# MAKING LEARNERS AWARE OF LEARNING STRATEGIES TO PROMOTE AUTONOMY AND IMPROVE VOCABULARY ACQUISITION 

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## FACULTAD DE CIENCIAS DE LA EDUCACIÓN

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Extranjera

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## APPROVAL

The thesis titled MAKING LEARNERS AWARE OF LEARNING STRATEGIES TO PROMOTE AUTONOMY AND IMPROVE VOCABULARY ACQUISITION presented by Brian McKitting in accordance with the requirements of being awarded the Degree of Master in Education with Mention in Teaching English as a Second/Foreign Language was approved by the thesis director : Mrs. Maria Esther Linares and defended on_before a jury with the following members:

President

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The author

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## INTRODUCTION

Why do many EFL students, even after years of instruction, still demonstrate a relatively low level of English proficiency? The instructorresearcher involved in this paper has long pondered this question. Since vocabulary plays such an important role in language acquisition, it is worth reconsidering how efficiently it is both taught andlearned.

Vocabulary is typically presented in a text, explicitly or implicitly explained, perhaps used communicatively, reviewed a few times and evaluated. However, is this enough? This process is very teachercentered with learners usually remaining passive as it takes place. Even if they have in fact acquired all the vocabulary presented in the classroom, will they retain this knowledge, or do they only store it in their short-term memories, and after the testing process forget most of it?

With the very limited time available in the EFL classroom, how can learners be expected to acquire the large amount of vocabulary required to become reasonably proficient? Perhaps the answer would be to focus not on the teaching of vocabulary, but on helping students become more independent. If learners are made aware of some vocabulary learning strategies, can they become more autonomous and less teacherdependent? This formed the basis of this paper: would it be possible to include the explicit teaching of vocabulary learning strategies into an already busy EFL class? If so, would learners be prepared to adopt these techniques? And would their use improve vocabulary acquisition and retention?

The first chapter of this paper identifies the problem, the low level of lexical knowledge of EFL students. Then the research hypothesis, the reasoning behind the paper and the objectives of the study are set out.

The theoretical underpinning of this research is presented in the second chapter. It initially establishes the importance of lexical knowledge, which in many EFL courses is taken to be secondary to the learning of grammatical structures. Next, the processes involved in vocabulary learning are discussed, and some techniques which can be used to teach lexis are presented. The paper goes on to describe some common vocabulary learning strategies, and how these vary from person to person. How instructors approach (or don't) the teaching of VLS is reviewed and research into them examined. Finally, the theoretical basis behind the use of vocabulary cards is focused on. It becomes clear that the teaching of VLS involves some very complex issues which should, nevertheless, be tackled. The following chapter explains the experimental methodology applied to this research. It sets out the quantitative approach used, and describes the experimental process in detail. Standard EFL classes were randomly designated as the pilot, control and experimental groups to test the hypothesis.

The results are presented in chapter four. Before any conclusions could be drawn, the results were analyzed statistically to determine any significant difference between them. Then, an auxiliary study, which was carried out after the initial experiment, is described. This was set up to extend the experimental period, to determine whether the vocabulary knowledge acquired would be retained long term.

In the final chapter, the research findings are discussed. The implications and limitations of the study are highlighted, and recommendations made.

## CHAPTER 1 INVESTIGATION OUTLINE

### 1.1. Formulation of the Problem

Some English language schools have a system that places students with a different instructor every month as they progress through the different levels and often the curriculum does not include the teaching of learning strategies, leaving it up to the individual instructor to decide whether or not to teach them. Under these circumstances, English acquisition, and therefore the communicative competence of the students, might be negatively influenced. One of weakest areas for manystudents is vocabulary, even for those who are in advanced EFL classes. Nation, P. and Waring, R. (1997) ${ }^{1}$ noted that even after many years of study many adult foreign learners of English have less than $25 \%$ of the vocabulary knowledge of an educated native speaker. Having such a limited lexis hinders both their ability to understand texts beyond the basic level, as well as their capacity to express themselves accurately and fluently.

### 1.2. Hypothesis

### 1.2.1. General Hypothesis

[^0]If taught vocabulary vocabulary learning strategies in a standard EFL class, students' vocabulary acquisition will improve.

### 1.2.2. Specific Hypothesis

If shown how to create and use vocabulary cards, learners will put this knowledge into use both inside and outside the classroom.

If learners create and use vocabulary cards, they will learn vocabulary better and retain that knowledge longer.

### 1.3. Statement of Objectives

### 1.3.1. General Objective

To determine whether the instruction of vocabulary learning strategies (VLS) can be incorporated into a standard EFL course.

### 1.3.2. Specific Objectives

To ascertain whether it is feasible to successfully include the explicit teaching of a vocabulary learning strategy in a EFL class which has the characteristics mentioned above. That is, if taught how to produce anduse vocabulary cards, learners will put this knowledge into practice both inside and outside the classroom. Furthermore, to establish whether their use will increase learners' ability to both acquire and retain new vocabulary.

### 1.4. Justification of Investigation

When they come across new lexis, EFL learners lack the strategies required to truly acquire it. Students generally look up the unknown item in a dictionary, and perhaps note down a definition, either in their L1 orin the L 2 , which although helpful, is not veryeffective. Once written down, the definition will generally never be given any more attention and the word will be forgotten. Learners should be taught more efficient ways to
acquire new vocabulary. Anderson (2005) ${ }^{2}$ : "Research on L2 learning strategies consistently shows that inexperienced and less successful L2 learners use the same learning strategies repeatedly even if they make no significant progress in their tasks."

Actual learning of new vocabulary requires a much more systematic approach. Pimsleur, P. (1967) ${ }^{3}$ : "When a new word is learned, theprocess of forgetting begins at once and proceeds very rapidly.....a small number of recalls, if properly spaced, can bring about retention over a long period." Learners need to be provided with the practical tools that can be used to repeatedly come into contact with the new lexicon and thus facilitate its long-term acquisicion.

The size and scope of vocabulary required to become competent L2 users cannot be achieved inside the EFL classroom alone. Therefore, it is crucial to provide learners with the techniques needed to continue learning outside the classroom. If taught VLS, students will become more efficient and independent learners, and will be more likely to achieve their language learning goals. Furthermore, this instruction can be carried out within the framework of a school system which involves monthly changes of teacher.

### 1.5. Limitations of Investigation

This experiment was carried out over a month and involved three groups of participants. It involved including experimental procedures into standard EFL classes which imposed obvious limitations.

One serious limitation was time. These experiments were carried out parallel to normal classroom activities which meant that very little time was available to practice the use of vocabulary cards and to check the use of journals. If, for example, more time had been available, perhaps more

[^1]texts could have been used and more vocabulary tested. As only one month was spent with the groups for the initial experiment, the test of residual vocabulary knowledge was given only one week after the end of the experimental period, which was not ideal.

Using such a small sample size, both in terms of number of students and the number of words tested, must have affected the validity of the experiments and a higher number of target words would have been especially beneficial. Kate Button (2013) ${ }^{4}$ discussed the negative effects of a small sample. Although she was writing about neuroscience, the effects she mentioned are relevant to almost all small-scale scientific studies: "Small studies testing for an effect that is of moderate strength will mostly be inconclusive because moderate effects are too small to detect with a small study.... Just as small studies are more susceptible to random variation between individuals, they are more susceptible to variability in research practice." To put it simply: the smaller the sample size, the more unreliable the results. It would have been better to have included more groups in the sample, but this would have complicated matters as itwould have required the willing participation of the institution and other instructors, which would have been far from guaranteed.

### 1.6. Antecedents of Investigation

### 1.6.1. Case Studies:

Case Study 1: A Study of the Learning Strategies Used by Secondary School and University Students of English in Spain by Ignacio Palacios ${ }^{5}$ in 1989 and 1990 at the Universidad de Santiago de Compostela, Spain.

[^2]http://www.theguardian.com/science/sifting-the-evidence/2013/apr/10/unreliable-neuroscience-power-matters

[^3]Results: This research revealed what strategies and techniques were used by learners and the challenges they faced when learning English. It also indicated the key role that strategy use played in their language learning. The investigation also highlighted that it would be useful to investigate how background variables (sex, age, learning style, motivation, social status) would affect students' choice of strategies, and the possible long term effects of the training of learning strategies. Furthermore, the study concluded that more than one source of data (in this case interviews) should be used.

Comments on the results: Teachers can help students by making them consider how they learn and explicitely training them in techniques which promote learning. If possible, any research should take into account background variables, and whether the training would be beneficial long term. It also highlighted the importance of having several data collection instruments.

Connection with the current study: The research showed how important the explicit teaching of learning strategies is, and also gave some insights on how to carry out the study.

Case Study 2: Variables Affecting Choice of Language Learning Strategies by University Students ${ }^{6}$ by Rebbeca Oxford and MarthaNyikos in 1989 at the University of Alabama.

Results: Motivation was found to have the strongest effect on choice of learning strategy. It affected both the frequency of use and the number of different techniques used. It was said that this was a strong indicator of the "the degree of active involvement in language learning". Furthermore, it was said that there was a virtuous circle of high strategy use and high motivation, they fed on each other. Becoming a more efficient learner also led to higher self-esteem. The reseach suggested that students should be encouraged to test and use a wide variety of strategies. Furthermore, a

[^4]language course should take into account learners' needs, including "the need to gain self-control and autonomy through strategy use." Students can be made more independent if they are made aware of learning strategies inside the EFL classroom.

Comments on the results: The study highlighted some of the challenges and benefits of incorporating the explicit teaching of (vocabulary) learning strategies into an EFL classroom.

Connection with the current study: The investigator/teacher should as far as possible try to develop techniques to motivate and encourage the participants over the research period. Motivation is often lacking in EFL learners who have no obvious use of the English that they learn in the classroom.

Case Study 3: Vocabulary Acquisition Strategies of Indonesian Postgraduate Students Through Reading. ${ }^{7}$ by Nanang Bagus Subekti and Michael J. Lawson in 2006 in South Australia.
Results: This study demonstrated that reading can be an effective way to acquire new words. Although the participants who were postgraduate L2 learners of English were generally active users of strategies, most of them tended to use simple techniques. This investigation was basedon two types of tests: Word Recognition Test (WRT) andMeaning Recall Test (MTT) which measured the depth of vocabulary knowledge. In general, the results indicated that the students did better in the former. The study also proved that both WRT and MTT scores were largely dependent on the frequency of use, and the number of different of strategies which were used.

Comments: The research showed that learners who were more active strategy users were more efficient. It also highlighted the importance of depth of vocabulary knowledge that acquisition of lexicon is not a black

[^5]and white issue. Furthermore, it signalled that reading can form the basis of vocabulary acquisition.

Connection with the current study: The paper highlighted that reading is an efficient way to learn vocabulary and could be used in this study, and that depth of vocabulary knowledge should be taken into account.

## CHAPTER 2 THEORETICAL BACKGROUND

### 2.1. The Importance of Vocabulary Learning

Is vocabulary learning so important?
Many approaches to EFL teaching focus primarily on grammar and vocabulary is seen as secondary, as something which will simply be acquired en route. However, if the main aim is to help learners to develop communicative skills, should the emphasis not be first on vocabulary development? After all, if someone says, "Tomorrow I go airport" is this not understandable? If an individual is unaware of this basic lexicon, he/she will be able to communicate very little. Grammar can be focused on later, as it is subservient to developing a reasonably wide vocabulary base.

Joe, G. (1994) ${ }^{8}$ maintains that developing a core vocabulary is critical to communication and the application of grammatical rules. Grammatical errors are often less serious than lexical faux pas. They tend not to interfere with communication so much, yet EFL classes focus a great deal on explaining the difference between the use of different tenses, for example.

Segler discusses how vocabulary errors are often reported by both learners and native speakers as being the most disruptive in terms of

[^6]communication. He also gave details of several studies which indicated the clear relationship between lexical knowledge and reading comprehension Segler, T. (2001) ${ }^{9}$.

Perhaps the focus on grammar of most language courses is based on the false sense of accomplishment that it gives both teachers and learners. While vocabulary is practically infinite, a grammatical structure can be learnt in a very short time, whether or not it can be used correctly is another matter.

Although many aspects of the Lexical Approach have been heavily criticized, the importance which it gives to lexis could be considered exemplary. Its basic principle is that: "Language is grammaticalised lexis, not lexicalised grammar" Lewis (1993) ${ }^{10}$. In other words, while lexis is central in creating meaning, grammar plays a subservient managerialrole. If you accept this principle, then the logical implication is that we should spend more time helping learners develop their lexis and stock ofphrases; and less time on grammatical structures.

### 2.2. Processes Involved in Vocabulary Learning

Nation (2001) ${ }^{11}$ concluded that there are three principal stages involved in vocabulary learning: noticing, retrieval and generative use.
These steps are progressive and the earlier steps are included in the later steps. That is, retrieval occurs after noticing, and generative use happens after both noticing and retrieval. Only after the earlier steps have been completed can the last stage of generative use be reached.

Nation, I. (2001): A. Noticing: Noticing is the first psychological process in vocabulary learning, and it means paying attention to the word item.

[^7]B. Retrieval: Retrieval is the second major step that promotes vocabulary learning. Retrieval can be either receptive orproductive, and it does not happen when the meaning and the form of the word are shown at the same time. Receptive learning occurs when the learner recognizes the word form and remembers its meaning.

On the other hand, productive retrieval involves wanting to express the meaning of the word and retrieve the word in spoken or written form. Stahl and Fairbanks (1986) uses the word "comprehension" to explain retrieval as follows, "Comprehension, in which the child demonstrates the comprehension of a learned association either by showing understanding of a word in asentence or by doing something with definitional information, such as finding an antonym, classifying words, and so forth"(p.76). There are studies that show the importance of retrieval in incidental vocabulary learning.

Naturally, the frequency of the word may be a factor in vocabulary learning. When the same words were exposed to the learners a number of times, they are more likely to be retained (Elley: 1989; Ellis etal: 1994; Stahl \& Fairbanks: 1986).
C. Generative Use: Generative (creative) use is the third major process during vocabulary teaching. It occurs when the language learner "produces a novel response to the word" (Stahl \&Fairbanks: 1986, p. 76). In other words, when the learner meets or uses the word that is used differently from previous meetings, he or she experiences generative use. In productive skills, learners change the concept of the word in this process when they make their own sentences, and they realize other features and properties of the word from before. This can be a change of meaning or part of speech. For example, the learner encounters the verb water (e.g. giving water to plants) after meeting the same word in the noun form, which causes the reconceptualization of the word water.

The table over relates the psychological processes involved in vocabulary learning to classroom activities (ibid p74-77):
$\left.\begin{array}{|c|c|c|}\hline \begin{array}{c}\text { Psychological } \\ \text { conditions } \\ \text { encouraging } \\ \text { learning }\end{array} & \begin{array}{c}\text { Signs that the conditions } \\ \text { are likely to be } \\ \text { occurring }\end{array} & \begin{array}{c}\text { Design features of the } \\ \text { activity that promotes } \\ \text { conditions }\end{array} \\ \hline \begin{array}{c}\text { Noticing a } \\ \text { word }\end{array} & \begin{array}{c}\text { Learner consults a } \\ \text { glossary, } \\ \text { Learner pauses over } \\ \text { word, Learner negotiates } \\ \text { word }\end{array} & \begin{array}{c}\text { Definition, glosses, } \\ \text { highlighting } \\ \text { unknown word in } \\ \text { salient position }\end{array} \\ \begin{array}{c}\text { Retrieving a } \\ \text { word }\end{array} & \begin{array}{c}\text { Learner pauses to recall, } \\ \text { Learner does not consult } \\ \text { a dictionary or gloss, } \\ \text { Learner produces a } \\ \text { previously unknown } \\ \text { word }\end{array} & \begin{array}{c}\text { written input }\end{array} \\ \begin{array}{c}\text { Using the } \\ \text { word } \\ \text { generatively }\end{array} & \begin{array}{c}\text { Learner produces a word } \\ \text { in a new sentence context }\end{array} & \begin{array}{c}\text { Role play based on } \\ \text { written input }\end{array} \\ \text { Learner produces } \\ \text { associations, causal links, } \\ \text { etc }\end{array} \quad \begin{array}{c}\text { Retelling without the } \\ \text { input text, } \\ \text { Brainstorming }\end{array}\right]$

## Table 1. Psychological Processes Involved in Vocabulary Learning and Classroom Activities

According to the above, it would seem logical that teachers should try to encourage learners to participate as much as possible in these types of activities. The processes involved in learning vocabulary were also described by Hatch and Brown (1995) ${ }^{12}$. They proposed a five-stepmodel which is far from linear. A circular process was described with both forward and backward steps possible, but they suggest that if learning continues, the overall process will be forwards. They described a 5R

[^8]model which involves: receiving, recognizing, retaining, retrieving, and recycling.

