

An Investigation into Vocabulary Language Learning Strategies through Cognitive Theory: Implications for Kurdish Universities

Talib Omer

Erbil Polytechnic University-Soran Technical Institute
Department of Administration
Erbil, Kurdistan Region
Soran University
Faculty of Arts
Department of English
Erbil, Kurdistan Region
Iraq

Introduction

Using the relevant strategy is central to the acquisition, maintenance and retrieval of words in long-term memory. Recalling vocabulary is vital for second language learners, hence mastery of a vocabulary learning strategy is necessary for L2 learners. They need to know which strategy works well for recalling the meanings of new words when using them spontaneously. Cognitive strategies can be defined as maintaining forms and meanings of words in the long-term memory; therefore, they are essential for L2 students to learn independently, because students need to retain and recall their knowledge continuously. According to Schmitt and Schmitt, learners need to include the new knowledge into the old, in order to remember meanings easily. They argue that “the best way to remember new words is to incorporate them into language that is already known” (Schmitt & Schmitt, 1995, p.133). The major issues among Kurdish university students include a lack in recalling the forms and meanings of new words within academic settings (Lavasani & Faryadres, 2011). The researcher will investigate the learners’ opinions using a quantitative questionnaire in determining the most used strategies for recalling new words and remembering their meanings. The findings of this study show that L2 learners are aware of using cognitive strategies and they use them differently. The results show that the participants highly appreciate the strategy of using dictionaries and guessing the meanings of new words from their contexts to retrieve new words for use in their academic life. The aim of this paper is to investigate which strategies under cognitive theory are the most used by successful second language learners. This paper argues that advanced learners need to use a variety of strategies, including the knowledge of words and utilizing dictionaries in an appropriate way, to benefit them in remembering meanings and forms in the long-term memory rather than short-term. The questionnaire items are variable. However, some participants left some questions unanswered, for example items 3 and 4, which led to a poorer validity of the results for these items. This paper comprises a literature review, followed by a section regarding the research methods, which include sampling, questionnaire, pilot results and discussions. The section preceding the conclusion discusses the implications for Kurdish university students.

2. Literature Review

2.1. What is Cognitive Strategy?

Strategies for learning English vocabulary are fundamentally important. The cognitive strategy cannot be ignored because it helps with remembering and processing information. According to O’Malley and Chamot (1990), cognitive theory involves the process of gaining and retrieving information. Chamot et al. identified the cognitive strategy as a “dynamic process in which learners select from incoming information encoded into long-term memory and retrieve it when needed” (Chamot et al., 1999, p.157). This means that information can be stored and recalled. It would be difficult to use different strategies without addressing the interaction between learning vocabulary and cognitive strategy (Chamot et al., 1999; Chamot, 2009). O’Malley and Chamot (1990) mention two types of cognitive memory, namely short-term and long-term. The former refers to information acquired which is active, while the latter is considered information that can be sustained in the memory for a longer time.

Research into second language learning shows that declarative knowledge can help information to stay in long-term memory and entails meaning, for example, images or playing physical games (Lavasani & Faryadres, 2011; Yang, 1999).

2.2. Types of Strategies for Recalling Vocabulary

Research in applied linguistics conducted by Nation (2011) indicates four main types of strategies in learning recalling vocabulary. These strategies are applied under the cognitive theory for remembering and retrieving word meanings. Strategies mentioned are: guessing words from the context clue; deliberately learning from word cards; using word parts; and dictionary use. Guessing words refers to the strategy of learning words from the contexts implicitly. In this case, learners are expected to know a large amount of vocabulary to understand the unknown word from the text. However, deliberate learning words, for example, using flashcards, is a conscious strategy for learning vocabulary. Flashcards can be a piece of paper where the word is written on one side, with the meaning on the other (Coxhead, 2006). Using word parts implies knowledge of the forms of grammatical usage for understanding the meaning of the forms of new words. For example, words can be broken into two or more parts or affixes, such as im- and suffixes such as -ful or -ed. The last strategy, according to Nation (2011), is using dictionaries by advanced learners in a university context; this is considered to be most effective. Dictionaries are perhaps most varied for looking for meanings of words, such as in bilingual or monolingual dictionaries. A bilingual dictionary is one that written in two languages (Nation, 2001; Coxhead, 2006; Marzano, 2004; Schmitt, 2010). Advanced learners might use different devices for controlling retrieval of vocabulary, the most common being use of dictionaries, for example. However, Cohen (2011) indicates that the most effective strategy is using flashcards. The reason he bases this on is that learners are aware and can retrieve meanings through the storage of words. Furthermore, Coxhead argues “The Cards are a reliable source for self-study ... Flash cards ensure that learners cannot see words or expressions and their meanings at the same time. This provides opportunity for recall or retrieval to take place” Coxhead (2006, p.42).

