading, the rich get richer and the poor get poorer (Stanovich, 1986). With a substantial achievement gap in reading comprehension (National Center for Education Statistics, 2003), it is important to look at factors that help *all* students gain knowledge about words from texts. As reading comprehension involves the interplay of factors beyond words and text (RAND Reading Study Group, 2002), we also need to examine global factors found to influence the opportunity to learn word meanings from text: (a) conceptual difficulty, (b) purpose for reading, and (c) importance of world knowledge.

2.13.a Conceptual difficulty

Not all words are equal. Knowing a high-frequency or function word such as *the* is different from knowing the meaning of a word such as *magma*. Graves (1987) points out that words that represent an entirely new concept need a different type of instruction from words that are synonymous for a known concept. Thus, it is relatively easy to teach a word like *superfluous,* for which there exists a close synonym *(unnecessary).* However, when a word is a new or difficult concept, such as *photosynthesis,* conceptual knowledge must be developed.

The idea of an associative network of knowledge is useful in thinking about learning new words. When people learn new word meanings, they are either building a new concept and creating new links *(e.g.,photosynthesis),* attaching a new label to a known concept (e.g., gluing *superfluous* onto the concept *of unnecessary),* or expanding the domain of a label (e.g., adding a new meaning *of break* to the associative network). When the word is a new concept, it needs to be anchored and consolidated within the domain of knowledge that is being taught. The word *magma* would not be taught alone but in conjunction with knowledge about volcanoes. In the development of this knowledge, it is important to link what is being learned to familiar words and concepts.

Research indicates that it is harder to learn a word for a new concept incidentally through context than to learn a new word for a known

concept (Nagy, 1997; Nagy et al., 1987). In a study of incidental word learning from context during independent reading, conceptual difficulty was found to be the strongest predictor of how easily the words were learned (Nagy et al., 1987). Words for which a new concept needed to be built (e.g., *osmosis)* were rated as conceptually difficult, whereas words that were synonyms for a well-known concept (e.g., *pusillanimous)* were rated as less conceptually complex. Nagy et al. (1987) found little incidental learning from context when words were rated as conceptually complex.

Purpose for reading is a factor that has been shown to be critical in reading comprehension research, but only one group of researchers has looked at this aspect of incidental word learning. In a study of sixth-grade students, Swanborn and de Glopper (2002) found that reading texts for different purposes influences the amount of incidental word learning that occurs. The probability of learning a word incidentally was highest when students read to gain knowledge of the topic (.10) and lowest in a free reading condition (.06). The low-ability group made no significant progress in its knowledge of words, regardless of the reading purpose. The average group made gains only when asked to learn about the topic, and the high-ability group learned significantly more words, with probabilities as high as .27 in both the free reading and the text comprehension conditions.

As world knowledge has frequently been overlooked in studies of vocabulary learning, Nagy (1997) argues cogently for broadening the perspective on acquiring vocabulary knowledge to include both linguistic knowledge (i.e., knowledge about morphemes) and extralinguistic knowledge (i.e., world knowledge). Given current understanding of the reading process (Anderson & Pearson, 1984; RAND Reading Study Group, 2002; Ruddell & Unrau, 2004), it makes sense that inferring the meaning of a word from context.

> involves a relationship between the situation model (the reader/listener's
>
> model of meaning of the text) and the text model, as well as knowledge of the
>
> nature of the possible mapping between the two. These, in turn, draw on the
>
> learner's world knowledge, his or her theory of the conceptual domain to

> which the word belongs and knowledge about the way in which the relevant part of the lexicon is organized. (Nagy, 1997, p. 83)

Studies by Diakidoy (1993, 1998) indicate that a student's familiarity with the topic of a passage has a significant effect on word learning from context; these studies predict more variance as a result of this world knowledge than from measures of local contextual support. Her studies indicate that, although the enrichment of local context may have value, it is less important than the development of rich conceptual knowledge. She found that prior knowledge of the main concepts was most significant in facilitating reading comprehension and in the ability to infer new word meanings. In addition, knowledge of concepts gained gradually over time had a more positive influence on reading comprehension and inferring word meanings from context than passages read immediately prior to the task.

Finally, growth in word knowledge is slow, incremental, and requires multiple exposures over time. Much of a student's vocabulary is learned incidentally through multiple exposures to words in multiple contexts (Nagy & Scott, 2000; Stahl, 2003) Through these encounters, students add to their growing network of knowledge about the word. However, not all children learn words from context at an equal rate, nor are all words equally learned from context. Many children arrive at our doorsteps with little background in the use of academic language or vocabulary. They depend on schools and schooling to become knowledgeable about the words found in an academic discourse. As educators, it is incumbent on us to provide the maximum opportunity for all students to gain access and knowledge about the academic discourse needed to succeed in schools. There are still many gaps in our research knowledge. However, it seems that a concerted effect on the part of publishers, authors, teachers, and researchers could improve the chances that all students, including those who have been marginalized by texts that are too difficult and inconsiderate, will learn important words. A multifaceted approach is necessary; words are unique, like individual students, and one type of instruction is not adequate.

Acquiring both word knowledge and world knowledge is a gradual and cumulative process (Hirsch, 2003). Designing materials intentionally, teaching word knowledge in conjunction with world knowledge, and recognizing those words that are likely to be "picked up" incidentally in texts and those that need more active instruction are necessary steps in closing the language gap.

2.2 Literature review

In this section different previous relevant research will be examined. The aim is to portray the points of differences and similarities. These studies have been carried out in Sudan.

Study (1) is conducted on semantics which is in a way relevant to vocabulary and namely entitled "The comprehensive and productive use of lexical items through semantic mapping and word list techniques for secondary level students." In this study was carried out at Khartoum University-Faculty of Education in 2000. In the said study two vocabulary learning strategies (semantic mapping and word-list) have been tested to find out their use in vocabulary acquisition and retention.

The second study was conducted by Dr. Medani Mohammed Osman entitled Vocabulary Learning Strategies, where the researcher examined a number of strategies particularly those suggested by Bialystok.

The third study was conducted Mahadi Mohammed Ismail "Semantic mapping for improving students' reading comprehension from teacher's perspective". This study sets out to examine whether reading comprehension can be improved as by gaining new vocabulary through semantic mapping.

The fourth study was conducted by Omer Naeem Mohamed entitled "The effect of teaching vocabulary to raise EFL learner's lexical awareness.

2.14 Summary

Intentional vocabulary learning strategies are an indispensable tool in describing and explaining the vocabulary development of a foreign language. VLS are also a tool in empowering learners to make wise decisions in terms of what to learn and how to learn. This study focused on the change of VLS when a group of EFL learners in Sudan University Science and Technology. As they progressed in a six-month intensive English proficiency enhancement programme, their passive and active vocabulary improved significantly. Some of these changes could be attributed to the changes in their VLS which in turn underwent significant shifts. VLS were found to be related to the growth of passive vocabulary and the participants' free use of active vocabulary at the K1 level. Beyond the first 1000 most frequent words, however, the pattern was not so straightforward. This is thought to have provided evidence to support Laufer's (1991) "active vocabulary threshold hypothesis", in that the development of active vocabulary follows a different pattern from that of passive vocabulary, and that beyond a threshold level of active vocabulary, growth is dependent on the learner's perceived need for use.

Chapter Three

Methodology

CHAPTER THREE
RESEARCH METHODOLOGY

This chapter will provide a full description of the research methodology adopted as well as the research instruments employed. Moreover, the validity and reliability of these instruments will be confirmed.

The chapter will include four main sections:

1. The subjects of the study
2. The teaching/learning materials.
3. The theoretical principles on which the methodology is based.
4. Instrumentation and procedures of data collection

3.1 The study methodology

The study adopted a mixed- methods approach: the descriptive analytical and experimental method. This allows the research instruments to complement each other. Hence, an experiment, questionnaires, and class observations were used to address the research questions and objectives. The (SPSS) program version 17 was used for data analysis.