The 5R-model is a dynamic circulatory system in which loops and sub-cycles are likely:
Step 1: Receiving (reception)
Step 2: Recognizing
Step 3: Retaining
Step 4: Retrieving
Step 5: Recycling in the four language skills
For step 1, learners have a number of choices for encountering new words. They may find them incidentally or intentionally, through the four main language skills, audio or visual materials, and from teachers, native speakers or other learners. It has been maintained that to achieve natural incidental acquisition, learners should use high contextualising resources.

Hulstijn, Hollander, and Greidanus (1996) ${ }^{13}$ emphasised that in incidental learning students need to pay more attention because there are so many words that have to be learnt, so intentional word teaching/learning activities alone cannot meet the need. After encountering and identifying new words, learners usually either consciously or subconsciously make efforts to recognise them. In step 2 , forms or meanings of the words are in general identified; learners might guess or analyse the meanings of the words through morphological elements that they have seen before; associate or create an image of the new words from sound or form. This may be a basic step for retaining and retrieving words from memory, which connects to the retention involved in step 3. Apart from learners' mental efforts, they may also use other aids, like using a dictionary, or ask others. However, if learners choose to neglect the newwords, and if the new words are not met frequently, then the subsequent steps of vocabulary learning may not always take place. There is

[^9]a line which separates active from passive knowledge (receptive and productive). However, such a division may not be always stable; some words can be learned at Step 1 and the learner jumps directly to Step 5.

This model highlights the complexity of vocabulary learning, and demonstrates how learners can take backwards steps in their lexical development, which may be one of the reasons why languagelearners can become demotivated. It also highlights how, in most cases, externally controlled vocabulary instruction is doomed to failure. Lexical learning is such an individual process, varying not only from person to person but also from word to word. Imposing a one-size-fits-all method on learners is clearly ludicrous and they should instead be in charge of their own learning.

Of course, teachers' beliefs about how vocabulary is acquired affect the way in which they teach it. They may rely on context and expect learners to acquire new vocabulary naturally or they may teach the vocabulary explicitly.

### 2.3. Vocabulary Learning Techniques

There are a great many techniques which may be used both in and outside the classroom to promote the acquisition of lexicon. Oxford and Crookall (1990) ${ }^{14}$ : divided vocabulary learning techniques into four main categories: decontextualizing, semi-contextualizing, fullycontextualizing, and adaptable:

- Decontextualizing techniques: remove the word as completely as possible from any communicative context (word lists, flashcards, and dictionary use).
- Semi-contextualizing techniques: allow some degree of context but fall short of full contextuality (word groupings, word or concept association, visual imagery, aural imagery, keyword, physical response, physical sensation, semantic mapping).

[^10]- Fully contextualizing techniques: embed the new words in a more or less normal communicative context (reading and listening practice, speaking and writing practice).
- Adaptable techniques (structured reviewing): reinforce other techniques at any part of the contextuality continuum. The technique entails going back over second language vocabulary at different intervals, at first close together and then increasingly far apart. Structured reviewing is scientifically based on memory principles, which highlight the importance of primacy, recency, duration, spacing, pacing, and linking. They also stated that second language textbooks typically fail to make any overt suggestions to learners about these techniques.

The above highlight one of the most widely discussed aspects involved in the learning of vocabulary, whether a decontextualized or a contextualized approach should be used. For many a decontextuailized approach is seen as a return to the dark ages of ELT with words being learnt in lists with only their translations, while a context only approach is seen as being more real, similar to the way in which native speakers learn their language.

Nielsen, B. (2006) ${ }^{15}$ describes the arguments: Convictions are strong among many language professionals that contextualized vocabulary learning is more effective than learning words in lists. Oxford and Scarcella: 1994 for example, observe that while decontextualized learning (word lists) may help students memorize vocabulary for tests, students are likely to rapidly forget words memorized from lists. McCarthy: 1990 argues that a word learned in a meaningful context is best assimilated and remembered. However, most studies have failed to produce findings favoring contextdependent vocabularylearning (e.g. Morgan and Bailey: 1943; Wind and Davidson: 1969; Gershman: 1970, Tudor and Hafiz: 1989; Hulstjin: 1992).

Moreover, in recent literature dealing with vocabulary acquisition, there can be seen increasing advocacy for explicitly

[^11]teaching words out of context at an early stage of language acquisition, with more context-based vocabulary learning taking place at later stages of language development (e.g. Coady:1997; Meara: 1997; Nation and Newton: 1997). To justify their position, these advocates often draw attention to the paradoxical situation facing the novice L2 (second language) learner of having to learn vocabulary through extensive reading or listening when they don't know enough words to read or listen well. This suggests the logical importance of helping beginners explicitly learn the basic 3,000 word families thought to represent the fundamental lexical competence by which learners can read independently and acquire language in a natural manner (Laufer: 1997).

Teachers often assume that learners can understand new vocabulary based on an understanding of the context in which it is found. However, (Nation: 2001) shows that for new vocabulary to be understood from context, a minimum of $98 \%$ of the words must be understood.

The latter indicates the pitfall of using authentic material to present new vocabulary. Perhaps only adapted texts can be considered appropriate for the EFL classroom. It may also explain the difficulties which less-able learners face. If they fail to develop vocabulary knowledge at the beginning of an EFL course, they face a vicious circle of continuously more difficult texts of which they comprehend an ever shrinking proportion.

An obvious alternative would be to combine both approaches, presenting the new vocabulary in a meaningful context, but in adapted texts to ensure that the $98 \%$ threshold is reached for the majority of learners and then to use a decontextualized approach to learning the vocabulary.

As Nielsen, B. (2006) argues: "Two studies have found learning that involves both contextual reading and explicit vocabulary instruction results in much greater gains in vocabulary knowledge than does contextualized learning through reading alone (Paribakht and Wesche: 1997; Zimmerman: 1994)."

### 2.4. Definitions of Language LearningStrategies

The following are some examples of the many definitions of language learning strategies:

Schmitt, N. (1997) ${ }^{16}$ maintained that a strategy should have the following characteristics (a strategy):

1. Should involve choice, that is, there are several strategies to choose from.
2. Be complex, that is, there are several steps to learn.
3. Require knowledge and benefit from training.
4. Increase the efficiency of learning and use.

Wenden and Rubin (1987:19) ${ }^{17}$ define learning strategies as "any sets of operations, steps, plans, routines used by the learner to facilitate the obtaining, storage, retrieval, and use of information."

Richards and Platt $(1992: 209)^{18}$ state that learning strategies are "intentional behavior and thoughts used by learners during learning so as to better help them understand, learn, or remember new information."

Faerch Claus and Casper $(1983: 67)^{19}$ stress that a learning strategy is "an attempt to develop linguistic and sociolinguistic competence in the target language."

According to Stern (1992:261) ${ }^{20}$ "the concept of learning strategy is dependent on the assumption that learners consciously engage in activities to achieve certain goals and learning strategies can be regarded as broadly conceived intentional directions and learning techniques."

[^12]It would seem that all language learners use language learning strategies to some extent, according to most of the above definitions this occurs consciously. Although, it could be argued that learners often use techniques unconsciously. Students in the language classroom adopt techniques to help process new information and perform tasks. They try to find the easiest, most efficient and/or quickest way to do what is required of them. It would appear that it is impossible to avoid the use of language learning strategies.

### 2.5. Taxonomies of Vocabulary Learning Strategies

The following presents some of the vocabulary learning strategies which researchers have identified and described as being used by learners: Nation, I. (2001): p218 grouped strategies into three main classes: planning, sources and processes:
\(\left.$$
\begin{array}{|cc|}\hline \text { General Class of Strategies } & \text { Types of Strategies } \\
\hline \begin{array}{c}\text { Planning: choosing what to focus on } \\
\text { and when to focus on it }\end{array}
$$ \& Choosing words <br>
\& Choosing strategies <br>
Choosing the aspects of <br>
word knowledge <br>

Planning repetition\end{array}\right]\)| Analysing the word |  |
| :---: | :---: |
| Sources: finding information about |  |
| words | Using context |
|  | Consulting a reference |
|  | source in L1 or L2 |
| Using parallels in L1 or L2 |  |
| Processes: establishing knowledge | Noticing; Retrieving ; |
|  | Generating |

Table 2. Vocabulary Learning Strategies (Nation: 2001)
Oxford, R. (1989) ${ }^{21}$, divided learning strategies into six main catagories:

[^13]1. Metacognitive techniques for organizing, focusing, and evaluating one's own learning.
2. Affective strategies for handling emotions or attitudes.
3. Social strategies for cooperating with others in the learning process.
4. Cognitive strategies for linking new information with existing schemata and for analyzing and classifying it.
5. Memory strategies for entering new information into memory storage and for retrieving it when needed
6. Compensation strategies (such as guessing or using gestures) to overcome deficiencies and gaps in one's current language knowledge.

She also stated that language learning strategy research has focused overwhelmingly on metacognitive and cognitive strategies, which are very important, but the other strategies have been neglected.

### 2.6. Individual Differences and Vocabulary LearningStrategies

The range and types of vocabulary learning strategies which a learner decides to employ are of course dependent on many factors, which include motivation, personality, gender, learning background, and learning styles. Motivation: Oxford and Nyikos (1989) ${ }^{22}$ found that "highly motivated learners used more strategies relating to formal practice, functional practice, general study, and conversation/input elicitation than poorly motivated learners."

Learning background: An individual who comes from a teachercentered background will most likely use very different vocabulary learning strategies from one who has been involved in more democratic learner-centered classes.

Learning style: according to Oxford (1990), a learner's general approach to language learning determines his/her choice of L2 learning strategies. For example, analytic learners prefer strategies such as contrastive analysis and discerning words and phrases, whereas global

[^14]students use strategies to find meaning: guessing, scanning, predicting and to converse without knowing all the words: paraphrasing, gesturing.

Personality type: Erhman (1990) ${ }^{23}$ suggests that there is no one"best" personality type for learning. Each of us has certain "assets" and "liabilities" when it comes to language learning. For example, extroverts are said to have the asset of being willing to take risks but require external stimulation and interaction which are defined as liabilities.

Gender: From experience more advanced classes generally contain more female learners and the majority of language teachers are female. Yongqi, P. (2003) ${ }^{24}$ : Sex differences in vocabulary learning have also received some attention. Boyle (1987) found that, despite a female superiority in general proficiency, male students outperformed their female counterparts in listening and vocabulary. Oxford, Lavine, Hollaway, Felkins, and Saleh 1996 discovered that females were significantly more willing to try out new vocabulary learning strategies, a finding corroborated in a few other studies (Gu: 2002; Young \& Oxford: 1997).

Culture: The cultural background of learners obviously influences the type of vocabulary learning strategy which they are likely to employ: an individual who has been brought up in a traditional teacher-centered educational environment such as that in most of Peru is likely to have a very different approach to someone who has been educated in a more progressive learner-centered environment.

Yongqi, P. (2003): Learning Context and Vocabulary Learning Strategies: Compared to task- and person-dependent strategies, learning context has received only cursory attention. Most studies would either ignore the educational and cultural traditions, the availability of input and output opportunities, and the classroom environment, or try to confine the contextual dimension byfocusing

[^15]on one homogeneous group of learners. Many studies, however, do discuss their results by singling out the context factor. Oxford's (1996) volume, though not specifically on vocabulary learning, underscores the importance strategy researchers are beginning to place on learning context. Personal styles of learning, for example, have been shown to be very much related to cultural differences (Nelson: 1995). In addition, classroom learning environments should demand different vocabulary learning strategies from informal learning contexts. Likewise, the availability and richness of input/output opportunities should also determine the strategies learners decide to use.

Research efforts have largely been directed towards discovering the "best" strategy for vocabulary retention. In reality, however, learners tend to utilize a varietyof strategies in combination. Recent research (e.g., Ahmed: 1989; Gu \& Johnson : 1996; Parr: 1997; Sanaoui: 1995) indicates that these approaches to, or styles of vocabulary acquisition, which may relate more to the learner thanto the task, may be more potent predictors of success than individual vocabulary learning strategies.

Conceptions of learning have been found to differ from culture to culture (e.g., Watkins \& Biggs: 1996). Even the same strategy may be executed in different ways in different educational traditions. More research clearly needs to be done along the learning context dimension.

Of course, the problem with culture variations, is exactly that, results obtained from studying strategy use in one culture cannot be transferred to another learning situation.

### 2.7. Classroom Approaches to the Teaching of Vocabulary Learning Strategies

How are vocabulary learning strategies generally approached by teachers? EFL course books at times teach strategies, but this would appear to be piecemeal, and if teachers do not actively reinforce these techniques then the likelihood of their adoption by learners is minimal. The study of vocabulary is mostly undertaken as very much a teacher-centered
activity. The following describes an Asian context, but it would seem to be similar to the situation here in Peru.

Wei Wei (2003) ${ }^{25}$ : Teachers tend to supply information for priority needs in the teaching process, to correct students' errors and check students' understanding. It remains a teacher-centred teaching style. Overall, the practice of vocabulary pedagogy has long been criticised for over ten years for such flaws (e.g. Sinclair and Renouf 1988). Despite rich theoretical developments, little seems to be effectively applied by modern language teachers (Meara 1998; Oxford and Crookall 1990; Oxford and Scarcella 1994; Sanaoui 1996; Zimmerman 1997).

So it would seem that the question whether or not learners can be taught to be more independent is international. Due to the sheer scale of lexicon, it cannot be taught in a traditional teacher-centered classroom. Learners need to be made aware of vocabulary learning strategies, so that they can use these techniques to become more independent. However, there are many difficulties faced by teachers when they decide to teach strategies.

Wei Wei (2003): Constraints in classroom teaching: Teachers' narrow use of vocabulary teaching strategies may be because they believe that giving the meaning of words directly can be less timeconsuming, or because of their familiarity with certain methods only. Moreover, it has been argued that vocabulary teaching is least likely to be effective, because there is a belief that vocabulary is learnt in a very limited way in classrooms. Students, therefore, have a general feeling that they "were not taught enough words in class", but have to rely on themselves in the learning process byspeaking, reading or watching TV (Morgan and Rinvolucri: 1986).

There is then a strong argument, which Coe (1997: 47) made, that "vocabulary must be learnt, not taught", as learning a word needs a long-term process of encountering it in many experiences. Coe (ibid.) questioned if there is much effect of teaching or giving more

[^16]exercises to enrich students' knowledge of words: there are simply too many unknown words which are difficult to cover in class.

Taking the problem of teaching collocations in classrooms as one example, Gough (1996) indicated: One problem with collocation is that, although it is too important a subject to ignore, it is far too big a subject to teach explicitly in class - even if you taught only collocations and nothing else, what you could cover in a 100-hour course would be simply the tip of the iceberg. Another problem is that textbooks don't seem to take a very systematic approach to collocation - often exercises ask students to saywhich words can go with which, without giving them any data on which to base these judgements, making them more like tests than teaching activities (p.32). However, being aware of these difficulties is not a reason for abandoning the effort to raise learners' awareness of collocation and to teach them to notice it for themselves (e.g. Nation 1975).