A study by Lawson and Hogben in Australia found that the vast majority of L2 learners at university level used flashcards for repetition and to practise the meanings for the new words. They suggest that at university level, “in each case, students make a decision to use deliberate procedures for remembering word meanings” (Lawson & Hogben, 1996, p.103). Utilizing flashcards could be useful for learners, in particular beginners rather than advanced learners, because learners at higher levels are probably able to guess unfamiliar words using contextual clues and a dictionary. Research has shown that advanced learners guess words not only for learning, but also for remembering the meaning (Nation, 2011), although guessing words from contexts could be difficult. Learners need to read texts intensively and they should be trained well for some skills. However, Lawson and Hogben claim that students might not benefit from guessing words in contexts. This is due to the lack of clarity in which authors might not draw the distinction between the input and the meaning of the context (Lawson & Hogben, 1996; Lee, 2010; Min, 2012). Research by Nation (2001, 2011) found that all types of strategy are equally effective. However, the most significant for university learners seems to be guessing words from contexts and using dictionaries. Several researchers such as Schmitt (2010) agree that using a dictionary is helpful and is a method used by advanced learners in order to retrieve words. However, some dictionaries seem to lack low frequency words. It is argued that students need to first guess a new word and then use dictionaries for making sure that the meaning is correct. Using a dictionary is prevalent among learners attempting to retrieve meanings and forms. Little research has been conducted on the strategy of using word parts among advanced learners, even though it is a helpful technique to remember words from prefixes and suffixes. According to Nation (2011) and Coxhead (2006), affixes can help L2 learners to realize and guess the meanings from contexts. Oxford and Nyikos (1989) argue that good language learners use a variety of cognitive strategies because using such variability may help information to stay in the long-term memory.

3. Methodology

3.1. Sample

The participants selected were male and female and between 27-33 years of age, and from different programmes in higher academic institutes. The majority of them were undergraduate and postgraduate students. The questionnaire was distributed to 20 participants from different cities in order to ensure whether the quality of responses were reliable (Davies & Hughes, 2014).

The purpose of this questionnaire is to find out which strategies are most used and helpful for retrieval of new words; thus, each individual has the same opportunity to answer each statement of the questionnaire (Creswell, 2014; Dörnyei, 2007).

3.2. Pilot Questionnaire

Developing the questionnaire is essential for avoiding redundancy and refining the items; as Dörnyei (2007) suggests, developing the questionnaire helps to revise the items and add or reduce the unnecessary items. After the first draft of the questionnaire about the recalling strategy for vocabularies, it was found that statement 14 read “Doctrinaires are not helpful for remembering and learning vocabulary”. The first concern regarded doctrinaires or dictionaries; it was apparent that “doctrinaires” is meaningless in this context, and that “dictionaries” is the correct word for statement 14. Before further development, the questionnaire failed to obtain the availability of results. Four questions were also added to the questionnaire in order to achieve convenient results for the target subject (Davies & Hughes, 2014; Spada et al., 2008). Statements 4, 6, 7, 10 and 12 were also amended; for example, in statement 4, examples have been added in order for the meaning to be more obvious. See the table below, which illustrates the adjustment of some statements.

Table 1: Piloting and Revising Six Questionnaire Items

Item	First version	Final version
4.ST	Bilingual dictionary helps me to remember the meaning of vocabulary.	Bilingual dictionary (e.g. English and Kurdish) helps me to remember the meaning of vocabulary.
6. ST	Grammatical rules are essential for remembering vocabulary.	Grammatical rules(e.g. plural s or es) are essential for remembering vocabulary.
7.ST	I remember and increase vocabulary when I use clues in contexts.	I remember vocabulary when I use clues in contexts.
10.ST	I am conscious when I improve my vocabulary.	I am aware when I improve my vocabulary.
12.ST	For recalling the meaning, I find it easier to learn vocabulary explicitly.	For recalling the meaning, I find it is helpful to learn vocabulary explicitly.
14.ST	Doctrinaires are not helpful for increasing and remembering vocabulary.	Dictionaries are not helpful for remembering and learning a new vocabulary.

(ST = Statement for using strategy)

3.3 Data Collection and Analysis

The data collection was conducted by the researcher. All participants received the ethical forms and the same questions to answer the all the items appropriately. Effort has been made to minimize causes of distrust of the data collection. The data has been measured using descriptive statistics for every single item from respondents. Three items have not been answered, but these have been included in the variability calculation of the questionnaire. However, this could affect the strategies used for remembering vocabulary and the measurement of the results of this study, because the conclusion depends on the data gathered from the results of the questionnaire (Oxford & Nyikos, 1989; Dörnyei, 2007).