3.2 Population and sample

The study population was students and the teaching staffs of English, male and female at Sudan University of Science and Technology. This experiment was conducted at the Faculty of Languages. As it is known, all the students in Sudan enter university after sending seven years studying English right at the basic level and the secondary school, after spending four years studying English at basic school. All the students are aged 16-18 years old. They all speak Arabic as their first language, and all of them have studied English for 7 years at school. All the students who took part in the study experiment were males and females.

The test used was similar to students test practiced on their text book and as Sudanese Secondary Certificate (see appendix 1). The test consists of true/false and multiple choice questions, such questions are good means to assess reading comprehension because they don't require production (Nuttal1982). The students stay for three years at secondary school.

All students have come from secondary school with good knowledge of English to help them get along quite properly with the exam. Tutors are well placed to take care of their classes and have helped cooperatively in conducting the experiment.

3.2.1 Questionnaire sample

The samples of this study included English language tutors and assistant professors at Sudan University of Science and Technology, College of Languages. They are as many as 100 teachers.

Table (3-1) shows teachers' numbers and their distribution according to sex.

SEX	FREQUENCY	PERCENTAGE
Male	52	52.0
Female	48	48.0
Total	100	100.0

According to the results in tables (3-3 & 3-4), a number of 250 pupils participated in the study, 58.8% were male and 41.2% were female, as shown in Table (3-3). However, all the respondents studied at a second year school class. They are better laced to take the test and stand experimentation. Moreover, all of them have completed their first year successfully as far as the English Language exam is concerned. They were arranged into three groups to facilitate the carrying out of the experiment and testing.

Table (3-4) Distribution of pupils according to their school grades.

Group	**Frequency**	**Percentage**
A	69	27.6%
B	85	34.0%
C	96	38.4%
TOTAL	250	100.0%

3.3 Research instruments

The data to inform this study were basically collected by using two main instruments, namely a test and a questionnaire for teachers.

3.4 Strategies for the research

The methodology adopted in this study is based mainly on a blend of the following methods and techniques:

1. Grounded Theory
2. Case study

3. Triangulation

4. Saturation

3.4.1 Grounded theory

This theory stresses the importance of "developing theories on the basis of empirical research and gradually build up general theories that emerge from data." (Denscombe, 2003: 110). This means that "researchers should engage themselves in fieldwork as the fundamental part of the work they should do." Practically, this entails that "the researcher should undertake data collection from the field." which has to be a continuing process. The basic concepts of the theory are:

a. Theories should be generated by a systematic analysis of the data.

b. The selection of instances to be included in the research reflects the developing nature of the theory and cannot be predicted at the start.

c. Researchers should start out with an "open-mind".

d. Theories should be useful at a practical level and meaningful to those on 'the ground'.

3.4.2 Grounded theory and the present study

The present study employs these concepts of Grounded Theory.

a. Grounded Theory is suitable for the present study since the present study focuses on language learning in a specific setting – the classroom context.

b. The data, which is taken first hand from the field, will be approached on an "open-mind" basis.

c. The results of the study can be of great use and meaning to those "on the ground". It will help enhance the learning outcomes of English language in the Sudanese context.

3.4.3 Triangulation

Triangulation refers to the practice of using multiple methods, data sources, and instruments to enhance the validity of research findings. Mathison (1988:14) explains that the notion of triangulation as a research strategy is based on some basic assumptions. Firstly, the bias inherent in any particular data source, investigator, or method will be cancelled out when used in conjunction with other data sources, investigators, and methods. Secondly, when triangulation is used as a research strategy the

result will be a convergence upon the truth about some social phenomenon. In other words, when data is collected from different sources and through different methods agree, the outcome is convergence.

Patton (2001: 247) advocates the use of triangulation by claiming that "triangulation strengthens a study by combining methods. This can mean using several kinds of methods or data, including using both quantitative and qualitative approaches".

3.4.4 Saturation

Saturation stems from Grounded Theory. It refers to the concept and practice of continuous sampling and collection and analysis of data until no new patterns emerge. Sandelowski (2008:875-876) points out that saturation occurs "when the researcher can assume that her/his emergent theory is adequately developed to fit any future data collected." Although Grounded Theory and saturation relate primarily to qualitative data, Glaser (1978:6) observes that

> *Grounded Theory method although uniquely suited to fieldwork and qualitative data, can be easily used as a general method of analysis with any form of data collection: survey, experiment, case study. Further, it can combine and integrate them. It transcends specific data collection methods.*

The present study combines both quantitative and qualitative data analysis. As such it makes use of saturation as a technique for reaching more conclusive results.

3.5 Research Experiment

There were three groups in the present study, that is (A),(B) and (C). The first one (A) as the experimental group, (B) and (C) were fused into a single (B) as a control group. Both members of the groups were daily exposed to reading comprehension for a couple of weeks. Then, for the remaining 45 days the tutor started to draw their attention to the question of lexical items, vocabulary with the aim of identifying the new lexis and trying to infer their meaning. Authentic material was included from time to time to make the work more challenging and have the students work hard through the selected texts.

The main difference between the classes, in terms of how they studied, was that the researcher could use Arabic in the English class. The researcher has to resort to L1 now and then to help explain things that may pose impediments to understanding, while Arabic was not used at all in the control group. Both classes took a pre-test prior to the instruction program and a post-test after the program.

3.6 Questionnaire

The teachers' questionnaire (TsQ.), consist of 15 multiple statements and two open-ended questions. It was divided into three parts (see appendix 3):

i) Use of dictionaries,

ii) The syllabus at university

iii) Tutors' training

Part one i) includes 5 statements surveying students' use of dictionaries particularly bilingual ones, with Likert 4 points scale (strongly agree,

Agree, disagree and strongly disagree).

Part two included also five statements surveying the tutors' attitude towards the syllabus, also with Likert 4 points scale.

Part three surveyed different issues ranging from tutors' training to teaching at the general education, with Likert 5 points scale.

The questionnaire papers were distributed to as many as a 100 tutors who send a considerable time responding to the different items. The papers were, and then collected after two days for conducting the desired analysis and evaluation.

Table (3-5) summary of teacher's questionnaire

Variable measured	**Measured by**
Use of dictionaries	Item 1,2,,4,5 and 6
Syllabus at university	Item 1,2,3, 4, 5 and 7
Tutors training	Item 1,2,4,5 and 5

3. 7 Classroom observation

The researcher visited some universities in Sudan and had a quick look at English language syllabus that was followed by these colleges. The researcher was also interested in attending reading comprehension sessions to get acquainted with the ways and the learning strategies students use to learn and retain new lexical items. The Classroom observations, which involved 7 teachers, were conducted by using check-list to note down observations. The check list covered the following items: explaining exercises, grammar, vocabulary, checking understanding, praising, and telling jokes. As for vocabulary, students provide equivalent in Arabic, no more. No one particular strategy was used to show how they approach their vocabulary learning.

3.8 Validity and Reliability of the test

The tests are believed to have content validity as they aimed at assessing the students‟ achievement in reading comprehension. The tasks required in the tests were comparable to those covered in the book and practiced in class. In addition, the test instructions were written clearly in English, and the examinee's task required was defined. Furthermore, the tests were validated by a group of experts who suggested some valuable remarks about the tests and the researcher responded to that. For the test reliability the study used the test-retest method: The test-retest method of estimating a test's reliability involves administering the test to the same group of people at least twice. Then the first set of scores is correlated with the second set of scores. Correlation ranges between 0 (low reliability) and 1 (high reliability) (highly unlikely they will be negative!).The coefficient correlation formula was used to calculate the correlation:

$$r = \frac{n(\Sigma xy) - (\Sigma x)(\Sigma y)}{\sqrt{[\, n\Sigma x^2 - (\Sigma x)^2 \,]\,[\, n\Sigma y^2 - (\Sigma y)^2 \,]}}$$

The results shown that there was strong positive correlation between the pre-test and post-test:

Pre- test: .878

Post-test: .757

3.8.1**Validity of the questionnaire**

The questionnaires of this study, were validated by a jury consisting of five assistant professors specialized in English language. They based their comments on the following criteria:

(i) The clarity of the items and instruction.