Even if a teacher decides to teach a vocabulary learning strategy, the question is which? When researching this area it becomes immediately obvious that there are a great deal of options and opinions. Thequestion is which strategies are most likely to be successful in the context in which one is teaching? Which would make the most efficient use of the limited amount of time available in an already busy EFL classroom?

Wei Wei (2003) highlighted some of the difficulties faced by teachers: What teachers consider useful strategies may only be based on assumptions (Carter: 1998; Tinkham: 1993), rather than based on considering relevant theories and research findings. Nevertheless, this is not without its reasons, as it may be that teachers are at loss and do not know on which research findings they should rely (Crookes: 1998). For example, choosing between the extreme of whether to learn words from a list or from a context can be debatable. Stevick (1982): pointed out that learning from a word list is often disfavoured by teachers but students often do it. Nation (1990) commented that learning from a vocabulary list can be either good or bad, whereas learning through the contexts can be time- consuming. Carter (1998) was unsure of the benefits of learning from the context alone, and believed that a mixture of different methods can be better.

Teachers are confronted with a great deal of often contradictoryadvice and therefore probably adopt a method which they feel comfortable with and think is effective rather than due to actual quantitative research.

### 2.8. Research into Vocabulary Learning Strategy Use

Research into the use of vocabulary learning strategies has often focused on how "good" and "poor" learners approach learning vocabulary. This approach assumes that by determining the actions of good learners, less able learners can be instructed on how to mimic their moresuccessful peers.

Ahmed (1989) ${ }^{26}$, in a study involving 300 learners of English, found that good learners not only used more vocabulary learning strategies but also relied more on different strategies than did poorer learners.

Sannoui (1995) ${ }^{27}$, identified two distinctive approaches to L2 vocabulary learning: those who preferred to structure their vocabulary learning independently engaging in several learning activities and practicing target words, and those who did not. Learners with a structured approach were determined to be more successful than those whofollowed an unstructured approach, regardless of level or type of instruction received. Kojic-Sabo and Lightbrown (1999) ${ }^{28}$, grouped learners according to the vocabulary learning strategy or set of strategies that dominated their approach. Learner independence and time available were shown to be related to the vocabulary learning profiles of the two most successful groups. Research has also indicated that patterns of strategy usage can change over time as a learner either matures or becomes more proficient in the target language. The above study by Ahmed (1989) found some evidence of a progression in strategy usage as the learner became

[^17]more experienced. It seems that learning strategies can indeed be learnt, whether they can be taught is another question.

The use of learning strategies is extremely complex as Oxford, R, (1989) indicated: Research both outside the language field (e.g., Brown, Bransford, Ferrara, \& Campione, 1983) and investigations with language learners (see reviews by Skehan, 1989; Oxford 1989; Oxford \& Crookall, 1989) frequently show that the most successful learners tend to use learning strategies that are appropriate to the material, to the task, and to their own goals, needs, and stage of learning. More proficient learners appear to use a wider range of strategies in a greater number of situations than do less proficient learners, but the relationship between strategy use and proficiency is complex. Research indicates that language learners at all levels use strategies (Chamot \& Kupper, 1989), but that some or most learners are not fully aware of the strategies they use or the strategies that might be most beneficial to employ.

This makes it clear that language learning is not an island as the language learning skills of an individual are linked to his/her overall approach to learning. This could be one of the reasons for Peruvian students' difficulties in language learning. In a country where formal educational standards are generally found wanting, this perhaps could only be expected. Indeed language teachers often are faced with trying to get students to learn skills in a foreign language which they are unable to develop in their native language.

Subekti and Lawson (2007) ${ }^{29}$ carried out a study which was of special relevance as it focused on vocabulary learning strategy use during reading, which was the aim adopted for this paper. The experimental group consisted of a group of Indonesian post-graduate students aged from 28 to 40 who were studying English in Australia. They were given a text and asked to use any method they felt appropriate to learn new vocabulary.

[^18]Various methods were used to record the strategies used, which were then divided into four main types:

| Strategy | Description (the learner) |
| :--- | :--- |
|  | PASSIVE : No active elaboration |
| Dictionary | Uses dictionary to find the meaning |
| Write definition | Writes the word and its meanings. |
| Repeat pron | Pronounces repeatedly without meaning |
| Create word list | Creates list of words and meaning. |
| Highligh words | Highlights the learned words in the text. |
| ACTIVE NON ELABORATION : no extension of the word |  |
| Word analysis | Breaks up according to formation |
| Parts of speech | Identifies the parts of speech (verb, adjective, adverb, and noun). |
| Guessing | Gets the meaning of the word without using any identifiable procedure |
| Sent analysis | Analyses the sentence according to the grammar or sentence structure. |
| Review learned | Reviews all the words and the meanings learned in simple ways. |
|  | SIMPLE ELABORATION |
| Sound similarity | Identifies the sound of the word, noting sounds of similar words |
| Context | Identifies the meaning of the word by focusing on the context of paragraph <br> or the whole article. |
| Simple Meaning <br> type analysis | Identifies type of meaning: connotative, denotative, contextual and <br> technical, no elaboration. |
| Word link <br> analysis | Makes links between the learned word and familiar words coming after or <br> before the learned word |
| Sim Link to L1. | Uses L1 to find meaning help memorize without any elaboration. |
|  | COMPLEX ELABORATION |
| Paraphrase | Identifies synonyms, comments on related words L1 or L2 |
| Link sound | Links sound to L2 or L1 word. |
| Generate image | Tries to create meaningful image for learned word. |
| Complex Link | Uses L1 to find meanings. Help memorise with further elaboration. <br> Complex <br> Meaning Type technical meaning with further elaboration. |

Table 3. Taxonomy of Developed Vocabulary Learning Strategies Subekti and Lawson (2007)

Subekti and Lawson (2007): B. Discussion: The level of retention was then tested several times over a four-week period, in two ways: through a Word Recognition Test (WRT) which involved
writing down the 15 target words and a Meaning Translation Test (MTT) which involved writing down the meaning of the same words in their L1.

Over the first week the strategy use of the participants was recorded, the results showed that passive strategy use was much more common ( $60.6 \%$ ) than the other forms; active non-elaboration (13.6\%), simple elaboration ( $13.7 \%$ ) and complex elaboration ( $12.1 \%$ ). In terms of individual participants the number of different strategies used varied from 16 to 6 whilst the overall frequency of strategy usage (Overall) varied from 116 to 43. In terms of word recall, both the WRT and the MTT followed a similar pattern: the highest results were obtained for the tests carried out during thefirst week, but these had dropped by week 2 and recovered for weeks 3 and 4.

The study then went on to determine which factors had significantly influenced vocabulary recall performance over time. Both the students' IELTS scores and Overall were significant in terms of an individual's WRT. That is the higher the Overall, the higher the WRT. For the MTT, there was a similar but lower effect. In general, word recognition was higher than word meaning.

Roughly speaking students had managed to acquire about $30 \%$ of the target vocabulary which was described as being higher than that obtained by other similar studies. It was hypothesized that this may have been due to the high level of motivation of the experimental group. One key point of this study, however, was the fact that a convienience sampling method was used that is only individuals who are willing to participate did so.

So it seems that the frequencyof strategyuse is critical when it comes to learning and retaining new vocabulary. In general, given the results obtained, it would seem logical that the most efficient use of class time would be to teach students the maximum possible number of VLSs which they can then apply according to their individual learning styles.

### 2.9. Use of Vocabulary Cards

For this paper it was decided to focus on a combination of methods. Words were first presented and studied in a real context, and then a
decontextualized vocabulary learning strategy was used to learn them. Of the many VLSs, the use of vocabulary cards was chosen. This method has the advantage that it can be both practical as well as fun. It can be used inside and outside the classroom.

As well as attending a fairly intensive language course at the institute concerned, many of the learners are either university or secondary school students and thus have very busy schedules. If they are shown that vocabulary cards are efficient, practical and fun, they might be convinced to use them and perhaps even to continue to use this strategy in the future. Vocabulary cards are criticized as being old-fashioned, simple memorization tools and unlikely to be of much long term benefit. However, in order to produce cards learners have to go through many of the stages identified by Nation (2001) as likely to promote vocabulary learning. They must first notice the word in context and then use a dictionary to identify its meaning (in context). Since the space on a vocabulary card is limited, learners must then decide how best to define that word. As stated by Nation (2001 p90): "evidence clearly shows that any explanation should not be complicated or elaborate.....There are strong arguments for using the learners' first language if this will provide a clear, simple, and brief explanation." Thus, short definitions are best, long definitions are more likely to be confusing and are less likely to be remembered. The cards then provide the all important opportunities for both receptive and productive repetition. Learners can use the target vocabulary to recall the definitions or visa-versa. The generative stage could be incorporated by showing learners that they can use the target vocabulary to produce new sentences in contexts which are meaningfulto them.

### 2.9.1. Number of Repetitions

How many repetitions does a word require to be remembered? Thisis an important factor and one of the main reasons for identifying the use of vocabulary cards as a useful strategy for learners. In a typical EFL class, learners have very few opportunities to come into repeated contact with new vocabulary. Even if the course book focuses on a specific word and this is reinforced by the instructor a few times, is this enough?

Yongqi, P (2003): Encouraging findings on this issue can be found in the literature. Crothers and Suppes (1967) discovered that
almost all of their participants remembered all 108 Russian-English word pairs after 7 repetitions, and about $80 \%$ of 216 word pairs were learned by most participants after 6 repetitions. Similarly, Lado, Baldwin and Lobo (1967) presented their intermediate level college students of Spanish with a list of 100 words, and found that only one exposure sufficed for an average of $95 \%$ recognition and $65 \%$ recall. In general, results on this issue show that, if remembering word pairs is the aim, a surprising amount can be learned within a relatively short time (Thorndike: 1908; Webb: 1962), and not many repetitions are needed before the L2-L1 word pairs can be remembered.

As is often the case, the results of research often seem contradictory. Nation (2001) p81 comments on the fact that many factors are involved in learning vocabulary and the number of repetitions required to learn new vocabulary varies substantially from learner to learner:

Repetition is only one of a number of factors affecting vocabulary learning, and the correlation between repetitions and learning generally are only moderate. For example, Sargi, Nation and Meister (1978) found a correlation of about .45 indicating that repetition accounted for around $20 \%$ of the factors involved in learning. It is thus not easy to fix on a particular number of repetitions needed for learning to occur.........Tinkham (1993), like many other researchers, found that learners differed greatly in the time and number of repetitions for learning. Most learners required five to seven repetitions for the learning of a group of six paired associates. A few required over twenty repetitions.
Nation therefore indirectly supports the case for encouraging independent learning. With such disparity between learners, how can the one-size-fits-all approach of instructor-led learning hope to succeed? A much more efficient use of classroom time would be to teach several learning strategies which individuals could decide to adopt or not according to their own learning styles. Perhaps the teacher could test vocabulary from time to time to demonstrate to learners how effective their learning has been and encourage less able students to repeat vocabulary more often or make use of more (efficient) learning strategies.

### 2.9.2. Timing of Repetitions

Several studies have indicated that what is important is not the time spent on trying to learn vocabulary but on the timing of the repetitions of new words, the spacing of repetitions from each other.

Yongqi, P (2003): Not surprisingly, a considerable amount of earlier work on foreign language vocabulary learning followed the psychological paradigm in memory research. And studies focusing on the pacing of repetition and recall of word lists arrived at the same conclusion: that forgetting mostly occurs immediately after initial encounter, and that the rate of forgetting slows down afterwards. Anderson and Jordan (1928) examined the number of words that could be recalled immediately after initial learning, 1 week, 3 weeks, and 8 weeks thereafter and discovered a learning rate of $66 \%, 48 \%$, $39 \%$, and $37 \%$ respectively. Similar results can be found in Seibert (1927, 1930). It was therefore suggested that students should start repeating newly learned words. Spaced recall and repetition should follow afterwards at longer intervals. (ibid).

Nation (2001) cites a study by Pimsleur (1967) which suggests that the spacing between repetitions should follow an exponential curve:

| Repetition | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| :--- | :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time before | 5 | 25 | 2 | 10 | 1 | 5 | 24 | 5 | 25 | 4 | 2 |
| Next rep | s | s | m | min | hr | hr | hr | dy | dy | mth | yr |

## Table 4. Pimsleur's Memory Schedule

It is clear that the older the learning, the longer it takes to forget and this also demonstrates the weakness of common approaches to new vocabulary. Typically, an individual finds a new word, looks it up in a dictionary and is satisfied with just understanding its meaning. Of course, this fulfills the immediate objective of helping the learner to comprehend the language at hand. Nevertheless, in terms of the longer-term goal of learning the language, probably very little is attained. This also shows the limitation of ELT classes based on monthly cycles. As is the case of the institution in question, a teacher often spends only one month with a group of students and even if the instructor attempts to focus on specific
vocabulary with the required number and spacing of repetitions, this will finish after the month and the vocabulary may be forgotten in any case.

A solution could be to make students aware of the principles involved in the above memory schedule, albeit in a simplified form, so that they can organize their learning appropriately. This principal is, after all, not limited to language learning and many may find it useful in their other studies or working lives.

The spacing of repetitions has to be balanced. If they are too closely spaced, it can be counterproductive, as students could get bored and feel that they are wasting time. On the other hand, if the repetitions are too widely spaced, the words may have been forgotten completely and learning will be effectively starting from zero. Given how different learners are, some will need many more repetitions, which is yet another argument for fostering learner independence and encouraging them to study according to their individual abilities and requirements.

### 2.9.3. Can Vocabulary Learning Strategies Be Taught?

Once a teacher decides to adopt a specific approach towards the teaching of vocabulary, and wishes to make learners aware of some VLSs, the question remains as to whether learners will in fact use these strategies.

Nielsen, B.(2006): There has been very little research done regarding the trainability of vocabulary learning strategies. Of the few studies done, the results are inconclusive; while some studies report reasonable success, others report only limited success and student resistance (McDonough, 1995; Skehan, 1989; Stoffer, 1995). This lack of research into VLS trainability can be attributed to the necessity for such studies to be longitudinal in nature, and also the difficulty with which success in VLS use and training can be measured.The limited research done in this area has shown that culture is an important determiner regarding the effectiveness with which VLS can be taught and used by learners.

O'Malley and Chamot (1990) found that Hispanics who had strategy training improved their vocabulary scores compared to a Hispanic control group. However, Asians in strategy training groups resisted VLS training and performed worse than the Asian control group - who used their familiar rote repetition strategy. In addition,
analysis of a survey by Schmitt, Bird, Tseng, \& Yang, (1997) revealed that learners of different culture groups have quite different opinions regarding what VLS they consider useful.

So culture would seem to be very important when deciding on which VLSs to try to teach, and learners and instructors should obviously take this into consideration. This highlights the danger of relying on international textbooks to provide VLS training. The strategies presented will be appropriate in certain cultures, but obviously not all. Culture is obviously an important factor here, given the heterogeneous nature of Peru. Within the country, there are many complex cultural differences which make VLS training even more complicated.

Oxford, R (1989): Important effects of training in the use of language learning strategies have been discovered by a number of researchers (see Atkinson, 1985; Bejarano, 1987; Chamot \& Kupper, 1989; Cohen \& Hosenfeld, 1981; Oxford, Crookall, Lavine, Cohen, Nyikos \& Sutter, forthcoming). It is clear that students can be taught to use better strategies, and research suggests that better strategies improve language performance. Just how language learning strategies should be taught is open to question, but so far it has been confirmed that strategy training is generally more effective when woven into regular classroom activities than when presented as a separate strategy course.

In the case at hand, it would be very difficult to establish a separate VLS course outside normal classes. However, this could be considered a possible long-term goal if deemed advantageous.

Sarah Mercer carried out research on vocabulary strategy use with students at Graz University in Austria and described how the background of individuals could influence the effectiveness of strategy instruction.

Mercer, S. (2005) ${ }^{30}$ : Conditions for strategy use: One precondition for successful strategy instruction is the willingness by

[^19]students to explore their beliefs about vocabulary learning. The students who were taught the strategies described (here) were highly motivated (as evidenced by their voluntary attendance of a noncredit course) and were from a cultural background open to explicit exploratory work. It therefore seemed likely that some direct teaching of strategies would suit their academic learning style and be welcomed by them.

It is therefore clear that the teaching of (vocabulary) learning strategies is highly complex and is dependent on a great many factors. As is often the case with teaching and learning, it is left up to the individual teacher/learner to decide which approach to follow. There is no simple answer, but it is clear that some teaching of learning strategies should be incorporated into language courses.

This paper will study one particular learning strategy and attempt to assess its effectiveness. Nevertheless, with so many factors involved in the use of learning strategies, it is highly debatable whether the results obtained in one situation can be deemed to be appropriate in another.

## CHAPTER 3 <br> RESEARCH METHODOLOGY

### 3.1. Type of Research

An experimental approach was used with the main focus being on obtaining and analyzing quantitative data.

### 3.2. Assumptions

After reviewing literature, theories and studies available on vocabulary learning strategies, it was assumed that the following would take place as a result of the experimental process:

- Students would become more autonomous and less dependent on the instructor.
- They would become aware of an efficient and practical approach towards learning vocabulary.


### 3.3. Questions

The questions that prompted research work were the following:

- Will the limited amount of explicit training possible in a busyEFL class on the use of vocabulary cards, when combined with the studying of new vocabulary in context, provide learners with a tool which they can use to become more efficient vocabulary learners?
- Will the use of vocabulary learning cards lead to longer term retention of vocabulary?


### 3.4. Hypotheses

If shown how to create and use vocabulary cards, learners will continue to use them outside the class.

If le arn ers create and use vocabulary cards, they will learn vocabulary better and retain that knowledge longer.

### 3.5. Variables

- Independent variable: The use of vocabulary cards by students
- Dependent variable: Improvement in learners' retention of new vocabulary.


### 3.6. Characteristics of the Sample

Three different samples were involved in this research, the main features of the groups in question were as follows:

| Sample: | Pilot Group | Control Group | Experimental <br> Group |
| :--- | :---: | :---: | :---: |
| 1. Age | 14 to 23 | 14 to 29 | 14 to 29 |
| 2. Sex | 02 male | 02 male | 08 male |
|  | 07 female | 14 female | 08 female |
| 3. Occupation | 09 students | 16 students | 16 students |

## Table 5. Sample Groups

Comments on learning background: The sample groups were all students at a private language school: the Cultural (CCPNA) in Arequipa, Peru. The institute offers English language courses based on monthly cycles. The classes are daily, Monday through Friday, for 90 minutes and involve groups of from 9 to 25 students. An individual instructor, the vast majority of whom are Peruvian, spends one or sometimes two months with a group. The groups are very homogeneous, consisting of Spanish L1
teenagers or young adults, who are either attending high school or university, with a smattering of older learners. Generally, as is common in higher level groups in language schools, the majority of learners are female. The sample groups were selected randomly. They were simply the cycles which were assigned to the instructor/researcher during the month in question, all three were upper-intermediate level. The experimental group was atypical in that it contained a high percentage of malestudents, which may have affected the validity of the study.

Note: The groups were larger, but only those who were present at each stage of the process were considered as part of the research

### 3.7. Description of Data Collection Instruments

### 3.7.1. Initial Survey

This instrument was used with the pilot, control and experimental groups to determine some characteristics of these samples (Age, sex, occupation, level of education), and to ascertain if learners were aware of vocabulary learning strategies and whether they attempted to learn vocabulary outside the classroom. (Blank sample and examples completed by participants: Appendices 1.1.0. and 1.1.1.)

### 3.7.2.1. Pilot Group Initial Test

This instrument was used with the pilot group to ascertain the appropriateness of the written text, and to provide alternative target vocabulary for the control and experimental groups. In fact, some changes were made to the target vocabulary when it was clear that some words were already known by many students. The article itself was found to be suitable and remained unaltered throughout the research. (Appendix 1.2.0)

### 3.7.2.2. Pilot Group Pre-experimental Test

This instrument was used with the pilot group to triangulate the results of the above initialtest and to determine the appropriateness of the definitions and the spoilers. (Blank sample: Appendix 1.2.1)

### 3.7.2.3. Pre-experimental Test adapted

This instrument was used with the control and experimental groupsto indicate previous knowledge of the target vocabulary. In both cases a few adjustments were made. Likewise, the target vocabulary was modified accordingly. (Blank sample and examples completed by participants: Appendices 1.2.2 and 1.2.3)

### 3.7.3.1. Pilot Group Glossary

This instrument was used with the pilot group to test the appropriateness of this instrument so that it could be modified and later used with the other groups. (Appendix 1.3.0)

### 3.7.3.2. Glossary (adapted from above)

This instrument was used with the control and experimental groups to present the target vocabulary in a meaningful context and also to provide both groups with the same information, so that effectiveness of dictionary use could be eliminated as a variable. (Appendix 1.3.1)

### 3.7.4. Vocabulary Cards (modified)

The information contained in the adapted glossary was then presented in the form of vocabulary cards to the experimental group. (Appendix 1.4.0)

### 3.7.5.1. Pilot Group Post-Experimental Test 1

This instrument was used with the pilot group to test the appropriateness of this instrument so that it could be modified and later used with the other groups. (Appendix 1.5.0)

### 3.7.5.2. Post-Experimental Test 1 (adapted)

This instrument was used with the control and experimental groups to test knowledge of the target vocabulary at the end of the experimental
period. It was designed to be very similar to typical exam questions to perhaps further convince learners of the usefulness of this method. (Blank sample and examples completed by participants:
Appendices 1.5 .1 and 1.5.2)

### 3.7.6.1. Pilot Group Post-Experimental Test 2

This instrument was used with the pilot group to test it so that it could be modified and used with other groups. ( Blank sample and completed examples: Appendices 1.6.0 and 1.6.1)

### 3.7.6.2. Post-Experimental Test 2 (adapted)

This instrument was used with the control and experimental groupsto test residual knowledge of the target vocabulary. This was an unannounced test taken as late as possible in the class monthly cycle. (Blank sample and examples completed by participants: Appendices 1.6.2 and 1.6.3)

### 3.7.7. Journals

The instructor encouraged learners to use journals to record what they were doing to learn vocabulary. They were expected to record what they did and how much time they spent. As there was no way to determine their veracity, these were used more to encourage learners to actively participate rather than as a reliable instrument. They did provide an insight into the approaches used by learners. (Examples: Appendix 1.7)

### 3.7.8. Informal Unscripted Interviews

Throughout the process the researcher conducted informal interviews of learners to receive further feedback. These were especially focused on the pilot group to enable the experimental instruments to be adjusted. (Tape scripts of examples: Appedix 1.8)

### 3.8. Reliability and Validity of Data CollectionInstruments

A pilot group was used to help ensure the reliability of the experimental procedures. The pilot pre-test was applied at the beginning of a class. The group was given only enough time to read the text and circle any unknown words which prevented them from using context to guess the meaning of "new" words. Using this approach to indicate vocabulary knowledge was perhaps questionable as learners, especially young adults, are often not be very keen to demonstrate their lack of knowledge. Furthermore, students may have recognized a word but might not have known its meaning in the context used in the text. However, if several learners highlighted a word as unknown, this was taken as being a fair indication that learners at this level would not know this word and that it could be used in the tests. At the end of the same class, the experimental pre-test was applied. This was due to external factors (Swine flu worries caused several classes to be canceled) and although not ideal, since learners only had time to quickly read the text, they would have recalled very little and in any case were given no clues as to the meaning of the target vocabulary. Furthermore several unconnected classroom activities separated the two tests.

The trialing of the tests and written text with the pilot group and the subsequent adjustments made should have ensured that these instruments were appropriate for the chosen sample. They appeared to have been wellconstructed and have provided reliable and validresults.

To improve the validity of the pre-experimental and first postexperimental tests, they were receptive so that any prior knowledge of the target vocabulary would become apparent. Furthermore, several distracter words were used to reduce the effect of chance. These distracter words were selected from the Academic Word List (Nation: 2001. p407) focusing on words which learners were unlikely to know. The second postexperimental test was productive to make it more challengingand perhaps a more accurate measure of residual knowledge of the target vocabulary.

To ensure the reliability of the results, they were analyzed using Excel software to calculate the means and carry out T-tests using 95\% confidence to determine if the sets of data showed statistically significant differences. This is standard practice in small-sample data analyses.

### 3.9. Procedure Followed in this Research

- A literature review was carried out to obtain information about the research area and related studies.
- A text was chosen which was thought would be both interesting and of an appropriate level for the intended sample. The content of the written text was important to help motivate learners. (Nation: 2001: 63) "The choice of content can be a major factor stimulating interest...without the engagement and aroused attention of the learners, there can be little opportunity for other conditions favoring learning to take effect". EFL learners often suffer from a lack of intrinsic motivation so the learning process itself should try to provide some.
- The text was intended to allow learners to be able to use the context to provide clues to the meaning of the target vocabulary. (Nation:2001:149,150): "for vocabulary growth, extensive reading texts should contain no more than $5 \%$ unknown tokens, (excluding proper nouns) and preferably no more than $2 \%$ to ensure that comprehension and guessing can occur, and no less than $1-2 \%$ tomake sure that there is new vocabulary to learn." Note: According to Nation tokens are running words even if they are repeated. $2 \%$ represents one word in fifty and $5 \%$ one word in 20. Of course, in reality, due to individual differences it is impossible to guarantee, that a text used with a group of learners will fulfill these conditions.
- Changes were made to the test instruments according to the results obtained from the pilot group.
- The test instruments were applied to the control and experimental groups and data collected.
- A statistical analysis of the test data was carried out to compare the performance of the control and experimental groups.
- The initial research paper was written
- An auxiliary experiment was designed and carried out to test whether the use of vocabulary cards would result in the retention of vocabulary knowledge over a longer period than the initial experiment.
- The initial research paper was amended to include the results of the auxiliary experiment.


### 3.9.1. Experimental Timelines

A. Pilot Group Timeline (overview)

Friday 7: Ss completed initial questionnaire, took initial test and experimental pre-test


Sat 8 :
experimental pretest and initial questionnaire
Mon 10: Ss study text and glossary, answer comprehension questions.

Tues 18: Ss took first Vocabulary test, gave feedback about content

| Mon 24: Ss took Post- |
| :--- |
| experimental test 2and |
| gave feedback on content, |

Wed 12: Ss used vocabulary cards in class completed questionnaire

Wed 26: Changes made to Post Experimental Test and Questionnaire
B. Control and Experimental Groups Timeline (overview)

Thurs 13: complete initial questionnaire, and experimental pretest

Sat 15: initial results are analyzed


Tues 18: Journals checked. Exp group used voc cards in class. Cont group test each other vocab knowledge.


## C. Detailed Timeline

Thursday 06 August: First day of classes. A decision was made based on the make-up of groups: age range, maturity, most likely to participate actively, similar English level and other characteristics as to which classes were to be used as control/experimental and pilot groups.

Friday 07: The pilot program was started.

1. Students were informed about the program and it was made clear that their course grades would not be affected by it.
2. At the beginning of the class students completed the initial questionnaire. Students were requested to answer honestly and informed that the information provided was strictly for use in the program.
3. They then took the pilot initial test to ascertain any prior knowledge of target vocabulary. They were given the target article and asked to circle words they did not know at all and to underline words whose meanings they were not sure about. They were requested to work quickly, alone, without using dictionaries.
4. Later in class (so that they should have eliminated from their shortterm memories the text vocabulary) after Ss had participated in some unrelated class activities, students took the experimental pretest. Feedback was obtained about the definitions whether they were clear and understandable. Students were reminded that the words had been chosen because they were "difficult" as some students were obviously concerned about their lack of knowledge. A point which was noted and similar reassurances were given to the other groups.

Saturday 08: Results of pilot group pre-tests were analyzed and changes were made to both the experimental pre-test and the initial questionnaire.

Monday 10: After a warm-up class discussion about global warming, the pilot group was given the text, glossary and comprehension questions. Feedback was obtained about the glossary definitions and the comprehension questions, which were completed as homework. Then students received the vocabulary cards. The teacher demonstrated how to use them and they were asked to complete a simple daily journal about
what exactly they did with the vocabulary cards and how much time they devoted to it.

Wednesday 12: The pilot group's answers to comprehension questions were checked and the learners worked in pairs using vocabulary cards to test each others' knowledge of target vocabulary. There was obvious enthusiasm during the activity. Feedback was obtained on the design and usefulness of vocabulary cards.

Thursday 13: Both the control and experimental groups took the experimental pre-test and completed the initial questionnaire.

Friday 14: The control and experimental groups: After a warm-up class discussion about global warming, the groups were given the text, glossary and comprehension questions. Feedback was obtained about the glossary definitions and the comprehension questions, which were completed as homework. Both groups were asked to complete a simple daily journal recording how they went about learning the target vocabulary and how much time they devoted to it. They were also informed about the first postexperiment test. The experimental group received the vocabulary cards and was shown how to use them.

Saturday 15: The results of the initial questionnaire and the pre-test for the control and experimental groups were recorded and analyzed.

Tuesday 18: The pilot group took the first post-reading vocabulary test and gave feedback about its content. A class discussion about the comprehension questions took place in both the control and experimental groups. The experimental group worked in pairs in the class using the vocabulary cards. In order to maintain validity, the control group was asked to spend some time in pairs testing each others' knowledge of the target vocabulary with no indication of how to carry this out. The experimental group showed a great deal more enthusiasm in carrying out this activity.

Wednesday 19: The pilot group gave more feedback on first postexperiment vocabulary test to determine which sentences were confusing,
using this data some changes were made. They also handed in their journals.

Thursday 20: Once again the experimental group did some pair work with the vocabulary cards and the control group spent some time in pairs testing each others' knowledge of the target vocabulary. This was done as it was thought unlikely that all the participants would be actively learning the vocabulary on their own.

Friday 21: The control and experimental groups completed the first postexperimental test.

Saturday 22: The results of the aforementioned tests were recorded and analyzed.

Monday 24: The pilot group took the second post-experimental test, which had not been mentioned to them before, and gave feedback on the content of the test to facilitate its improvement. They also completed a questionnaire on the use of vocabulary cards.

Tuesday 25: The results of the aforementioned data were recorded and analyzed.

Wednesday 26: Changes were made to the design of second postexperimental test and the questionnaire.

Friday 28: The final day of classes. The control and experimental groups took the second post-experimental test, which had not been mentioned to them before, and handed in their journals. The experimental group completed a questionnaire on the use of vocabulary cards. The control group completed a questionnaire on how they had tried to remember the target vocabulary.

### 3.9.2. Pilot Group Experiment

Objective of the pilot tests: to test if the instruments could be used to provide reliable and valid data and whether these should be altered.

### 3.9.2.1. Pilot Group Sample Data

Population: Upper-Intermediate Level, cycle I10, 3:50 p.m. at the Cultural

Characteristics of the Sample: There was a sample of 9 students as the remainder were absent on first day.