(ii) The simplicity of items, and how far they related to the subject.

(iii) The language used.

The jury made some remarks concerning some items and suggested modification for these items. Two items from were omitted, and the researcher responded to their suggestions, and made the required modifications.

3.8.2 Reliability of the questionnaire

In statistics, reliability is the consistency of a set of measurements often used to describe a test. For the reliability of the questionnaires, the study used the split – half method: A measure of consistency where a questionnaire is splitted in two and the score for each half of the questionnaire was compared with one another. The questionnaires were distributed to **100** teachers of English at Sudanese universities. The coefficient correlation formula was used to calculate the correlation:

The analysis shows that there was strong positive correlation between the answers given to the items asked: = 084%

3.9 Procedures

The questionnaire was administered to teachers by hand, and was given up to 15 days to respond to the questions, some were given to other teachers to distribute them. Two forms were returned unfilled, and some were lost.

3.9 Pilot Study

The pilot study (P.S) was conducted to check out the instruments used before their final administration. A group of randomly selected ten teachers, they were requested to fill in the questionnaire and feel free to write or comment orally on any observation they think necessary with a view to check the following:

1- The appropriate length of time needed to fill in the questionnaire.

2- Clarity of the questions.

The researcher received no comments regarding the above points from the teachers.

3.10 Summary of the chapter

This chapter described the methodology employed for gathering the data of the present study. Research instruments were described; instruments reliability and 50 validity were confirmed. Having finished with the methodology of the study, the next chapter will present data analysis, results and discussion.

Chapter Four

Analysis and Discussion of Data

Chapter Four

Data Analysis, Results and Discussion

This chapter presents the analysis of data obtained from experiment, teachers' questionnaire, pre-test and post-test and classroom observations.

4.1 Analysis of the experiment.

The analysis of the experiment will focus on answering the most important question: to what extent can the undergraduate syllabus pursued at universities teach vocabulary in a way that helps students learn vocabulary whether intentionally or else. To answer this question, we computed the mean, standard deviation, standard error and ranges for the pretest- and post-test scores of both experimental and control groups. T-test was computed to find out whether each group had made any progress as a direct result of instruction.

Table (4-1) showed that when the vocabulary items namely those already explained in Arabic glossary, students have displayed relatively higher scores than those in the control group who were deprived of the glossary on the post-test. (mean =69 and 61 respectively) with similar variations among students in the experimental and controls (SD = 20.92 and 20.20 respectively).

In view of the fact that both the experimental and control group have been equal in size when deprived of the glossary , no noteworthy differences have been detected between the groups on the basis of their pre-test mean scores formerly right at the outset of the experimentation. Results of the T-test in Table (4-2) shows that the mean scores of both control and experimental groups were (6.967) and (6.300) respectively, as shown in Table (4-2). Comparison of mean scores for the groups produced a difference of (+ 0.667) between experiment and control groups. Furthermore, the results of the T-test produced significant manifestations at the .001 level ($p<.001^{***}$) which definitely entails that the difference between the experiment and control scores were statistically significant. This indicates, beyond doubt, that a student grasp of the linking devices within the experimental group improved significantly as a result of being introduced to a substantial dose of the writing devices.

Table (4-1) Scores obtained by the end of the Pre-test and Post-test as distributed within the Experimental and Control Groups.

Group		Mean	SD	SE of Mean
Experimental Group	**Pre-test**	61.333	20.9241	3.5064
	Post-test	69.667	20.9241	3.8202
Control Group	**Pre-test**	69.667	19.2055	2.6846
	Post-test	61.000	20.2055	3.5064

Table (4-2) T-test comparing the results of the two groups.

Group	N	Mean	St. Deviation	t-observed	df	Sig 2 tailed	St. error mean
Experimental	30	6.967	6.300	1.3170	29	000	.3820
Control	30	6.300	1.3170	26.201	29	000	.2404

Judging by the results manifested at table (4-1), it is safely admitted that the performance of the students at the experimental group is significantly improved as compared with the scores of the control group students. Improvement on the side of the control group is unnoticeably felt, though they receive the same dose of classes after the pre-test. Both groups show improvements but the experimental group showed a marked improvement with the highest scores when compared to the slight improvements achieved by the control group. These results clearly demonstrate the strongest evidence of exploiting explained vocabulary to understand the texts.

4.2 Analysis of the Teachers' Questionnaire.

No.	STATEMENT	RESPONSE					
		Always	often	Sometimes	rarely	never	total
1.	Students are advised to use bilingual dictionaries to help them translate English words into Arabic language?	19 63.3%	16 (16%)	8 (8%)	15 (15%)	7%	100%

In view of the first item relating to the use of bilingual dictionaries, the majority of teachers (63.3%) stated poor language input always affect the students performance. While only 7% of the respondents believed that use of bilingual dictionaries never affect so extensively the students' performance. This suggests that using bilingual dictionaries do actually affect the students' performance in understanding written texts. Again, paying little attention to the question of bilingual dictionaries usage can have terrible consequences on the overall performance.

The dictionary has traditionally been a widely used tool by Foreign Language students, both in their self process of vocabulary acquisition and trying to understand a text. The reason is that vocabulary which is the main content of a dictionary can be considered «the building block of languages» (Schmitt, Schmitt, & Clapham 2001: 53). That is why students carry dictionaries, and not grammar books, when they travel abroad (McLaughlin 1978).

However, the more recent approaches such as the Communicative method seem to have left this tool aside. The dictionary seems to have been replaced by other techniques. This tendency started around the late 70s and 80s, when the prevalent view among educators was that L2 learners should consult a dictionary sparingly and only as a last resort (Carrell, De vine, & Eskey 1988). Consequently, this lexical tool was replaced by inferring from context, a strategy which was thought to be more efficient and effective for dealing with unfamiliar vocabulary. Students are encouraged and presumably trained to infer the meaning of foreign words with the help of context. In fact, Hosenfeld (1984) prompts teachers to train learners in the use of guessing techniques, so that they

can avoid the dictionary. Rubin (1975: 45) states that «the good language learner is a willing and accurate guesser».

Table (4-4) Tutors have to encourage their students to use pictures illustrated in the textbook to find the word meanings.

No.	STATEMENT	RESPONSE					
		Always	often	sometimes	rarely	never	total
2.	Tutors have to encourage their students to use pictures illustrated in the textbook to find the word meanings.	22%	21	4%	3%	00%	100%

Glancing at table (4-4), it becomes clear that encouraging students to use picture dictionaries is a desired feature in learning vocabulary. This helps maximize understanding. . 22 % of the respondents do agree or are in favor of using picture dictionaries. Very few are not in favor of picture dictionaries as they think they are not suitable for students at university level. This is true to a large extent that picture dictionaries are more suitable for young learners. However, almost all encyclopedias adopt drawings and sketches as important means of maximizing their subject matter.

Teachers should find the most effective ways in teaching vocabulary. According to Hubbard as cited in Syarifah (2001:1) teachers must make sure that students have understood the new words which will be remembered better if introduced in memorable way. It means that the teacher have to be more effective in teaching learning process, such as finding the suitable method or use variety of teaching techniques in order to help students to learn it well.

There are a lot of methods, techniques or strategies which can be applied in teaching vocabulary. However, they are not quite effective without teaching aid. Teaching aid is one of the important things which can support and make teaching process more interesting, and enable the students to improve their vocabulary easily. Many kinds of teaching aids

can be used in teaching vocabulary, and of those teaching aids supporting the learning activity is dictionary. As nation (1989) says " as well as being source information, dictionaries can also be aids to learning". In other words, dictionaries can help learners understanding and produce a word.

There are some types of dictionary; one of them is picture dictionary. Picture dictionary can be used in teaching vocabulary. It can help the students to understand a word easier because every word is presented in an interesting and enjoyable way and it also provides picture. Collin (1993) states that " picture dictionary is a book containing words of the language with the pictures". It means that by applying an appropriate technique to teach vocabulary can help the students to understand the word. The using of picture dictionary can be an effective way or an alternative way in teaching vocabulary.

Table (4-5) Meaning of words is best learnt by identifying their parts of speech. Dictionaries are very useful tools in this connection

No.	STATEMENT	RESPONSE					
		Always	often	sometimes	rarely	never	total
3.	Meaning of words is best learnt by identifying their parts of speech. Dictionaries are very useful tools in this connection.	25%	17%	4%	3%	1%	100%

Table (4-5) indicates that the majority of the respondents are of the same opinion that meaning of words is best learnt by identifying their parts of speech and that dictionaries are extremely useful as far this is concerned. . Only 2% of those respondent believed that teaching these mechanics is absolutely of no use. In comparison with the former percentage, the latter will be taken to as invalid.

Many instructors perceive that they should spend considerable time teaching correct grammar and usage. Studies tell us, however, that spending lots of time on explicit grammar instruction is less effective

than brief and focused work on "surface" issues in the writing and text comprehension tin which students are currently engaged and at an appropriate time in the process.

There are eight parts of speech in the English language: noun, pronoun, verb, adjective, adverb, preposition, conjunction, and interjection. The part of speech indicates how the word functions in meaning as well as grammatically within the sentence. An individual word can function as more than one part of speech when used in different circumstances. Understanding parts of speech is essential for determining the correct definition of a word when using the dictionary.

Every word in a sentence serves a specific purpose within the structure of that particular sentence. According to rules of grammar, sentence structure can sometimes be quite complicated. For the sake of simplicity, however, the basic parts of a sentence are discussed here. The two most basic parts of a sentence are the *subject* and *predicate*

The subject of a sentence is the person, place, or thing that is performing the action of the sentence. The subject represents what or whom the sentence is about. The simple subject usually contains a noun or pronoun and can include modifying words, phrases, or clauses.

The subject and predicate make up the two basic structural parts of any complete sentence. In addition, there are other elements, contained within the subject or predicate that adds meaning or detail. These elements include the direct object, indirect object, and subject complement. All of these elements can be expanded and further combined into simple, compound, complex, or compound/complex sentences.

As an example of the difference between parts of speech and parts of a sentence, a noun can function within a sentence as subject, direct object, indirect object, object of a preposition, or subject complement. Understanding this is crucial to the understanding of the meaning of the word.

Table (4-6) Classroom practitioners at university level are not adequately trained to handle the available material proficiently enough to challenge students into increasing their word power.

No.	STATEMENT	RESPONSE					
		Always	often	sometimes	rarely	never	total
4	Classroom practitioners at university level are not adequately trained to handle the available material proficiently enough to challenge students into increasing their word power.	28%	20%	2%	00%	00%	100%

Almost 80% (28%) of the respondents recognize the effect of varying classroom activities and enhancing classroom interaction in improving students' communicative competence especially in the realm of reading comprehension.

Principally, learning a foreign language means to communicate with other people to understand them, talk to them, read what they have written and write to them (Byrne, 1991). We know why reading is important, right? Not only does reading teach ESL students grammar, word usage and idea expression, but it also enables them to acquire new information about their second language's culture.

Additionally, reading helps students to see how English is communicated through writing, which is why reader. But **reading anything in a second language is never easy.** ESL students who are still juggling new vocabulary, grammar rules and even phonics may find reading not only tedious, but also challenging.

Most of the time, students may read an assigned story or text for the mere purpose of "doing" it. Other times, students may have diligently poured

over the text—but for one reason or another—completely misunderstood the content. **This is because reading is a complex cognitive process.** It involves your student recognizing individual words and putting a string of words together in their relevant context. Depending on the syntactic structure of the sentence and the overall paragraph theme, the semantic of each word may shift to carry on new meanings.

Table (4-7) The overall environment at undergraduate level is not advantageous to learning vocabulary.

No.	STATEMENT	RESPONSE					
		Always	often	sometimes	rarely	never	total
7	The overall environment at undergraduate level is not advantageous to learning vocabulary.	24 (48.0%)	21(42.0%)	4 (8.0%)	00%	00%	100%

Percentages drawn from table (4-7) reflect the importance of teaching and learning vocabulary inside the classroom. As many as 48% of the respondents consider that teaching and learning vocabulary for the purpose of improving Students' writing abilities of prime importance. This can be achieved through exposing students to vocabulary rich reading topics.

Speaking of reading, it has long been known that reading is one of the best ways to improve your vocabulary. In fact, the education experts at the Education Resources Information Center recently remarked that "reading is THE most efficient and effective means of acquiring vocabulary." Not only will reading help you better understand words and introduce you to new words, reading also helps you to become a better writer by exposing you to well-written prose.

Table (4-8) What worsens the situation more is that the English language syllabus adopted at undergraduate levels

No.	STATEMENT	RESPONSE					
		Always	often	sometimes	rarely	never	total
8	What worsens the situation more is that the English language syllabus adopted at undergraduate levels	32 (64%)	15 (30%)	2 (4.0%)	1(2.0%)	00%	100%

Almost all 64% of the respondents have agreed that the English language syllabus at university, particularly at lower levels, is not strong enough to cater for the different language components including vocabulary teaching strategies.

Vocabulary is the knowledge of words and word meanings. As Steven Stahl (2005) puts it, "Vocabulary knowledge is knowledge; the knowledge of a word not only implies a definition, but also implies how that word fits into the world." Vocabulary knowledge is not something that can ever be fully mastered; it is something that expands and deepens over the course of a lifetime. Instruction in vocabulary involves far more than looking up words in a dictionary and using the words in a sentence. Vocabulary is acquired incidentally through indirect exposure to words and intentionally through explicit instruction in specific words and word-learning strategies. According to Michael Graves (2000), there are four components of an effective vocabulary program.

The syllabus at university level hardly considers the question explicit instruction of vocabulary is highly effective. To develop vocabulary intentionally, students should be explicitly taught both specific words and word-learning strategies. To deepen students' knowledge of word meanings, specific word instruction should be robust (Beck et al., 2002). Seeing vocabulary in rich contexts provided by authentic texts, rather than in isolated vocabulary drills, produces robust vocabulary learning (National Reading Panel, 2000). Such instruction often does not begin with a definition, for the ability to give a definition is often the result of knowing what the word means. Rich and robust vocabulary instruction goes beyond definitional knowledge; it gets students actively engaged in

using and thinking about word meanings and in creating relationships among words.

Research shows that there are more words to be learned than can be directly taught in even the most ambitious program of vocabulary instruction. Explicit instruction in word-learning strategies gives students tools for independently determining the meanings of unfamiliar words that have not been explicitly introduced in class. Since students encounter so many unfamiliar words in their reading, any help provided by such strategies can be useful.

Word-learning strategies include dictionary use, morphemic analysis, and contextual analysis. For ELLs whose language shares cognates with English, cognate awareness is also an important strategy. Dictionary use teaches students about multiple word meanings, as well as the importance of choosing the appropriate definition to fit the particular context. Morphemic analysis is the process of deriving a word's meaning by analyzing its meaningful parts, or morphemes. Such word parts include root words, prefixes, and suffixes. Contextual analysis involves inferring the meaning of an unfamiliar word by scrutinizing the text surrounding it. Instruction in contextual analysis generally involves teaching students to employ both generic and specific types of context clues.