Chart 1. Pilot Age Chart


Chart 2. Pilot Gender Chart


## Chart 3. Pilot Education Chart

### 3.9.2.2. Pilot Group Results

|  | Pre-Test |  | Post-Test 1 |  | Post-Test 2 |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1.livestock | 1 | $11 \%$ | 9 | $100 \%$ | 8 | $89 \%$ |  |
| 2. head | 4 | $44 \%$ | 9 | $100 \%$ | 9 | $100 \%$ |  |
| 3. Guideline | 4 | $44 \%$ | 4 | $44 \%$ | 8 | $89 \%$ |  |
| 4.curb | 2 | $22 \%$ | 5 | $56 \%$ | 7 | $78 \%$ |  |
| 5.fair | 7 | $78 \%$ | 7 | $78 \%$ | 9 | $100 \%$ |  |
| 6.level | 4 | $44 \%$ | 6 | $67 \%$ | 9 | $100 \%$ |  |
| 7.target | 2 | $22 \%$ | 5 | $56 \%$ | 8 | $89 \%$ |  |
| 8.shift | 7 | $78 \%$ | 5 | $56 \%$ | 9 | $100 \%$ |  |
| 9.chair | 2 | $22 \%$ | 5 | $56 \%$ | 8 | $89 \%$ |  |
| 10.rear | 4 | $44 \%$ | 6 | $67 \%$ | 9 | $100 \%$ |  |
| 11.means | 0 | $0 \%$ | 5 | $56 \%$ | 9 | $100 \%$ |  |
| 12.urge | 0 | $0 \%$ | 2 | $22 \%$ | 8 | $89 \%$ |  |
| 13.feed | 5 | $56 \%$ | 8 | $89 \%$ | 8 | $89 \%$ |  |
| 14. Support | 8 | $89 \%$ | 6 | $67 \%$ | 9 | $100 \%$ |  |
| 15.indoor | 9 | $100 \%$ | 5 | $56 \%$ | 8 | $89 \%$ |  |
| Average | 3.9 | $44 \%$ | 5.8 | $64 \%$ | 8.4 | $93 \%$ |  |
| Total | 59 | 8 |  |  |  |  |  |

Table 6. Pilot Group Experimental Data 1.

|  | Pre-Test | Post-Test 1 | Post-Test 2 |
| :---: | :---: | :---: | :---: |
| Min/Max | $0 / 9$ | $2 / 9$ | $7 / 9$ |
| 25th Percentile | 2 | 5 | 8 |
| Median | 4 | 5 | 8 |
| 75th Percentile | 6 | 6.5 | 9 |

Table 7. Pilot Group Experimental Data 2.


## Chart 4. Pilot Group Overall Results Graph



## Chart 5. Pilot Group Box Plot

### 3.9.2.3. Pilot Group - Statistical Analysis of Results

The results were analyzed to see if the differences found were in fact statistically significant:
A. Two-sample T-test supposing unequal variances was carried out to compare the pilot group post-test 1 and the pre-test: Ho: $\mu 1-\mu 2=0$ where $\mu 1$ is the mean for the post-test 1 and $\mu 2$ is the mean for the pre-test.

The alternative hypothesis was that there would be a statistically significant change and in this case that vocabulary knowledge increases such that: $\mathrm{H} 1: \mu 1-\mu 2>0$

|  | Post 1 | Pre |
| :--- | :---: | :---: |
| mean | 5,8000 | 3,9333 |
| variance | 3,4571 | 8,0667 |
| degrees of Freedom | 24,0000 |  |
| t statistic | 2,1297 |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t})$ one tail | 0,0218 |  |
| Critical t value (one tail) | 1,7109 |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t})$ two tail | 0,0437 |  |
| Critical t value (two tail) | 2,0639 |  |

Table 8. Pilot Group T-test Post-Test 1 and Pre-test
Since the critical value of $t$ in the one tail test was less than the $t$ statistic, Ho is rejected and there was a significant difference between the two samples.
B. Two-sample T-test assuming unequal variances pilot group posttest 2 and pre-test. Ho: $\mu 1-\mu 2=0$ where $\mu 1$ was the mean for post-test 2 and $\mu 2$ the mean for the pre-test.H1: $\mu 1-\mu 2>0$

|  | Post 2 | Pre 1 |
| :--- | :---: | :---: |
| mean | 8,4000 | 3,9333 |
| variance | 0,4000 | 8,0667 |
| degrees of Freedom | 15,0000 |  |
| t statistic | 5,9453 |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t})$ one tail | 0,0000 |  |
| Critical t value (one tail) | 1,7531 |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t})$ two tail | 0,0000 |  |
| Critical t value (two tail) | 2,1314 |  |

## Table 9. Pilot Group T-test Post-Test 2 and Pre-Test

Since the critical value of t in the one tail test was less than the t statistic, Ho was rejected.

### 3.9.2.4. Comments on Pilot Group

As is common for higher-level EFL classes, the majority of learners were female. Groups studying at this time in the institution concerned generally consist of secondary school students with a few at university.

Despite their youth, by reaching this stage they have demonstrated a reasonable level of maturity. Nevertheless, these groups are generally challenging, having spent all day in school before going to language classes. On the other hand, they are potentially the most capable. If motivated, they are the most likely to make substantial progress in L 2 .
As can be seen from the box plot, there was an increase in vocabulary knowledge from the pre-test to the first post-test with median values of 4 and 5 respectively. There was, as expected, an obvious increase in vocabulary knowledge during the experimental period. After the experimental period, between the first and second post-tests, a drop in vocabulary knowledge was to be expected. However, in this case, the vocabulary knowledge of the group actually increased from a median of 5 to 8 . This could have been due to the relatively short time time period imposed by practical considerations.

The average vocabulary knowledge of the group increased from $44 \%$ to $64 \%$ between the pre-test and first post-test. When tested statistically, this was shown to represent a statistically significant increase, with a mean of 3.93 for the pre-test and 5.8 for the post test, which suggested that these instruments were valid and could be applied to the experimental and control groups. Furthermore, the average vocabulary knowledge increased from $44 \%$ to $93 \%$ between the pre-test and second post-test. When tested statistically, this was shown to represent a statistically significant increase with a mean of 3.93 for the pre-test and 8.4 for the post test, which suggested that these instruments were valid and could be applied to the experimental and control groups.

### 3.9.3. Control Group Experiment

Objective of Control Group Tests: To set benchmarks by which to judge the results of the experimental group.

### 3.9.3.1. Control Group Sample

Population: Upper - Intermediate Level, cycle I09 2.10 pm at the Cultural.
Characteristics of the Sample: The control group sample consisted of the 16 students who were present at each stage of the research.


Chart 6. Control Age Chart Chart 7. Control Gender Chart


Chart 8. Control Education Chart

### 3.9.3.2. Control Group Results

|  | Pre-test | Post Test 1 | Post Test 2 |
| :--- | :---: | :---: | :---: |
| Minimum | 0 | 5 | 3 |
| 25th Percentile | 1 | 9.75 | 5.75 |
| Median | 2.5 | 11.5 | 8.5 |
| 75th Percentile | 5.25 | 13 | 11.25 |

Table 10. Control Group Test Data 1

| learner | Pre-Test (A) |  | Post-Test 1 (B) |  | Post-Test 1 (C) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Np | \% | Np | \% | Np | \% |
| 1. | 0 | 0 | 15 | 94 | 13 | 81 |
| 2. | 1 | 6 | 9 | 56 | 8 | 50 |
| 3 | 1 | 6 | 10 | 63 | 9 | 56 |
| 4 | 1 | 6 | 13 | 81 | 3 | 19 |
| 5 | 1 | 6 | 15 | 94 | 12 | 75 |
| 6 | 2 | 13 | 10 | 63 | 3 | 19 |
| 7 | 2 | 13 | 12 | 75 | 11 | 69 |
| 8 | 2 | 13 | 13 | 81 | 10 | 63 |
| 9 | 3 | 19 | 11 | 69 | 9 | 56 |
| 10 | 4 | 25 | 5 | 31 | 5 | 31 |
| 11 | 4 | 25 | 11 | 69 | 13 | 81 |
| 12 | 5 | 31 | 12 | 75 | 8 | 50 |
| 13 | 6 | 38 | 6 | 38 | 6 | 38 |
| 14 | 6 | 38 | 8 | 50 | 4 | 25 |
| 15 | 6 | 38 | 13 | 81 | 13 | 81 |
| 6 | 6 | 38 | 13 | 81 | 6 | 38 |
| Average | 3 | 20\% | 11 | 69\% | 8 | 52\% |
| Total | 50 |  | 176 |  | 133 | Total 50 |

Table 11. Control Group Test Data 2

| Learner | B A |  | $\mathrm{C}-\mathrm{A}$ |  | $\mathrm{B}-\mathrm{C}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Np | $\%$ | Np | $\%$ | Np | $\%$ |
| 1. | 15 | 94 | 13 | 81 | 2 | 13 |
| 2. | 8 | 50 | 7 | 44 | 1 | 6 |
| 3 | 9 | 56 | 8 | 50 | 1 | 6 |
| 4 | 12 | 75 | 2 | 13 | 10 | 63 |
| 5 | 14 | 88 | 11 | 69 | 3 | 19 |
| 6 | 8 | 50 | 1 | 6 | 7 | 44 |
| 7 | 10 | 63 | 9 | 56 | 1 | 6 |
| 8 | 11 | 69 | 8 | 50 | 3 | 19 |
| 9 | 8 | 50 | 6 | 38 | 2 | 13 |
| 10 | 1 | 6 | 1 | 6 | 0 | 0 |
| 11 | 7 | 44 | 9 | 56 | -2 | -13 |
| 12 | 7 | 44 | 3 | 19 | 4 | 25 |
| 13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 2 | 13 | -2 | -13 | 4 | 25 |
| 15 | 7 | 44 | 7 | 44 | 0 | 0 |
| 16 | 7 | 44 | 0 | 0 | 7 | 44 |
| Average | 8 | $49 \%$ | 5 | $32 \%$ | 3 | $17 \%$ |
| Total | 126 |  | 83 |  | 43 |  |

Table 12. Control Group Test Data 2 (cont)


Chart 9. Control Group Box Plot.


## Chart 10. Control Group Results Graph

### 3.9.3.3. Control Group Experimental Data Statistical Analysis

Two-sample T-test assuming unequal variances for the control group post-test 1 and pre-test:
Ho: $\mu 1-\mu 2=0$ where $\mu 1$ is the mean for post-test 1 and $\mu 2$ the mean for the pre-test.H1: $\mu 1-\mu 2>0$

|  | Post 1 | Pre |
| :--- | :---: | :---: |
| mean | 11,0000 | 3,1250 |
| variance | 8,4000 | 4,6500 |
| degrees of Freedom | 28,0000 |  |
| t statistic | 8,7198 |  |
| P(T<=t) one tail | 0,0000 |  |
| Critical t value (one tail) | 1,7011 |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t})$ two tail | 0,0000 |  |
| Critical t value (two tail) | 2,0484 |  |

Table 13. Control Group T-test Post-test 1 and Pre-test

Ho is rejected and there is a significant difference between the two samples. The mean before the test was of 3.125 and after 11.00 thus there has been a significant improvement in the test scores.

Two-sample T-test assuming unequal variances control group post 2 and pre-test Ho: $\mu 1-\mu 2=0$ where $\mu 1$ is the mean for post-test 2 and $\mu 2$ the mean for the pre-test: $\mathrm{H} 1: \mu 1-\mu 2>0$

| 16 observations | Post 2 | Pre |
| :--- | :---: | :---: |
| mean | 8,3125 | 3,1250 |
| variance | 12,4958 | 4,6500 |
| degrees of Freedom | 25,0000 |  |
| t statistic | 5,0112 |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t})$ one tail | 0,0000 |  |
| Critical t value (one tail) | 1,7081 |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t}) /$ Critical t value two tail | $0,0 / 2,06$ |  |

## Table 14. T-test Control Group Post-test 2 and Pre-test

Ho is rejected and there is a significant difference between the two samples. The mean before the test was of 3.12 and after 8.312 thus there has been a significant improvement in the test scores Two-sample T-test assuming unequal variances control group post 1 and post-test 2 . Ho: $\mu 1-\mu 2=0$ where $\mu 1$ is the mean for post-test 1 and $\mu 2$ the mean for the post-test 2 . $\mathrm{H} 1: \mu 1-\mu 2>0$

| 16 observations | Post 1 | Post 2 |
| :--- | :---: | :---: |
| mean | 11,0000 | 8,3125 |
| variance | 8,4000 | 12,4958 |
| degrees of Freedom | 29,0000 |  |
| t statistic | 2,3517 |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t})$ one tail | 0,0128 |  |
| Critical t value (one tail) | 1,6991 |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t})$ two tail | 0,0257 |  |
| Critical t value (two tail) | 2,0452 |  |

## Table 15. Control Group T-test Post-test 1 and Post-test 2

Ho is rejected and there is a significant difference between the two samples. The mean before the test was of 11.00 and after 8.313 thus there has been a significant decrease in the test scores.

### 3.9.3.4. Comments on Control Group

The age range of this sample was from 14 to 28 years old, with the majority in their early twenties, which is typical of classes at this time in the institution concerned. As is usual in more advanced classes, the majority of students were female. Most of the students were in further education. The Cultural maintains a policy of varying the cost of classes according to the schedule, which affects the socioeconomic make-up of groups. In general, as could be expected, the lower the cost of classes, the lower the socioeconomic level of the learners. From experience, there is a direct correlation between the socioeconomic level of the group and their English level. For example, early afternoon groups, such as the one in question, are generally lower priced and hence have a relatively lower level of English.

The average vocabulary knowledge increased from $21 \%$ to $73 \%$ between the pre-test and first post-test. When tested this was shown to represent a statistically significant increase, with a mean of 3.1 for the pretest and 11.0 for the first post test. Furthermore, the average vocabulary knowledge increased from $21 \%$ to $55 \%$ between the pre-test and second post-test. When tested, this was shown to indicate a statistically significant increase with a mean of 3.1 for the pre-test and 8.3 for the post test.

As can be seen, there was, as anticipated, an obvious increase in vocabulary knowledge during the experimental period. Likewise, muchof this knowledge was retained after this period. As expected some of this knowledge was lost after the experimental period. Average vocabulary knowledge fell from $73 \%$ to $55 \%$ between the first and second post-tests, a decrease of $18 \%$, which was shown to represent a statistically significant change.

### 3.9.4. Experimental Group Experiment

Objectives: To carry out the experimental procedure, collect and analyze the results obtained by the experimental group.

### 3.9.4.1. Experimental Group SampleData

Population: Upper-Intermediate level, cycle I09, 7:15 a.m., CCPNA.
Characteristics of the sample: The experimental group sample consisted of the students who were present at each stage of the research.