Table (4-9) The English syllabus is not given enough weight along the lines of other syllabuses

No.	STATEMENT	RESPONSE					
		Always	often	sometimes	rarely	never	total
9	The English syllabus is not given enough weight along the lines of other syllabuses.	26 (52.0%)	20 (40.0%)	3 (6.0%)	0 (00.0%)	1 (2.0%)	100%

At Colleges where English is taught as a requirement subject, very little weight compared to other subjects is given to English. More hours need to be allocated to the teaching of English in order to improve the standards of the students.

Table (4.10) Students should be encouraged to ask their peers of the words they ignore their meaning..

No.	STATEMENT	RESPONSE					
		Always	often	sometimes	rarely	never	total
10	Students should be encouraged to ask their peers of the words they ignore their meaning..	30 60%	16 32%	3 (6.0%)	1 2.0%	0	100%

Judging by table 4.10 almost all respondents (60%) are greatly in favor of peer learning, though the concept is perhaps unclear to some. Many tutors attach very little importance to the question of peer learning. In countries like the Sudan where culture lays a central role in shaping up lots of practices, peer learning may be viewed as a shameful practice. Asking for a meaning of a word is like begging. A lot of input is required to modify this view to many concepts including peer learning.

Peer learning is not a single, undifferentiated educational strategy. It encompasses a broad sweep of activities. For example, researchers from the University of Ulster identified 10 different models of peer learning (Griffiths, Housten and Lazenbatt, 1995). These ranged from the traditional proctor model, in which senior students tutor junior students, to the more innovative learning cells, in which students in the same year form partnerships to assist each other with both course content and personal concerns. Other models involved discussion seminars, private study groups, parrainage (a buddy system) or counseling, peer-assessment schemes, collaborative project or laboratory work, projects in different sized (cascading) groups, workplace mentoring and community activities.

The term 'peer learning', however, remains abstract. The sense in which we use it here suggests a two-way, reciprocal learning activity. Peer learning should be mutually beneficial and involve the sharing of knowledge, ideas and experience between the participants. It can be described as a way of moving beyond independent to interdependent or mutual learning (Boud, 1988).

Students learn a great deal by explaining their ideas to others and by participating in activities in which they can learn from their peers. They develop skills in organizing and planning learning activities, working collaboratively with others, giving and receiving feedback and evaluating their own learning. Peer learning is becoming an increasingly important part of many courses, and it is being used in a variety of contexts and disciplines in many countries.

The potential of peer learning is starting to be realized, but examination of the ways in which it is used in existing courses suggests that practices are often introduced in an ad hoc way, without consideration of their implications. When such practices are used unsystematically, students unfamiliar with this approach become confused about what they are supposed to be doing, they miss opportunities for learning altogether, and fail to develop the skills expected of them. Much peer learning occurs informally without staff involvement, and students who are already effective learners tend to benefit disproportionately when it is left to chance.

Table 4.11 The teaching of English at lower undergraduate levels is entrusted to barely trained tutors. Hence, vocabulary, learning is affected.

No.	STATEMENT	RESPONSE					
		Always	often	sometimes	rarely	never	total
10	The teaching of English at lower undergraduate levels is entrusted to barely trained tutors. Hence, vocabulary, learning is affected.	54%	18%	16%	12%	0	100%

The above table shows that 54% respondents agree that teaching at university level is entrusted to hardly trained tutors hence affecting the overall teaching operation and vocabulary teaching and learning among others.

Teacher training is an isolated requirement in the teaching learning process and usually a secondary need for the system to run effectively. Teaching and learning goes hand in hand which makes it necessary for the institutions to have teacher training modules which are well knit in the curriculum and should cater to the demands of teaching fraternity which may arise during the teaching learning process. A good teacher training program should be like a support for teachers to sharpen their tools as and when required.

There is more or less clarity on the parameter to measure student achievement in schools but measuring teacher effectiveness is still a vague and obscure practice. Measuring tutors effectiveness at university level is undoubtedly a difficult task but it is important for universities to bring out some clarity to the role of teacher and the expected outcomes from the teaching. A good tutor is one who enriches the syllabus by authentic materials which will help the students develop both academically and emotionally.

Lower levels at universities are badly taken care of. Fresh graduates are assigned the task of teaching English at these levels. It is these levels that are drastically in need of good handling as long as they usually come from secondary schools with terribly bad knowledge of English. At university the opportunity is moderately ripe for them to improve if they were immersed in the proper environment of learning.

Table (4-12) Almost all syllabuses are designed by local Sudanese expertise but mostly assigned to staff members with relatively inadequate knowledge in syllabus design.

No.	STATEMENT	RESPONSE					
		Always	often	sometimes	rarely	never	total
12	Almost all syllabuses are designed by local Sudanese expertise but mostly assigned to staff members with relatively inadequate knowledge in syllabus design.	54%	18%	16%	12%	0	100%

The above table (4-12) indicates that syllabuses developed by people with little if ever knowledge of syllabus design can definitely have a much detrimental effect. Curriculum implementation, according to Okello and Kagoire (1996:124) "is a network of varying activities involved in translating curriculum designs into classroom activities and changing people's attitudes to accept and participate in these activities". However, curriculum implementers (lectures, professors, dean, head departments standard officers and others) are faced with barriers which hinder the successful implementation of the curriculum.

Table (4-13) Almost all syllabuses are designed by local Sudanese expertise but mostly assigned to staff members with relatively inadequate knowledge in syllabus design.

13	Almost all syllabuses are designed by local Sudanese expertise but mostly assigned to staff members with relatively inadequate knowledge in syllabus design.	54%	18%	16%	12%	0	100%

English language syllabuses at undergraduate levels are designed by Sudanese expertise particularly if they are university requirements. The syllabus designer should have complete information about the target group. Here target group means the learner. He should know who are the learner, what their age of group, the information about social economical status of the learner, their previous knowledge, their interest and behavior of the learners. And syllabus should have particular target group in mind and it should be clear about the learner of the class. 54% of the respondents agree that those entrusted with the creation or designing of the syllabus are not well placed to carry out the intended mission quite effectively.

The aims of the teaching of foreign language as a second language vary as to include to teach learner to read to write and to speak foreign language and to speak foreign language and to improve foreign language. Here object are written from the learners' point of view, objective are description of what is to be achieved in a course by the learner. They have more detailed description of what a learner is expected to be able to do at end of a period of teaching. This might be a single lesson the chapter of a book of particular topic. For instance, the objective of a classroom lesson might be the use of a verb, adjective noun pronoun etc.

So, aims and objectives of the course should emerge from the analysis of the learners need. If the learners wanted to learner second level English, so a syllabus should find out the following information.

Table (4-14) *Learning about the culture of the native speakers can help students remarkably learn vocabulary.*

No.	STATEMENT	RESPONSE					
		Always	often	sometimes	rarely	never	total
14	Learning about the culture of the native speakers can help students remarkably learn vocabulary.	24 (48.0%)	21(42.0%)	4 (8.0%)	00%	00%	100%

Almost half the respondents do agree that culture knowledge of the target language is essential in expanding the learner's knowledge of the language. The link between foreign language learning and culture learning has been established by the linguists and anthropologists a long time ago.

The American Council on the Teaching of Foreign Languages has concluded that through the study of other languages, students gain a knowledge and understanding of the cultures that use that language. Moreover, students cannot truly master the language until they have also mastered the cultural contexts in which the language occurs. Linguistic competence alone is not enough for learners of a language to be competent in that language. From simple, everyday things, like forms of address to appropriate ways of expressing disagreement, culture forms an integral part of the language learning curricula. In any case, in order for communication to be successful, language use must be associated with other culturally appropriate behavior, not only linguistic rules in the narrow sense.

Culture is often taught implicitly, as a part of the linguistic forms that students are learning. To make students aware of the cultural features reflected in the language, teachers can make those cultural features an explicit topic of discussion and bring them to the forefront when

appropriate. It is of utmost importance that cultural information be presented in a nonjudgmental way which doesn't evaluate the distinctions between the students' native culture and the culture explored in the classroom. Claire Kramsch uses the term "third culture" of the language classroom to describe an ideal learning environment, one where learners can explore and reflect on their own and the target culture and language.

Table (4-15) Syllabuses designed locally often fail to cater for external culture which is desirable to enhance the learners background and word power.

No.	STATEMENT	RESPONSE					
		Always	often	sometimes	rarely	never	total
15	Syllabuses designed locally often fail to cater for external culture which is desirable to enhance the learners background and word power.	26 (52.0%)	20 (40.0%)	3 (6.0%)	0 (00.0%)	1 (2.0%)	100%

As was shown on the previous table along with this one , the importance of the target language culture is undeniably crucial to master the new language.

There are several practical ways to effectively teach culture, along with teaching a language:

Provide students with **authentic materials** – Watching films, news broadcasts or TV shows can provide students with ample information about non-verbal behavior, such as the use of personal space, eye contact or gestures. On the other hand, reading authentic fictional or non-fictional materials can also be a good introduction about the values and norms of the target language culture. These materials also help the

students improve their language skills, especially in terms of listening and understanding written texts.

Compare and contrast **proverbs** – Apart from being very informative about the two cultures, proverbs can lead to a discussion about stereotypes or values represented in the proverbs of both cultures. Furthermore, proverbs and idioms form a significant part of every language and knowing them is a plus for every learner.

Use **role plays** – They especially support students in making the shift in perspective from their own culture, which can become a strange one and is looked at from the outside, and the target culture, which becomes more familiar. In the process, students practice speaking and using language in unpredictable situations.

Research **cultural items** – While also practicing their presentation or writing skills in the target language, the students can inform their classmates about an assigned item from the foreign culture and contextualized the knowledge gained.

Students as cultural resources – Many classrooms nowadays are very culturally and ethnically diverse and they often have exchange students from foreign cultures or returnees from an exchange program in the target culture. They can be invited to the classroom as expert sources and share authentic insights into the home and cultural life of native speakers of the language.

4. Summary of the chapter

This chapter presented the analyzed data of the study which consisted of: analysis of experiment and teachers' questionnaire through tabulation of frequencies and percentages.

Chapter Five

Conclusions and Recommendations

Chapter Five

Summary, Conclusions and Recommendations

This chapter provides a summary of the study, conclusions, recommendations and suggestions for further studies.

5.1 Summary and Conclusions

This study is an attempt to explore issues strongly linked with the teaching and learning of vocabulary considered from an intentional point of view. The recommendations reflect the overall views to find answers to the questions posed in the present study. Suggestions have been made as to the upcoming studies.

The study also aimed to find evidence to back up the hypothesis that teaching of individual words as an intentional vocabulary learning strategy, particularly those words which are easier to learn, helps promote learners' vocabulary. The study also through the questionnaire which was administered to the tutors proved that dictionaries are such essential tool in promoting students comprehension and writing. It also surveyed the tutors views about the kind of syllabuses adopted at undergraduate levels whether they are effective in providing with the right dose of language to improve.

Now, to be more precise, the study set out to answer the following questions:

1. To what extent can the teaching of individual words as an intentional vocabulary learning strategy help promote learners' vocabulary?
2. Will exposure to rich language help improve learners' vocabulary and that learned vocabulary is sustained long enough to be used when required?
3. Can generative word knowledge as a vocabulary learning strategy be advantageous as a long-term learning strategy?

In order to come up with solid answers based on the investigation carried out in the present research, the following hypotheses have been formulated:

1. Teaching of individual words as an intentional vocabulary learning strategy, particularly those words which are easier to learn, helps promote learners' vocabulary.

2. Exposure to rich language helps improve learners' vocabulary and that learned vocabulary is sustained long enough to be used when required.

3. Generative word knowledge as a vocabulary learning strategy is advantageous as a long-term learning strategy.

To accomplish the set objectives, the study adopted a mixed- methods approach: the descriptive analytical and experimental methods. This enabled the researcher to draw on the relevant tools the research instruments that can complement each other. Hence, experiments, questionnaires, were used to tackle the research questions and objectives. The (SPSS) program version 19 was used for data analysis.

The study found out that teaching of individual words at lower levels can be effective, however as students proceed with their study they have to look for a different learning strategy. This finding is in harmony with Al-many research carried out in Malaysia and China. These studies which were mentioned chapter two, provided evidence in favor of teaching individual words but lower levels of education. When this result is considered within the framework of hypotheses, it appears that the first hypothesis is confirmed.

It was also found that exposure to rich language help the learner to improve quite considerably, and that the kind of vocabulary gained through this strategy will continue to be sustainable. Furthermore, students as well as the tutors demonstrated their acceptance of the fact that generative word knowledge as a vocabulary learning strategy is advantageous as a long-term learning strategy, hence confirming the third hypothesis.

5.2 Summary of the Findings

1. The syllabus at the undergraduate level does not provide the students with the appropriate dose of vocabulary which will help them attain their comprehension end.
2. Tutors of English do not provide students with extra reading activities so as to develop or improve their comprehension and oral abilities.
3. Teachers of English language do not encourage students to read so as to improve and increase their vocabulary.
4. Inclusion of cultural elements as found in literature books within the syllabus can contribute to great extent in enhancing students reading and speaking skills.

5. Literature books enrich the students' vocabulary and help them improve their oral communication.

6. Dictionary use should be encouraged.

Tutors should seek to include authentic materials to back-up the syllabus.

5.3 Recommendations

On basis of the findings and conclusions, the following points are recommended:

1- Designing English language syllabus at undergraduate level should be entrusted to expertise and at least old practitioners and educators.

2- English language syllabus should be supported by authentic materials to reinforce students' word power.

3- English language syllabus should be enriched with vocabulary which meets students 'communicative purposes and further develop their

References

References

Alexander, L.G. (1967). First Things First. London: Longman.

Breen, M.P. (1984a). Process syllabuses for the language classroom. In C.J.Brumfit (Ed.). *General English Syllabus Design. ELT Documents No. 118*. London: Pergamon Press & The British Council. 47-60.

----------. (1984b). Process in syllabus design and classroom language learning. In C.J.Brumfit (Ed.). General English Syllabus Design. ELT Documents No. 118. London: Pergamon Press & The British Council.

----------. (1985a). Authenticity in the language classroom. *Applied Linguistics*, 6/1, 60-70.

----------. (1985b). The social context for language learning - a neglected situation? *Studies in Second Language Acquisition.* 7, 135-158.

----------. (1987a). Contemporary paradigms in syllabus design, part I. *Language Teaching*, 20/2, 81-91.

----------. (1987b). Contemporary paradigms in syllabus design, part II. *Language Teaching*, 20/3, 158-174.

Breen, M.P. &Candlin, C. (1980). The essentials of a communicative curriculum in language teaching. Applied Linguistics, 1/2, 89-112.

Breen, M.P., Candlin, C. & Waters, A. (1979). Communicative materials design: some basic principles. RELC Journal, 10/2.

Brinton, D. M., Snow, M. A., &Wesche, M. B. (1989). *Content-based second language instruction*. New York: Newbury House.

Brown, G.A. & Yule, G. (1983). *Teaching the Spoken Language*. Cambridge: Cambridge University Press.

Brumfit, C.J. (1981). Notional syllabuses revisited: a response. *Applied Linguistics*, 2/1, 90-92.

Brumfit, C.J. (Ed.). (1984a). General English Syllabus Design. ELT Documents No. 118. London: Pergamon Press & The British Council.

Brumfit, C.J. (1984b). The Bangalore Procedural Syllabus. *English Language Teaching Journal* 38/4, 233-241.

Brumfit, C.J. (1984c). Communicative Methodology in Language Teaching. Cambridge: Cambridge University Press.