Chart 11. Experimental
Age Chart


Chart 12. Experimental Gender Chart


Chart 13. Experimental Group Education Chart

### 3.9.4.2. Experimental Group Results

| Learner | Pre-Test (A) |  | Post-Test 1 (B) |  | Post-Test 2 (C) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Np | \% | Np | \% | Np | \% |
| 1. | 1 | 6 | 10 | 63 | 12 | 75 |
| 2. | 2 | 13 | 15 | 94 | 14 | 88 |
| 3 | 2 | 13 | 7 | 44 | 7 | 44 |
| 4 | 2 | 13 | 11 | 69 | 4 | 25 |
| 5 | 2 | 13 | 13 | 81 | 4 | 25 |
| 6 | 2 | 13 | 7 | 44 | 12 | 75 |
| 7 | 2 | 13 | 11 | 69 | 11 | 69 |
| 8 | 3 | 19 | 15 | 94 | 12 | 75 |
| 9 | 3 | 19 | 6 | 38 | 10 | 63 |
| 10 | 3 | 19 | 10 | 63 | 8 | 50 |
| 11 | 4 | 25 | 4 | 25 | 3 | 19 |
| 12 | 5 | 31 | 6 | 38 | 3 | 19 |
| 13 | 5 | 31 | 15 | 94 | 11 | 69 |
| 14 | 5 | 31 | 15 | 94 | 15 | 94 |
| 15 | 7 | 44 | 13 | 81 | 9 | 56 |
| 16 | 8 | 50 | 11 | 69 | 13 | 81 |
| Average | 4 | 22\% | 11 | 66\% | 9 | 58\% |
| Total | 56 |  | 169 |  | 148 |  |

Table 16. Experimental Group Test Data 1

| Learner | $\mathrm{B}-\mathrm{A}$ |  | $\mathrm{C}-\mathrm{A}$ |  | $\mathrm{B}-\mathrm{C}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Np | $\%$ | Np |  | $\%$ | Np |
| 1. | 9 | 56 | 11 | 69 | -2 | -13 |
| 2. | 13 | 81 | 12 | 75 | 1 | 6 |
| 3 | 5 | 31 | 5 | 31 | 0 | 0 |
| 4 | 9 | 56 | 2 | 13 | 7 | 44 |
| 5 | 11 | 69 | 2 | 13 | 9 | 56 |
| 6 | 5 | 31 | 10 | 63 | -5 | -31 |
| 7 | 9 | 56 | 9 | 56 | 0 | 0 |
| 8 | 12 | 75 | 9 | 56 | 3 | 19 |
| 9 | 3 | 19 | 7 | 44 | -4 | -25 |
| 10 | 7 | 44 | 5 | 31 | 2 | 13 |
| 11 | 0 | 0 | -1 | -6 | 1 | 6 |
| 12 | 1 | 6 | -2 | -13 | 3 | 19 |
| 13 | 10 | 63 | 6 | 38 | 4 | 25 |
| 14 | 10 | 63 | 10 | 63 | 0 | 0 |
| 15 | 6 | 38 | 2 | 13 | 4 | 25 |
| 16 | 3 | 19 | 5 | 31 | -2 | -13 |
| Average | 7 | $44 \%$ | 6 | $36 \%$ | 1 | $8 \%$ |
| Total | 113 |  | 92 |  | 21 |  |
|  |  |  |  |  |  |  |

Table 17. Experimental Group Test Data 1 (cont)

|  | Pre | Post 1 | Post 2 |
| :--- | :---: | :---: | :---: |
| Minimum | 1 | 4 | 3 |
| 25th percentile | 2 | 7 | 6.25 |
| Median | 3 | 11 | 10.5 |
| 75th percentile | 5 | 13.5 | 12 |
| Maximum | 8 | 15 | 15 |

Table 18. Experimental Group Test Data 2


## Chart 14. Experimental Group Overall Results Graph



Chart 15. Experimental Group Box Plot

### 3.9.4.3. Experimental Group Statistical Analysis of Results

Two-sample T-test assuming unequal variances experimental group post 1 and pre-testHo: $\mu 1-\mu 2=0$ where $\mu 1$ is the mean for post-test 1 and $\mu 2$ the mean for the pre-test. $\mathrm{H} 1: \mu 1-\mu 2>0$

|  | Post 1 | Pre |
| :--- | :---: | :---: |
| mean | 10,5625 | 3,5000 |
| variance | 13,4625 | 4,0000 |
| observations | 16,0000 | 16,0000 |
| degrees of Freedom | 23,0000 |  |
| t statistic | 6,7603 |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t})$ one tail | 0,0000 |  |
| Critical t value (one tail) | 1,7139 |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t})$ two tail | 0,0000 |  |
| Critical t value (two tail) | 2,0687 |  |

## Table 19. Experimental Group T-test Post-test 1 and Pre-test

Ho is rejected and there is a significant difference between the two samples. The mean before the test was of 3.5 and after 10.56 thus there has been a significant improvement in the test scores.
Two-sample T-test assuming unequal variances experimental group post 2 and pre-test

Ho: $\mu 1-\mu 2=0$ where $\mu 1$ is the mean for post-test 2 and $\mu 2$ the mean for the pre-test.H1: $\mu 1-\mu 2>0$

|  | Post 2 | Pre |
| :--- | :---: | :---: |
| mean | 9,2500 | 3,5000 |
| variance | 15,9333 | 4,0000 |
| observations | 16,0000 | 16,0000 |
| degrees of Freedom | 22,0000 |  |
| t statistic | 5,1515 |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t})$ one tail | 0,0000 |  |
| Critical t value (one tail) | 1,7171 |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t})$ two tail | 0,0000 |  |
| Critical t value (two tail) | 2,0739 |  |

Table 20. Experimental Group T-test Post-test 2 and Pre-test

Ho is rejected and there is a significant difference between the two samples. The mean before the test was of 3.50 and after 9.25 thus there has been a significant improvement in the test scores
Two-sample T-test assuming unequal variances experimental group posttest 1 and post-test 2

Ho: $\mu 1-\mu 2=0$ where $\mu 1$ is the mean for post-test 1 and $\mu 2$ the mean for the post-test 2.H1: $\mu 1-\mu 2>0$

|  | Post 1 | Post 2 |
| :--- | :---: | :---: |
| mean | 10,5625 | 9,2500 |
| variance | 13,4625 | 15,9333 |
| observations | 16,0000 | 16,0000 |
| degrees of Freedom | 30,0000 |  |
| t statistic | 0,9683 |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t})$ one tail | 0,1703 |  |
| Critical t value (one tail) | 1,6973 |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t}$ ) two tail | 0,3406 |  |
| Critical t value (two tail) | 2,0423 |  |

## Table 21. Experimental Group T-test Post-test 1 and Post-test 2

Ho is accepted. There is no significant difference between the two samples. The mean before the test was of 10.56 and after 9.25 thus there has been no significant change to the test scores

### 3.9.4.4. Comments on Experimental Group

The age range of this sample was from 15 to 27 years old, with the majority in their early twenties, which was typical of classes at this time of day in the institution concerned and was similar to the control group. There was an equal number of male and female students, which is atypical, normally the majority of a more advanced class would be female, as was the case of the control group.

The vast majority of the participants were in further education, which was in line with the control group. As already mentioned, the language school involved varies its fees according to the schedule. However, both
the control and experimental groups had roughly the same cost, which supports the premise that they were socio-economically similar.

The average vocabulary knowledge of the experimental group increased from $21 \%$ to $73 \%$ between the pre-test and first post-test. When tested statistically, this was shown to represent a statistically significant increase, with a mean of 3.1 for the pre-test and 11.0 for the first posttest. Furthermore, the average vocabulary knowledge increased from $21 \%$ to $55 \%$ between the pre-test and second post-test. When tested statistically, this was shown to represent a statistically significant increase with amean of 3.1 for the pre-test and 8.3 for the post test. As can be seen, there was, as expected, an obvious increases in vocabulary acquisition during the experimental period, much of which was retained after this period. As envisioned, after the experimental period average vocabulary knowledge fell. In this case, it decreased from $73 \%$ to $55 \%$ between the first and second post-tests, a reduction of $18 \%$, which was shown to indicate a statistically significant change.

### 3.9.5. Overall Results Control and Experimental Groups

|  | Control <br> Group (A) | Experimental <br> Group (B) | Difference <br> (B-A) |
| :--- | :---: | :---: | :---: |
| Total Np Pre-test | 50 | 56 | $+12 \%$ |
| Total Np Post-test 1 | 176 | 169 | $-4 \%$ |
| Total Np Post-test 2 | 133 | 148 | $+11 \%$ |
| Average Change Pre <br> to Post-test 1 | $+53 \%$ | $+47 \%$ | $-6 \%$ |
| Average Change Pre <br> to Post-test 2 | $+35 \%$ | $+38 \%$ | $+3 \%$ |
| Average Change Post <br> 1 to Post-test 2 | $-18 \%$ | $-9 \%$ | $+9 \%$ |

Table 22. Control and Experimental Overall Results


Chart 16. Control and Experimental Overall Results Graph


## Chart 17. Control and Experimental Pre-Test Bar Plot



Chart 18. Control and Experimental Post-Test 1 Bar Plot


Chart 19. Control and Experimental Post-Test 2 Bar Plot

### 3.9.5.1. Statistical Analysis of Control and Experimental Results

Two-sample T-test assuming unequal variances pre-test control group and experimental group Ho: $\mu 1-\mu 2=0$ where $\mu 1$ is the mean for the control group and $\mu 2$ the mean for the experimental group pre-test.
H1: $\mu 1-\mu 2>0$

|  | Control | Experimental |
| :--- | :---: | :---: |
| mean | 3,1250 | 3,5000 |
| variance | 4,6500 | 4,0000 |
| observations | 16,0000 | 16,0000 |
| degrees of Freedom | 30,0000 |  |
| t statistic | $-0,5100$ |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t})$ one tail | 0,3069 |  |
| Critical t value (one tail) | 1,6973 |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t})$ two tail | 0,6138 |  |
| Critical t value (two tail) | 2,0423 |  |

## Table 23. T-test Pre-test Control and Experimental Groups

Ho is accepted. There is no significant difference between the two samples. The mean of the control group is 3.125 and the experimental group 3.50.

Two-sample T-test assuming unequal variances post-test 1 experimental group and control group Ho: $\mu 1-\mu 2=0$ where $\mu 1$ is the mean for the experimental group and $\mu 2$ the mean for the control group post-test 1.

H1: $\mu 1-\mu 2>0$

|  | Experimental | Control |
| :--- | :---: | :---: |
| mean | 10,5625 | 11,0000 |
| variance | 13,4625 | 8,4000 |
| observations | 16,0000 | 16,0000 |
| degrees of Freedom | 28,0000 |  |
| t statistic | $-0,3743$ |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t})$ one tail | 0,3555 |  |
| Critical t value (one tail) | 1,7011 |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t})$ two tail | 0,7110 |  |
| Critical t value (two tail) | 2,0484 |  |

## Table 24. T-test Post-test 1 Control and Experimental Groups

Ho is accepted. There is no significant difference between the two samples. The mean of the control group is 11.00 and the experimental group 10.56.

Two-sample T-test assuming unequal variances post-test 2 experimental group and control group Ho: $\mu 1-\mu 2=0$ where $\mu 1$ is the mean for the experimental group and $\mu 2$ the mean for the control grouppost-test 2.H1: $\mu 1-\mu 2>0$

|  | Experimental | Control |
| :--- | :---: | :---: |
| mean | 9,2500 | 8,3125 |
| variance | 15,9333 | 12,4958 |
| observations | 16,0000 | 16,0000 |
| degrees of Freedom | 30,0000 |  |
| t statistic | 0,7033 |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t})$ one tail | 0,2436 |  |
| Critical t value (one tail) | 1,6973 |  |
| $\mathrm{P}(\mathrm{T}<=\mathrm{t})$ two tail | 0,4873 |  |
| Critical t value (two tail) | 2,0423 |  |

Table 25. T-test Post-test 2 Control and Experimental Groups

Ho is accepted. There is no significant difference between the two samples. The mean of the control group is 8.31 and the experimental group 9.25 .

### 3.9.5.2. Comments on Comparison of Results of the Control and Experimental Groups

The results from the control and experimental groups were compared, and it can be observed that the average vocabulary knowledge of the control group increased by $53 \%$ over the experimental period, while the experimental group showed an improvement of $47 \%$. After the experimental period, between post-test 1 and post-test 2 , the vocabulary knowledge of the control group decreased by an average of $-18 \%$ while that of the experimental group fell byan average of $-9 \%$. When the results comparing both groups were tested statistically, the pre-test, post-tests 1 and 2 results all indicated that there were no statistically significant differences between the groups.

### 3.9.6. Auxiliary Experiment

### 3.9.6.1. Introduction

After completing the initial experiment, it was decided that one important aspect should be further investigated, namely whether the use of vocabulary cards would lead to greater retention of vocabulary knowledge over a longer period than the month of the initial experiment. A follow-up experiment was carried out over 2 months to test if the use of vocabulary cards would lead to an increase in residual knowledge of the target vocabulary. The teacher continued to use vocabulary cards with normal classes, and when the opportunity arose and he was given the same group for a second month, this facilitated the follow-up experiment. Note: rather than carrying out a controlled scientific experiment, it was decided to make this a more empirical and thus more "real" experiment. Therefore, only a few variables were controlled for.

### 3.9.6.2. Sample

The experimental group consisted of 12 students of Advanced 4 of the 9 to 10.30 am cycle at The Cultural ( 4 males, 8 females).

The control group consisted of 11 students of Advanced 4 of the 2.10 to 3.40 pm cycle at The Cultural. (3 males, 8 females).

| Experimental Group Age: | $16-18$ | 0 | $19-21$ | 3 | $22-24$ | 9 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $25+0$ |  |  |  |  |  |  |
| Control Group Age: | $16-18$ | 2 | $19-21$ | 3 | $22-244$ | $25+2$ |

All of the participants were in further education.

### 3.9.6.3. Data Collection

At the end of the first month all the members of the experimental group were asked to make a list of the vocabulary they had used to make their vocabulary cards. Then at the end of the second month both the experimental and control groups took a vocabulary recognition test (appendices 1.9.0 and 1.9.1). Also at the end of the second month students were asked to give some personal information about themselves: name, age, occupation. Furthermore, the students in the experimental group were asked to give their opinion about using vocabulary cards (appendix 1.9.2)

### 3.9.6.4. Procedure

A group of advanced students at the Cultural, the same institution as that of the initial experiment, was selected to act as the experimental group. They were requested to make their own vocabulary cards based upon new vocabulary which they would come across over the following academic month. The course book which students used was American Inside out Advanced (Macmillan Publishers Limited, 2003), which contains several long and in terms of vocabulary challenging texts. The instructor demonstrated to the group how to produce vocabulary cards, giving advice on dictionary use, etc. Students then proceeded to make their own in the class with the instructor providing individual support. Learners were then asked to use the cards both inside and outside the class. This procedure was repeated several times over the month with new words being added
each time. At the end of the month, the participants were asked to make a list of the vocabulary which they had studied. These were compared and the 15 most common words were used to formulate a final vocabulary recognition test. At the end of the second month students took this test, which they had no prior knowledge of. Students were also asked to give their opinions about the use of vocabulary cards if they felt that this was a useful method for learning vocabulary. The vocabulary knowledge of the experimental group was then compared to a control group. The latter had studied the same material, but had received no instruction on the use of vocabulary cards.

### 3.9.6.5. Results

Vocabulary Recognition Test:
The Experimental Group achieved from 2 to 13, an average of 6.8 (about 45\%)

The Control Group achieved from 1 to 10 , an average of 4.5 (about $30 \%$ ) so there would appear to be a substantial difference between the groups.

### 3.9.6.6. Comments

It would appear that the experimental group retained the target vocabulary substantially better after 2 months. The groups were very similar in terms of age, sex and education. Both groups were at the same level in the institute; nevertheless, this did not necessarily mean that their level of English was very similar. Although both groups would have come into contact with the target vocabulary the previous month, as the control group had been taught by a different instructor, it was impossible to determine to what extent they had focused on the target vocabulary.

## CHAPTER 4 RESULTS

### 4.1. Research Results

The experiments carried out yielded the following findings: in the immediate post-tests, a medium effect size was obtained for both the control and experimental groups. They both showed an increase in vocabulary knowledge. At the end of the month-long experimental period, there was, as expected, a decrease in vocabulary knowledge. Furthermore, the loss was greater in the control group. However, the differences between the results of the two groups were not statistically significant.

The constraints of combining research and instruction may have negatively affected the study and caused these inconclusive results. For instance, to reduce the number of variables, the control group was provided with the target vocabulary plus definitions. This was done so that the quality of the dictionaries used by the learners, their ability to use such dictionaries, as well as their skills in deducing meaning from context would not affect the results. Another reason for this was to raise learner motivation, as requiring students to do additional work (e.g. looking up meanings of words) could have reduced their willingness to participate. Consequently, in reality, the study did not compare the effects ofapplying a learning strategy with the absence of such a strategy, but instead compared two vocabulary learning strategies: using lists and using
vocabulary cards. In fact, these two strategies are so similar that teasing out the intervening factors proved very difficult.

Given the issues above, the auxiliary experiment was used to test longer-term vocabulary retention, over two months, and the results indicated a significant difference between the experimental group and the control group. The experimental group exhibited a $45 \%$ acquisition rate, which was significantly higher than the control group. These findings support Subekti \& Lawson's (2007) research on the effectiveness of vocabulary learning strategies used by Indonesian postgraduate students, in which the participants who possessed and used strategies of their own acquired approximately $30 \%$ of the new words, a higher percentage than in other similar studies. However, their results were ascribed to high levels of learner motivation, which was not so in the current study. It could be hypothesized that the use of vocabulary cards helped to overcome the lack of intrinsic motivation of students and resulted in important gains nonetheless.