Brumfit, C.J. (1984d). Key issues in curriculum and syllabus design for ELT. In C.J. Brumfit (Ed.). *General English Syllabus Design*. *ELT Documents No. 118*. London: Pergamon Press & The British Council. Bruner, J. (1960). The Process of Education. Cambridge, Mass.: Harvard University Press.

Brumfit, C.J. (Ed.). (1984a). General English Syllabus Design. ELT Documents No. 118. London: Pergamon Press & The British Council.

Chomsky, N. (1966). Linguistic theory. In R.G. Mead, Jr. (Ed.). *Language Teaching: Broader Contexts. Northeast Conference on the Teaching of Foreign Languages: Reports of the Working Committees.* New York: MLA Materials Center. 43-9. Reprinted also in J.P.B. Allen & P. van Buren (Eds.). (1971). *Chomsky: Selected Readings.* London: Oxford University Press. 152-9, with an explanatory introduction by the editors.

Cook, V. J.(1974). English Topics. Oxford: Oxford University Press.

Cook, V.J. (1978a). Second-language learning: a psycho-linguistic perspective. *Language Teaching and Linguistics: Abstracts,* 11, 73-89.

Cook, V.J. (1978b). Some ways of organising language. *Audio-Visual Journal*, 16/2, 89-94.

Cook, V.J. (1985). Language functions, social factors, and second language learning and teaching. International Review of Applied Linguistics 23/3, 177-198.

Cook, V.J. (1994). Linguistics and Second Language Acquisition. London: Macmillan.

Council of Europe (1971). Linguistic Content, Means Of Evaluation And Their Interaction In The Teaching And Learning Of Modern Language In Adult Education. Symposium at Rüschlikon, May 1971. Council of Europe Paper CCC/EES. Strasbourg: Council of Europe. 135.

Crystal, D. (1981). Directions in Applied Linguistics. London: Academic Press

Faucet, L., West, M., Palmer, H. & Thorndike, E.L. (1936). *The Interim Report on Vocabulary Selection for the Teaching of English as a Foreign Language.* London: P.S. King.

Ferreira, L. (1981). *Notion by Notion.* Rowley, MA: Newbury House.

Genesee, F. (1987). Learning through Two Languages: Studies for Immersion and Bilingual Education. Rowley, MA: Newbury House.

Genesee, F. (1998). Content-based language instruction (Chapter 5). In Met, M. (ed.). Critical Issues in Early Second Language Learning (pp. 103-123). Reading, MA: Scott Foresman-Addison Wesley.

Givon, T. (1984). *Syntax: A Functional-Typological Introduction, Volume 1*. Amsterdam: John Benjamins.

Grabe, W. &Stoller, F.L. (1997). Content-Based Instruction: Research foundations. In Snow, M.A. & Brinton, D.M. (eds.). The Content-Based Classroom: Perspectives on integrating language and content. (pp. 5-21). NY: Longman.

Grandin, J.M. (1993). The University of Rhode Island's International Program. In Kreuger, M. & Ryan, F. (eds.). Language and Content: Discipline- and Content- Based Approaches to Language Study. (pp.130-137) MA: D.C. Heath.

Halliday, M.A.K. (1973). *Explorations in the Functions of Language*. London: Edward Arnold.

Halliday, M.A.K. (1976). *Learning How to Mean: Explorations in the Development of Language.* London: Edward Arnold.

Halliday, M.A.K. (1978) *Language as a Social Semiotic.* London: Edward Arnold.

Hindmarsh, R. l980. Cambridge English Lexicon. Cambridge: Cambridge University Press

Howatt, A.P.R. (1984). *A History of English Language Teaching*. Oxford: Oxford University Press.

Hymes, D. (1966). On communicative competence. Paper originally read at the Research Planning Conference on Language Development among Disadvantaged Children, Yeshiva University, June 1966. Reprinted, in part, in C.J. Brumfit& K. Johnson (Eds.). (1979). *The Communicative Approach to Teaching.* Oxford: Oxford University Press.

Hymes, D. (1971). Competence and performance in linguistic theory. In R. Huxley & E. Ingram (Eds.). *Language Acquisition and Methods.* New York: Academic Press.

Hymes, D. (1972). Models of the interaction of language and social life. In J.J. Gumpertz& D. Hymes (Eds.). *Directions In*

Sociolinguistics: The Ethnography Of Communication. New York: Holt, Rinehart & Winston.

Hymes, D. (1974). *Foundations in Sociolinguistics: an Ethnographic Approach.* Philadelphia: University of Philadelphia.

Johnson, K., & Swain, M. (1997). Immersion Education: International perspectives. New York: Cambridge University Press.

Jones, L. (1979). *Notions in English*. Cambridge: Cambridge University Press.

Kenyon, D. (1992). An investigation of the validity of the demands of tasks on performance-based tests of oral proficiency. Paper presented at the Language Testing Research Colloquium, Vancouver, Canada.

Long, M.H. & Crookes, G. (1986). Intervention points in second language classroom processes. University of Hawai'i Working Papers in ESL, 5/2.

----------. (1992). Three approaches to task-based syllabus design. *TESOL Quarterly*, 26/1, 27-55.

----------. (1993). Units of analysis in syllabus design: the case for the task. In G. Crookes & S.M. Gass (Eds.). *Tasks in a Pedagogical Context.* Cleveland, UK: Multilingual Matters. 9-44.

Maidment, Stella and Roberts, Lorena (2009). *Happy House: Class Book Level 2*. University Press.

Met. M. (1994). Teaching content through a second language. In Genesee, F (ed.) Educating Second Language Children: The whole child, the world curriculum, the whole community. (pp. 159-182). NY: Cambridge University Press.

Miura, A. &McGloin, N. H. (1994). An Integrated Approach to Intermediate Japanese. Tokyo: The Japan Times.

Mohan, B. (1986). Language as a medium of learning. In Language and content (pp.1-22). Reading, MA: Addison Wesley.

Mohanan, K.P. (1992). Emergence of complexity in phonological development. In C. Ferguson, L. Menn and C. Stoel-Gammon (Eds.). *Phonological development.* Timonium, MD: York Press, Inc.

Nation, I.S.P. (1990). Teaching and Learning Vocabulary. New York: Newbury House.

NHK International & Japan Foundation (1994) Foreign Student in Japan: Dares and Rahman. [Video]

Nunan, David (1998) . *Sylabus design: a scheme for teacher education.* Editors: C. N. Candling and H. G. Widdoson. Oxford: OUP

Ogden, C.K. (1930). *Basic English: An Introduction with Rules and Grammar.* London: Kegan Paul, Trench &Trubner.

Palmer, A.S. & Bachman, L.F. (1981). Basic concerns in test validation. In Alderson & Hughes (eds.), (1981)

Richards, J. C (2002).Curriculum Development in Language Teaching. CUP.

Richards, J. C., & Rodgers, T. S. (2001). Approaches and methods in language teaching (2nd ed.). New York: Cambridge University Press.

RubiStar: Create rubrics for your project-based-learning activities. [Online] http://rubistar.4teachers.org

Shanahan, Timothy. *The Reading Teacher*. May 1995, Vol. 48, No. 8. *apud*

Sinclair, B. & Ellis, G. (1985). Learner training: preparation for learner autonomy. Paper presented at the 19th Annual TESOL Convention, New York.

Sinclair, B. & Ellis, G. (1992). Survey review: learner training in EFL course books. *English Language Teaching Journal* 46/2, 209-225.

Sinclair, B. (1996). Materials design for the promotion of learner autonomy: how explicit is explicit? In R. Pemberton, S.L. Edward, W.W.F. Or, and H.D. Pierson (Eds.). *Taking Control: Autonomy in Language Learning.* Hong Kong: Hong Kong University Press. 149-165.