In terms of whether it is possible to successfully include the explicit teaching of vocabulary learning strategies in an already busy EFL class, the results were more conclusive. The experimental group (as well as the pilot group) participated very enthusiastically in the use of vocabulary cards in the classroom. Informal interviews showed that some of this eagerness continued outside the classroom (see examples of tape scripts appendix 1.8.0). The participants commented positively on being shown how to produce and use vocabulary cards, and it was clear from classroom observations that they seemed to enjoy using them, a phenomenon noted not only in the initial group, but also in the subsequent groups. The participants were encouraged to be honest in their opinions, be they positive or negative, as typically students' answers lack objectivity and/or tend to reflect the teacher's expectations. From these interviews, some negative, but nevertheless insightful comments were also obtained. Several participants indicated that preparing cards was tiresome and that theyonly used them in class when requested by the teacher. This was not surprising, since EFL students in this context generally lack intrinsic motivation; they rarely carry out extra-curricular learning activities, and tend to do so only if prompted by the teacher, as is the case with written homework.

To try to verify exactly how much effort students were putting into using the vocabulary cards, they were asked to complete daily journals.

However, the participants' responses were limited and seemed to lack veracity. A check was made to see if they were completing the daily journal, which demonstrated a lack of interest amongst many participants. The students who actually completed journals were bydefinition the more willing participants, so it was difficult to accurately measure card use outside the confines of the class, which was after all one of the main reasons for teaching learners this strategy. Furthermore, since verifying the information they provided was impossible, this data was not included in the results. Nevertheless, some examples are included in appendix 1.7.0.

Embedding strategy training in a normal class also presented several difficulties. The limited amount of time available was of course a restricting factor. A balance had to be reached between normal class activities and those related to the experiment.

### 4.2. Discussion

### 4.2.1. Implications

Following the initial experimental period, the teacher continued to instruct students on the use of vocabulary cards, with positive results. Groups of learners using the more demanding textbooks were targeted, as this, added to time constraints and mixed-abilities, adds to the challenges they and the teacher face. Instruction on the development and use of vocabulary cards was evidently more productive than only using the textbook activities or expecting learners to deduce meaning from context. Weaker students, particularly, benefitted from this, since they tend to have very limited comprehension of complex texts, and may become demotivated in the process. When shown how to make and use vocabulary cards, theywere obviously enthusiastic, which was helpful to their overall performance.

It must be borne in mind that instruction in learning strategies remains a teacher-led approach, and is only one step in promoting student autonomy, which should be the ultimate aim. Ideally, students should seek out new reading material independently and use effective strategies to acquire new vocabulary, which would, in turn, allow more class time for communicative activities. Achieving this would require a paradigm shift in teaching methodology that would necessitate additional training,
guidance, and supervision, and it is unclear whether the school officials and/or teachers would be willing to do this. Shortly after completing this study, the researcher presented a workshop on vocabulary acquisition which made reference to the experiment. The participants, who were all EFL teachers, were keen about the use of vocabulary cards, but they were skeptical about the long-term objective of encouraging student autonomy.

Another interesting aspect of the research was the use of L1 to define new vocabulary. This is a highly controversial area, especially in the institute concerned; teachers are often monitored and evaluated with L1 use a key issue. The policy of the institute and many others is that L1 should be avoided if at all possible. However, it became clear that this was probably the most efficient way to present new vocabulary. Long L2 explications can confuse learners and negatively affect motivation. Even if learners eventually understand the L2 explanation, they generally immediately translate it, effectively negating the whole process.

In retrospect, the way vocabulary knowledge was tested during the initial experiment was far from ideal. For example, during the pilot program, learners were asked to circle words they "didn't know" a very subjective question. Even defining what it means to know a word is very complicated; Laufer and Paribakht ${ }^{31}$ (1998, p. 366) observe, "No clear and unequivocal consensus exists as to the nature of lexical knowledge". It is widely accepted that vocabulary knowledge is not a yes-no process; it lies on a continuum of several levels. Therefore, there are many factors involved in knowing a word, and learners would have applied their own criteria. They might have been mistakenly convinced that they knew or did not know a word. They may have known the meaning of a word, but not in the context in which it was being used. Some cultural factors would have come into play. In many cultures, Peru included, showing a lack of knowledge is undesirable as it involves losing face. Learners may have felt disinclined to circle a great many words as doing so would have indicated a low overall level of knowledge.

Given that what constitutes lexical knowledge is debatable, testing vocabulary knowledge must also be far from straight forward. During the initial experiment several types of vocabulary tests were used. The pre- test was a simple vocabulary recognition test, a multiple-choice test with

[^20]short definitions in English. For the first post-test, a different type of test was used. It was once again a vocabulary recognition test, but learners were given the target vocabularytogether with a number of spoilers. They then had to use these words to complete example sentences. The second posttest was a vocabulary recall test; students were given definitions in Spanish, then were given the initial letter of the target word and had to complete it. Reliability between the groups was ensured as the same tests were applied to both the control and experimental groups. However, as a measure of vocabulary retention, the use of different types of tests was questionable. Since, as already mentioned, vocabulary knowledge can be measured in degrees and is far from a black and white issue, it makes sense to applythe simplest type of test which would be sensitive to the minimum level of vocabulary knowledge. ISP Nation (page 359): "Recognition (test) items are easier because even with partial knowledge a test-taker may be able to make the right choice". He also stated (page 351): "The greatest value of the first language in vocabulary testing is that it allows learners to respond to vocabulary items in a way that does not draw on second language knowledge which is not directly relevant to what is being tested." Thus, a more precise method would be to use the most sensitive test at all times. The pre-test multiple choice type would appear to be the most appropriate, albeit with the definitions in L1. Of course, in each case, the order of the test items and the definitions would have to be varied.

The auxillary experiment suffered from similar limitations as the original. As an experiment it can be criticized on several fronts. Nevertheless, it was not intended to be scientific; it was designed to be more naturalistic, less controlled.

## CONCLUSIONS

This paper was based upon the premise that despite the importance of lexical knowledge in language proficiency, EFL students in the sociocultural context in which this study took place generally lack the learning strategies required to adequately acquire new vocabulary.

Consequently this study set out to examine whether it is viable to incorporate the explicit instruction of one such strategy, namely the creation and use of vocabulary cards, into an already busy EFL class, and if so, whether their use enhanced the subjects' acquisition of lexis.

The results confirmed that it is possible to embed instruction of this learning strategy into the predetermined syllabus for an experimental group. Despite time constraints, the learners were observed to apply it inside the classroom. Furthermore, the participants' journals and informal interviews evidenced that some of them continued to use them outside the classroom, and there were indications that this process helped motivate the learners.

In terms of vocabulary acquisition, the results of the initial experiment were inconclusive. After the month-long period, there was no stastically significant difference between the group which had been instructed on Vocabulary Learning Strategies (VLSs) and the control group. This might have been due to an attempt to limit the number of variables, which involved giving both the control group and the experimental group the same target vocabulary list and definitions, to try to eliminate the willingness and ability to use a dictionary as factors. Trying to make the experiment more scientific might have made it less
useful as a test of the effectiveness of the teaching of strategies. A further difficulty was that it was impossible to confirm whether the information provided by the subjects about the use of the strategy outside the class was accurate. Likewise, there were many other variables which could not be controlled for, such as Internet or dictionary use, ability to deduce meaning from context, motivational levels, aptitud, etc. All of which attest to the challenges involved in carrying out a valid scientific study in an EFL class. To really test the effectiveness of a VLS, the short duration of the initial experiment was perhaps insufficient. The research also highlighted the issues involved in using small samples, since determining a direct causeeffect relationship in such cases is problematic. In an attempt to overcome this, a less controlled, but longer-term auxiliary study was carried out. This experiment indicated that over a two-month period the use of vocabulary cards resulted in a clear improvement in acquisition and retention of new lexis.

While the experimental process was to a certain degree flawed, the explicit teaching of a VLS was on the whole found to be successful and had several positive side-effects, one of which was an increase in motivational levels for both the learners and the teacher. Moreover, the students practiced using dictionaries and received orientation on deducing meaning from context. Teachers often assume that students master these skills independently, which is not always the case.

## RECOMMENDATIONS

Many questions still remain unanswered. For instance, did the participants simply treat the use of vocabulary cards as a fun activity, or would learners continue to make use of this method after the novelty value had worn off? Perhaps it would require a much longer period of classroombased use of vocabulary cards for learners to actually apply this strategy independently.

During this research, the impressions of other teachers were also collected, and there was some indication of their resistance to incorporating the instruction of VLSs into their classes. Perhaps it would be more productive if each EFL school developed an auxiliary learning- strategy course. This could take place prior to normal EFL classes and include several different learning strategies. Such a course might eliminate many of the practical difficulties involved in embedding the teaching of VLSs into an already busy schedule. It seems logical for learners to learn these skills at the start of an EFL course rather than mid-way since beginners are often the most highly motivated students and the most responsive to adopting new techniques. Of course, teachers would also have to be taught these strategies and be expected to apply them in their classes.

A longer term experiment could determine whether after being explicitly taught how to use vocabulary cards, learners' vocabulary knowledge actuallyimproves and if this knowledge is retained. The use of L1 in defining new vocabulary could also be studied. To what extent would this aid learners and to what extent would it encourage learners to rely on
their L1? It could be tested whether by explicitly teaching vocabulary learning strategies, learners would actually use these strategies to become more autonomous. Would learners be prepared to use their own initiative to learn new words? If so, more class time could be devoted to discussing new vocabulary found outside the classroom, which would make classes more interesting and much less teacher centered. However, it would also have to be determined whether teachers would be prepared to make this change possible.

Additional research is needed to determine if strategy training programs for language learning, such as the one described here, result in direct linguistic gains alone or in indirect gains as well, such as increased learner motivation, self-efficacy, awareness of language learning options, and awareness of oneself as a language learner.

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## APPENDICES

Appendix 1.1.0. Initial Survey (Blank Sample):

How can someone remember new English words?
What English words do you try to leam? all the new words you find _; words likely to be in exam __ ; Words you think will be usefui __ ; None: ___
; Other (describe):
How often do you study yocabulary outside the classroom? Never _; almost never __; sometimes __; often __ very oten _
look up a dictionary __; Ask someone about it ___; other (describe):




- 270481 - $8107 \varepsilon 1$ :20ิН
Student Questionnaire Name:
$-_{t \varepsilon 016 \tau}-6 z 09+2$
-गџр

:SSE|J


Appendix 1.1.1. Initial Survey (Completed Examples):
 :(әquьзер) геро :
What English words do you try to learn? all the new words you find _; words likely to be in exam__ Words you think will be useful __ None: __



 $\therefore$ : (әqцизар) дацр
What English words do you try to learn? all the new words you find _ words likely to be in exam __ Words you think will be useful __ None: __
How often do you study vocabulary outside the classfoom? Never _; almost never __; sometimes _ ; often _ ; very often _
look up a dictionary $\not \subset$, Ask someone about it __; other (describe)


Education: In secondary school __ finished secondary __ in further education (institute, university) $\not \subset$ finished university _ _ other:
Age: 13 to 18 _ 18 to 23 y 24 to 29 _ 29 to 34 _ other: _ ;
Student Questionnaire Disipion brbag bubl :awen Kıurpnis :uo!ssajo3d


## Appendix 1.2.0. Pilot Group Initial Test:

## Name:

Pre-test 1. Instructions: Read the text VERY quickly and a) circle any words whose meaning you do not know
b) underline any words whose meaning you are not sure about. Work alone and do not use a dictionary.

1. UN says eat less meat to curb global warming. Climate expert urges radical shift in diet.

Industry unfairly targeted - farmers. Juliette Jowit, environment editor September 7, 2008
The world's main expert on global warming says people should give up meat for one day a week if they want to do something that would help stop climate change
5. Dr Rajendra Pachauri, chair of the United Nations Intergovernmental Panel on Climate Change, said that people should then continue to reduce the amount of meat they eat. Dr Pachauri said it was important for people to change their diet because rearing cattle and other animals produced enormous amounts of greenhouse gases. It also caused other environmental problems, including the destruction of animal habitats, 10. He said it was quite easy to change people's eating habits - much easier than changing means of transport, for example. The United Nations Food and Agriculture Organization has said that meat production causes nearly $20 \%$ of global greenhouse gas emissions. These gases are made during the production of animal 15, Feeds, for example, while animals such as cows produce methane gas. Methane is 23 times more effective as a global warming agent than carbon dioxide.
The United Nations Food and Agriculture Organization has also said that meat consumption will probably double by the middle of the century.
"Reducing meat consumption is the best option because we can do it almost immediately and it will 20. Reduce greenhouse gas emissions in a short period of time," said Pachauri. "Give up meat for one day [a week] at first, and then continue to decrease it," said the Indian economist, who is a vegetarian. However, he also said that other. Changes in lifestyle would help to stop climate change. "We really have to reduce consumption in every sector of the economy," he said.
25.Pachauri can expect some strong opposition from the food industry, but he has received unexpected support from British restaurateur John Torode, who is about to publish a new book, John Torode's Beef. "I have a little bit of meat and enjoy it," said Torode. "Too much meat for any person is just being greedy. But there's a more important question here: where the meat comes from. If we all buy British food and stop buying imported food, we will reduce our carbon
30. Emissions dramatically."

Pachauri will be speaking at an event organized by animal welfare group Compassion in World Farming. The group has calculated that if the average UK home reduced meat consumption by $50 \%$ that would reduce emissions more than cutting car use by $50 \%$. The group wants the government to try to reduce meat consumption by $60 \%$ by 30.2020 . They also say that eating less
35 meat is good for your health. The average person in the UK eats 50 g of protein from meat a day -a relatively low level for rich nations but 25-50\% more than World Heath Organization guidelines. Professor Robert Watson, a government scientific adviser, said the government could help educate people about the benefits of eating less meat, but it should not 'regulate'. "Eating less meat would help, there's no question 35. about that, but there are other things," Watson said.
40. But Chris Lamb, head of marketing for a pig industry group, said it wasn't fair to target the meat industry. He said the industry was working hard to find out which activities had the biggest environmental impact and was trying to reduce those activities. Some ideas were contradictory, he said. For example, one solution was to keep farm animals indoors, but this would be very bad for their health. "Climate change is a very young science and we think 40 . that some of the solutions
45. which people are proposing are very simplistic," he said. Last year a report on the environmental impact of meat eating said livestock produced $8 \%$ of UK emissions - but eating some meat was good for the planet because some habitats benefited from animals eating grass. It also said that vegetarian diets included lots of milk, butter and cheese so they would probably not reduce emmissions much because cows produce a lot of methane.