Sinclair, B. (1999). Survey review: recent publications on autonomy in language learning. *ELT Journal*, 53/4, 309-329.

Sinclair, J. McH. &Renouf , J. (1988). A lexical syllabus for language learning. In R. Carter & M. McCarthy (Eds.). *Vocabulary and Language Teaching*.New York: Longman. 140-158.

Sinclair, J. McH. (1987). Collocation: a progress report. In R. Steel & T. Threadgold (Eds.). *Language Topics: Essays in Honor of Michael Halliday*.Philadelphia, PA: John Benjamins. 319-331.

Slayden, Bridget. *Thematic Units in the Classroom.* Article in the Internet, 1999. Availuable at:

http://www.suite101.com/article.cfm/english_education_k12/26979/1

Stoller, F. L. &Grabe, W. (1997). A Six-T's approach to content-based instruction. In Snow, M.A. & Brinton, D. M. (eds.). The Content-Based Classroom: Perspectives on Integrating Language and Content. (pp. 78-94). NY: Longman.

Stryker, B. Leaver, Betty Lou (2007). *Content-Based Instruction: from theory to practice*. In *Content-based instruction in foreign language education: models and methods*. Stephen B. Stryker, Betty Lou Leaver, editors. Georgetown University Press, Washington, D.C.

Thombury. Scon (1997) . *About language: tasks for teachers of English*. CUP.

Ur, Penny (1996). *A course in language teaching: practice and theory*. CUP.

West, M. (1926). *Bilingualism (With Special Reference to Bengal).* Calcutta: Bureau of Education, India.

White, A. (Ed.). (1981). *New Directions for Teaching and Learning: Interdisciplinary Teaching.* San Francisco: Jossey-Bass.

White, C. (1999). Expectations and emergent beliefs of self-instructed language learners. *System*, 27. 443-57.

White, L. (1987). Against comprehensible input: The input hypothesis and the development of L2 competence. *Applied Linguistics*, 8/1, 95-110.

White, R.M., Martin, M., Stimson, M. & Hodge, R. (1991). *Management in English Language Teaching.* Cambridge: Cambridge University Press.

White, R.V. (1988). *The ELT Curriculum, Design, Innovation and Management.* Oxford: Basil Blackwell.

White, R.W. (1959). Motivation reconsidered: the concept of competence. *Psychological Review,* 66, 297-333.

Widdowson, H.G. (1968). The teaching of English through science. In J. Dakin, B. Tuffen& H.G. Widdowson. *Language In Education: The Problem In Commonwealth Africa And The Indo-Pakistan Sub-Continent*. London: Oxford University Press. 115-175.

Widdowson, H. G. (1971). The teaching of rhetoric to students of science and technology. In *Science and Technology in a Second*

Language, 7. Reprinted in *Explorations in Applied Linguistics* (1979). Oxford: Oxford University Press. 7-17.

Widdowson, H.G. (1978a). *Teaching Language as Communication*. Oxford: Oxford University Press.

Widdowson, H.G. (1978b). Notional-functional syllabuses: 1978, part 4. In C.H. Blatchford & J. Schacter (Eds.). *On TESOL '78.* Washington, DC: TESOL. 32-5.

Widdowson, H.G. (1979). *Explorations in Applied Linguistics*. Oxford: Oxford University Press.

Widdowson, H.G. (1981). English for Specific Purposes: Criteria for course design. In L. Selinker, E. Tarone& V. Hanzeli. *English For Academic And Technical Purposes: Studies in Honour of Louis Trimble.* Rowley, MA: Newbury House. 1-11.

Widdowson, H.G. (1983). *Learning Purpose and Language Use*. Oxford: Oxford University Press.

Wilkins, D. (1972). Grammatical, situational and notional syllabuses. In Association Internationale de LinguistiqueAppliqueé (Ed.). *Proceedings of the 3rdInternational Congress of Appied Linguistics.* Heidelberg: Julius GrooseVerlag. Reprinted in Brumfit& Johnson (eds.) (1979). 82-90.

Wilkins, D. (1974). Notional syllabuses and the concept of a minimum adequate grammar. In S.P. Corder, & E. Roulet (Eds.). *Linguistic Insights in Applied Linguistics.* AIMAV/Didier.

Wilkins, D. (1976). *Notional Syllabuses: A Taxonomy and its Relevance to Foreign Language Curriculum Development.* London: Oxford University Pres..

Wilkins, D., Brumfit, C.J. & C. Paulston (1981). Notional Syllabuses revisited: A response, some comments, and a further reply. *Applied Linguistics*, 2/1, 83-90.

Willis, D. & Willis, J. (1988). *Collins COBUILD English Course*. London: Collins.

Willis, D. & Willis, J. (1996). Consciousness-raising activities in the language classroom. In J. Willis & D. Willis (Eds.). *Challenge and Change in Language Teaching*. Oxford: Heinemann.

Willis, D. (1990). *The Lexical Syllabus.* London: Collins.

Willis, D. (1993). Syllabus, corpus, and data-driven learning. In C. Kennedy (Ed.): Plenaries from the 1993 IATEFL Conference, Swansea, Wales.

Willis, J. & Willis, D. (Eds.) (1996). *Challenge and Change in Language Teaching*. Oxford: Heinemann

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

Appendixes

SUDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

COLLEGE OF GRADUATE STUDIES AND SCIENTIFIC RESEARCH

COLLEGE OF EUCATION-ENGLISH DEPARTMENT

A QUESTIONNAIRE FOR UNIVERSITY TUTORS AT SUDANESE UNIVERSITIES

Dear Colleague,

This questionnaire will gather data about the learning strategies students use when setting about learning vocabulary intentionally. The analyzed data will help form a better insight about the nature, causes and how the problem can be addressed.

Part 1: Personal data:

1. Name: (optional_____

2. Highest degree earned:

Bachelor's Degree ☐ Master's Degree ☐ PhD ☐

3 How many years have you been teaching English

1.year ☐ 2-5 years ☐ 2. 6-10 years ☐ more than 10 ye ☐

Part 2: General statements:

Instructions:

Please choose only one answer for every question or statement.

Use the following scales:

Strongly agree: (If you strongly agree with the idea stated in the item).

Agree: (If you agree with the idea stated in the item).

Disagree: (If you disagree with the idea stated in the item).

Strongly disagree: (If you strongly disagree with the idea stated in the item).

No.	STATEMENT	RESPONSE			
		STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
1.	Students are advised to use bilingual dictionaries to help them translate English words into Arabic language?				
2	Tutors have to encourage their students to use pictures illustrated in the textbook to find the word meanings.				
3	Meaning of words is best learnt by identifying their parts of speech.				
4.	Classroom practitioners at				

	university level are not adequately trained to handle the available material proficiently enough to challenge students into increasing their word power.				
5	Teachers, there at university, do not provide students with varied reading activities which reinforce vocabulary learning strategies.				
6.	The overall environment at undergraduate level is not advantageous to learning vocabulary.				
7	Upon entering university, first-year students come with a terribly poor level of vocabulary knowledge.				
8.	What worsens the situation more is that the				

	English language syllabus adopted at undergraduate levels across Sudanese Universities is not effective enough to develop vocabulary learning.				
9.	The English syllabus is not given enough weight along the lines of other syllabuses				
10	Students should be encouraged to ask their peers of the words they ignore their meaning..				
11	The teaching of English at lower undergraduate levels is entrusted to barely trained tutors. Hence, vocabulary, learning is affected.				
12	Almost all syllabuses are designed by				

	local Sudanese expertise but mostly assigned to staff members with relatively inadequate knowledge in syllabus design.				
13	Not all the parts of the syllabus, i.e. The skills are given the same time in handling, and so vocabulary learning is given very little time.				
14	Learning about the culture of the native speakers can help students remarkably learn vocabulary.				
15	Syllabuses designed locally often fail to cater for external culture which is desirable to enhance the learners background and word power.				