## http://www.guardian.co.uk/environment/2008/sep/07/food.foodanddrink

## Appendix 1.2.1. Pre-experimental Test (Blank Sample):

Pre-test 2: Put the number of the word next to its definition:
A. 1. amend
2. guideline
3. head
4. erode
5. income
6. livestock
B. 1. pose
2. attach
3. curb
$\qquad$ control / limit
4. fair right / reasonable
5. level
6. draft
C. 1. levy
2. chair $\qquad$ try to reach
3. underlie $\qquad$ change
4. shift most important person (meeting)
5. core
6. levy
D. 1. means
2. offset $\qquad$ care for young animals / people
3. urge way of doing something
4. rear tell someone to do something
5. subsidy
6. link
E. 1. indoor
2. denote
food eaten by animals
3. trigger
help
4. feed
inside a building
5. support
6. emerge

Appendix 1.2.2. Pre-experimental Test (Adapted) (Blank Sample):

Pre-test : Put the number of the word next to its definition:
A. 1. amend
2. guideline $\qquad$ farm animals
3. greedy
4. erode always wanting more
5. income
6. livestock
official instruction
B. 1. pose
2. attach $\qquad$ control / limit
3. curb $\qquad$ milk products
4. dairy
5. level
6. draft
C. 1. levy
2. chair
try to get
3. underlie change
4. shift
5. target
6. levy
most important person (meeting)
D. 1. means
2. offset $\qquad$ care for young animals / people
3. urge way of doing something
4. rear
5. subsidy
6. link
E. 1.welfare.
2. denote $\qquad$ food eaten by animals
3. trigger $\qquad$ cows
4. feed
5. cattle
6. emerge

## Appendix 1.2.3. Pre-experimental Test (Adapted) (Completed

## Examples):



Pre-test : Put the number of the word next to its definition:
A. 1. amend
2. guideline
3. greedy
4. erode $\qquad$ farm animals $x$ always wanting more $x$ official instruction $\times$
5. income
6. livestock
B. 1. pose
2. attach
 control / limit $x$
3. curb
4. dairy
5. level
6. draft
C. 1. levy
2. chair
3. underlie
 try to get

4. shift change most important person (meeting)
5. target
6. levy detox
D. 1. mèans
2. offset

care for young animals / people
3. urge
4. rear
5. subsidy
6. link
E. 1.welfare
2. denote
3. trigger
4. feed
5. cattle
6. emerge

## Ana Ruoy Quispe Vilca

Pre-test: Put the number of the word next to its definition:

| A.1. amend $\quad *$ |  |
| :---: | :---: |
| 2. guideline | 3 farm animals $x$ |
| 3 3reedy | 1 always wanting more $x$ |
| 4. erode | 2 official instruction |
| 5. income |  |
| 6. livestock |  |
| B. 1. pose |  |
| 2. attach | 5 controi/ limit $\%$ |
| 3. curb | 3 milk products $x$ |
| 4. dairy | 6 amount/ quantity $x$ |
| 5.1 level |  |
| 6. draft |  |
| C. 1. levy |  |
| 2. chair | 1 try to get $x$ |
| 3. underlie | 3 change $x$ |
| 4. shift | 4 most important person (meeting) $X$ |
| 5 . target |  |
| 6 6. levy |  |
| D. 1. means |  |
| 2. offset | 5 care for young animals / people $x$ |
| 3. urge | 3 way of doing something $x$ |
| 4. rear | 4 tell someone to do something $y$ |
| 5. subsidy |  |
| 6. link |  |
| E. 1.welfare |  |
| 2. denote | 1 food eaten by animals $x$ |
| 3. trigger | 4 cows 4 |
| 4. feed | 6 health and happiness/ |
| 5. cattle |  |
| 6. emerge |  |

## Appendix 1.3.0. Glossary Provided With Text

(Note: the text itself was never altered and is as appendix 1.2.0):

1. Curb (verb) to control or limit something - limitar algo (line 1)
2. Shift (noun) change - un cambio (line 1)
3. Urge (verb) to strongly advise or ask someone to do something - instar (line 1)
4. Chair (noun) a person in charge of a formal meeting - la presidencia de una reunion (line 5)
5. Rearing (noun) caring for young people or animals until they can look after themselves - crianza (line 7)
6. Means (noun) a method or way of doing something - manera / forma (line 10)
7. Feed (noun) food eaten by animals - alimento para animales (line 15);
8. Support (noun) help - apoyo (line 26)
9. Level (noun) amount or quantity - nivel / cantidad (line 31)
10. Guidelines (noun) official instructions or advice about how to do something pautas (line 36)
11. Head (noun) the most important person in an organisation - el dirigente (line 40)

- 12. Fair (adjective) treating someone in a way that is right or reasonable - justo / imparcial (line 40)

13. Target (verb) to direct an action at a specific group of people - estar dirigido a un grupo especifico (line 40)
14. Indoors (adj) inside a building - dentro de un edificio (line 43)
15. Livestock (noun) - collective word for farm animals - animales de granja (line 46)

## Appendix 1.3.1. Glossary (adapted from 1.3.0):

1. Curb (verb) to control or limit something - limitar algo (line 1)
2. Shift (noun) change - un cambio (line 1)
3. Urge (verb) to strongly advise or ask someone to do something - instar (line 1)
4. Chair (noun) a person in charge of a formal meeting - la presidencia de una reunion (line 5)
5. Rearing (noun) caring for young people or animals until they can look after themselves - crianza (line 7)
6. Cattle (noun): collective name for cows - ganado (line 7)
7. Means (noun) a method or way of doing something - manera / forma (line 10)
8. Feed (noun) food eaten by animals - alimento para animales (line 15);
9. Greedy (adj): continually wanting more - avaricioso (line 27)
10. Welfare (noun): health and happiness - bien estar (line 31)
11. level (noun) amount or quantity - nivel / cantidad (line 31)
12. Guidelines (noun) official instructions or advice about how to do something pautas (line 36) 13.Target (verb) to direct an action at a specific group of people estar dirigido a un grup̉o especifico (line 40)
13. Livestock (noun) - collective word for farm animals - animales de granja (line 46)
14. Dairy (noun): used to produce milk - lechero (line 49)

Appendix 1.4.0. Final Vocabulary Cards Side 1:

| Curb (verb) | Shift (noun) | Urge (verb) | Chair (noun) |
| :---: | :---: | :---: | :---: |
| Rearing (noun) | Means (noun) | Feed (noun) | Cattle (noun) |
| Level <br> (Noun) | Guideline <br> (noun) | Greedy <br> (adj) | Welfare <br> (noun) |
| . | Target (noun) | Dairy (noun) | Livestock (noun) |

## Final Vocabulary Cards Side 2:

| a person in charge of a formal meeting la presidencia de una reunion | to strongly advise or ask someone to do something instar | change cambio | control or limit something limitar algo |
| :---: | :---: | :---: | :---: |
| Collective Name for Cows ganado | food eaten by animals <br> alimento para animales | a method or way of doing something manera / forma | caring for young people or animals until they can look after themselves <br> crianza |
| Health and happiness bienestar | Always wanting more avaricioso | official instruction or advice about how to do something pauta | amount or quantity nivel / cantidad |
| - farm animals <br> animales de granja | Used for Milk production <br> lechero | direct an action at a specific group of people estar dirigido a un grupo especifico |  |

Appendix 1.5.0. Post-experimental Test 1 (Blank Sample):




Appendix 1.5.1. Post-experimental Test 1 (Adapted) (Blank Sample):
mou s!


 :ssej : :uben

## Appendix 1.5.2. Post-experimental Test 1 (Adapted)

(Completed Examples):
Name: Shirkey leiva
Complete the following sentences using the words given. Don't repeat any. (You will not use all the woros)
Grant, cattle, curb, rear, demote, target, link, greedy, compound, expose, livestock, welfare, feed, core, guidelines, chair, issue, dairy, albeit, urge, means, attach, head, behalf, shift.

|  | is very difficult to rear vicunas in captivity. They don't adapt to living in farms. |
| :---: | :---: |
|  | 6. The best noeans of becoming rich is to start an internet based company. |
|  | 7. So much com is used as feed for animals that its price has increased dramatically. |
|  | 8. Daikce products such as milk, cheese and yogurt are very popular with vegetarians. |
|  | 9. Only children are often greedy and find it difficult to share their things with other children. |
|  | 10. Despite the very strict avidelines controlling the spread of nuclear arms, many more countries now possess them. |
|  | 11. The tavaet of a country is usually the president or the prime minister. |
|  | 12. Unfortunately many doctors don't put the wel fase of their patients first. They don't do enough to help them, |
|  | Cigarette firms usually _ural young people with commercials which are design |
|  | ere are huge cattle ranches in Texas. There are cows everywhere. |
|  |  |


issue, dairy, aibeit, urge, means, attach, head, behaif, shift.
Grant, cattle, curb, rear, demote, target, link, greedy, compound, expose, livestock, welfare, feed, core, quidelines, chair,
Complete the following sentences using the words given. Don't repeat any. (You will not use all the words)

Appendix 1.6.0. Post-experimental Test 2 (Blank Sample):

Post- test 2 write the English equivalent:

1. la presidencia de una reunión
$\qquad$
2. Nivel / cantidad
3. Alimento para animales
4. Apoyo
5. Dentro de un edificio
6. Cambio
7. Limitar algo
8. Animales de granja
9. Pautas
10. estar dirigido a un grupo especifico _t
11. Instar
12. Crianza

_r

13. Dirigente de una organización $\qquad$
14. Justo / imparcial
15. Manera / forma


Appendix 1.6.1. Post-experimental Test 2 (Completed Examples):
serato
Post- test 2 write the English equivalent:

1. la presidencia de una reunión
2. Nivel / cantidad
3. Alimento para animales
4. Apoyo
5. Dentro de un edificio
$\qquad$ C
$\qquad$ foel
6. Cambio
7. Limitar algo
8. Animales de granja
9. Pautas

10. estar dirigido a un grupo especifico
$\qquad$
11. Instar
12. Crianza
13. Dirigente de una organización
14. Justo / imparcial
15. Manera / forma


Post- test 2 write the English equivalent:

1. la presidencia de una reunión
2. Nivel / cantidad
3. Alimento para animales

4. Apoyo
5. Dentro de un edificio
6. Cambio

7. Limitar algo
8. Animales de granja
9. Pautas

10. estar


Appendix 1.6.2. Post-experimental Test 2 (Adapted) (Blank Sample):

Post- test 2 write the English equivalent:

1. la presidencia de una reunión $\qquad$
2. Lechero
3. Alimento para animales
4. Avaricioso
5. bien estar

6. Cambio

7. Limitar algo
8. Animales de granja
9. Pautas
10. estar dirigido a un grupo especifico _t
11. Instar
12. Crianza
$\ldots$ $\qquad$
ion $\frac{r}{h}$
13. Ganado
14. Manera / forma

e

How many times did you review the vocabulary in total? $\begin{array}{llllllll}0 & 1 & 3 & 4 & 5 & 6 & 7 & m o r e ~ t h a n ~\end{array} 7$

Which definition did you use:
More Spanish more English both equaily

## Appendix 1.6.3. Post-experimental Test 2 (Ad) (Completed Examples):

## Azhi Quspe NooR.

Post- test 2 write the English equivalent:

1. la presidencia de una reunión $\qquad$
2. Lechero
3. Alimento para animates
4. Avaricioso
5. bien estar
6. Cambio
7. Limitar algo
8. Animales de granja
9. Pautas

10. estar dirigido a un grupo específico $t$
11. Instar
12. Crianza

13. Ganado
14. Manera / forma

How many times did you review the vocabulary in total? $\begin{array}{lllllll}0 & \uparrow & 3 & 4 & 5 & 6 & 7\end{array}$

Which definition did you use:
More Spanish more English both equally

## Yuliana Calvo Huayopa

Post- test 2 write the English equivalent:

1. la presidencia de una reunión
2. Lechero
3. Alimento para animales
4. Avaricioso
5. bien estar
6. Cambio
7. Limitar algo
8. Animales de granja
9. Pautas
$\qquad$
10. estar dirigido a un grupo específico target
11. Instar
$\qquad$
12. Dirigente de una organización

14: Ganado
15. Manera / forma

How many times did you review the vocabulary in total? $0 \quad 1 \quad 3 \quad 4 \quad .5 \quad 6 \quad 7$ more than 7

Which definition did you use:
More Spanish more English
both equally

> Ana Ruby Quispe Vilca.

Post- test 2 write the English equivalent:

1. la presidencia de una reunión $\qquad$ chair
2. Lechero
3. Alimento para animales


$$
\text { guinelimeo }<
$$

4. Avaricioso
5. bien estar
6. Cambio
7. Limitar algo
8. Animales de granja
9. Pautas
10. estar dirigido a un grupo específico _t
11. Instar

12. Crianza
13. Dirigente de una organización

14. Ganado

15. Manera / forma $\square$
How many times did you review the vocabulary in total?

| 0 | 1 | 3 | 4 | 5 | (6) | 7 | more than 7 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Which definition did you use:
More Spanish more English
both equally

Post- test 2 write the English equivalent:

1. la presidencia de una reunión
2. Lechero
3. Alimento para animales
4. Avaricioso
5. bien estar
6. Cambio
7. Limitar algo
8. Animales de granja
9. Pautas
10. estar dirigido a un grupo específico torget
11. Instar
12. Crianza
urge
$r \frac{r}{h}$
13. Ganado
14. Manera / forma


How many times did you review the vocabulary in total? $\begin{array}{llllllll}0 & 1 & \text { (3) } & 4 & 5 & 6 & 7 & \text { more than } 7\end{array}$

Which definition did you use:
More Spanish more English
both equally

Appendix 1.7.0. Examples of Journals:

$$
\begin{aligned}
& \text { Day } \\
& \text { - Mam } \\
& 10 \mathrm{~min} \\
& \text { - tuos } 5 \text { min } \\
& \text { - Wuels } 0 \\
& \text { - Haurs } \\
& \text { - Priday ismin neviewed vocububoy } \\
& \text { - Sat iswn nevieweb } \\
& \text { - Sun comar } \\
& \text { what did you } 30 \\
& \text { neveress woid cards } \\
& \text { reverend word cards } \\
& \because \\
& \text { grecumen }
\end{aligned}
$$

## Renato

```
Dey Amount onat youd
\begin{tabular}{ccc}
\(M\) & 0 & 0 \\
\(T\) & 5 min & \begin{tabular}{c} 
reviewed \\
word candr
\end{tabular}
\end{tabular}
    W 15 min teoted may pattmon velabulay candr
    T 2 mim reviewed, testar amy ocabulory condr
    F 3 mim
    5 Smim "
    5. 3 minm tested my partmen vocuburay sonds
```


Hipredo Medina Sano

## Journal



FANY BEDREGAL VIZ
1 At home: read the text and answer the comprelicension questions. $\rightarrow$ Wednes day
2. rad the vocabulary explanations
3. This is for Wednesday.
carnal
Day
Mon
Tues
wed
Amount of time
16 min
10 min
15 min
what you did
reviewed wordcards'meaning
spelled the new words I'm learning Tested my partner with vocabulary cards.

| Thurs | 0 min |
| :--- | :--- |
| Fri | 15 min |
| Sat | 0 min |
| Sun | 0 min |

- Complete the journal for the wok (if you aid nothing say so), -There will be a verabulary test on wednesday, Monday


## Appedix 1.8.0. Tape Scripts of Unscripted Interviews (Examples):

Rocio (age 20): I think it's useful because we can remember more easy many words, on the other hand if we only study the vocabulary from the book we will forget it.

Vianca (age 23): Is a good method to learn new words and their means. I like it so much.

Kelly (age 24): I think it's a great way to remember the vocabulary, and the difficult words.

Alejandra (age 19): They are useful, but (they) aredifficult to make.
Carmen (age 20): The cards were useful, but Ithink we used them because it was homework, otherwise we didn't do that. And we only use them when the teacher ask for them.

Emily (age 19): I think is useful and practical.
Johnny (age 24): It's a good idea for the exam I could remember the words and it help(s) us to improve our vocabulary. Very goodidea.

Yoselyn (age 17): I think that using vocabulary cards help me a lot, for that reason I know some new words, maybe is a little boring make it, but are very useful.

## Appendix 1.9.0. Auxillary Experiment Vocabulary Recognition Test

 (Blank Sample):

Appendix 1.9.1. Auxillary Experiment Vocabulary Recognition Test (Completed Examples):



Appendix 1.9.2. Auxiliary Experiment: Experimental Group's Journals and Comments (Examples):

- Name: Alejandro Huahuala Chavpi-
-Age: 22
- Use vocabulary Cards last month? Yes. - Education: Univ. (Fimshed)
- What do you think about vising Vorabulang Cards?
It's verfull, but is tired to mokeit (departs How is made).

Rail Fernando Alascon Valderrama
23
sse vocabulary card last month ye rs
Education $\rightarrow$ Frmsthed uniwercitg
What do you think about using vorabbulory cards (be Honest)

It haik is coot but if some one gaves me the cases, Hethe, but you have to remember to use iT, it you dost, it is a waste of time

Name: Giselle
Age: 22
Use vocabulary cards last mont $\Rightarrow$ Yes.
Education $\Rightarrow$ University.
I think the vocabulary cards are vogul, and I have learned some words with them but I think I have to practice more I mean I have to learned more words and then I have to practice but sometimes it's difficult to practice them.

NAme: Uictoe EDUARDO MANSIJA RODé́Guiz? AGr: 23

USE w CABuLary last mont en yES I No
Gouration - I finisivo my camarer in institute

- I Dons it finish my caress in unuresity yet.
- I Hiding tint usus 6 capos is goods for us You can bears nits mores.


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