3.4. Questionnaire and Variability

A quantitative method was conducted for data collection because it deals with numerical statistics (Dörnyei,2007).The instrument used for this quantitative method could be considered the close-ended questions, because they help respondents contribute by answering various questions. The research conclusion may be based on the variability of the questionnaire (Spada et al., 2008). The constructive validity may be presumed based on the relationships between the research questions and variability of items. Additional supportive evidence is found in different research studies by Nation(2011) and Oxford & Nyikos(1989).The researcher has also used and amended a citation in the literature indicating that the instrument was previously developed and used for research purposes(Davies & Hughes, 2014; Bryman & Cramer, 2009).The 20statements are used to investigate the most frequent strategies. Items were designed to measure the strategy of guessing (numbers 1,7,9,11,19), flashcards (2,8,10,12,17), dictionaries (4,5,14,16,18) and word parts(3,6,13,15,20).These items were taken and some were amended from previous studies such as Nation & Webb (2011) and Coxhead (2006), and the strategies were adopted from the cognitive strategies for recalling new words.

The strategy of utilizing dictionaries was used to check the meaning of new words frequently and it helps learners to save time. The unknown words could also be investigated by guessing from their contexts. The five-point Likert-scale ratings for the questionnaire were: 1=strongly agree; 2=agree;3=unsure; 4= disagree; 5=strongly disagree. The researcher will attempt to find out the answers for particular phenomena; for example, which strategy was most used for learning and remembering vocabulary.

3.5. Research Objectives and Questions

The purpose of this study is to investigate the importance of recalling the meanings of words in the English vocabulary by using cognitive strategies.

The research question is:

What types of strategies do successful L2 learners use most to remember the meaning of a new vocabulary?

3.6. Results and Analysis

This section analyses the results of the implementation of the questionnaire throughout the study.

Table 2: The Division of Cognitive Strategies Used in Remembering Vocabulary by Advanced Learners

No	Strategy	Scales and Percentages				
		1	2	3	4	5
Guessing words from context strategy						
1.	It is helpful for me to retrieve the meaning of vocabulary through guessing in context.	26%	33%	33%	6%	0%
7.	I remember vocabulary when I use clues in contexts.	33%	33%	46%	0%	0%
9.	Learning vocabulary incidentally is useful for recalling the meaning.	20%	33%	20%	0%	0%
11.	I would predict it is useful to improve vocabulary implicitly.	6%	60%	33%	0%	0%
19.	I believe training in the skills of guessing unknown words results in remembering new words.	26%	40%	26%	6%	0%
Using flashcard strategy						
2.	I remember words by using flashcards.	0%	13%	6%	53%	6%
8.	I use diagrams when I learn vocabulary.	6%	40%	20%	0%	0%
10.	I am aware when I improve my vocabulary.	13%	46%	20%	6%	6%
12.	For recalling the meaning, I find it is helpful to learn vocabulary explicitly.	6%	60%	26%	6%	0%
17.	Making diagrams or pictures to memorize words helps me to retrieve the meaning of the word.	13%	20%	33%	20%	0%
Using strategy of dictionary						
4.	Bilingual (e.g. English and Kurdish) helps me to remember the meaning of vocabulary.	33%	26%	20%	20%	0%
5.	I prefer to use a dictionary to increase my vocabulary.	20%	33%	26%	20%	0%
14.	Dictionaries are not helpful for remembering and learning a new vocabulary.	0%	6%	13%	60%	20%
16.	I use a monolingual dictionary to increase and retrieve the meanings of vocabularies.	20%	33%	13%	33%	60%
18.	I like remembering vocabulary by using an electronic dictionary.	26%	60%	0%	13%	0%
Strategy of using word parts						
3.	The forms of words can always help me to retrieve the meaning of words.	33%	46%	0%	6%	0%
6.	Grammatical rules(e.g. plural s or es) are essential for remembering vocabulary.	13%	26%	40%	6%	0%
13.	Affixes are helpful to remember the meaning of the words.	0%	40%	20%	13%	33%
15.	The forms of words are always for remembering the meaning of words.	20%	60%	13%	6%	0%
20.	I would prefer to use word parts to understand the meaning of new words.	13%	40%	33%	13%	0%

Generally, in reply to the strategy of guessing words in statement 7, 66% of participants agree and strongly agree that they found it helpful to retrieve the meanings by using clues in context. It is only 46% of participants who are unsure, but none of them disagree or strongly disagree. By contrast, for statement 9, the result shows that 53% of respondents agree and strongly agree that learning vocabulary incidentally helps them to recall the meaning, with 20% unsure; but none of them disagree or strongly disagree with the statement. With regard to the strategy of using flashcards, the results of the questionnaire for statement 12 show that 66% agree and strongly agree that learning vocabulary explicitly helps to recall the meaning of words; but 26% of them are not sure and 6% of them disagree and strongly disagree with the statement. The result contradicts with statement 2, where only 13 participants agree and strongly agree, and 6% of them are not sure; but 59% disagree and strongly disagree with the statement of using flashcards for remembering the meaning of new words.

In terms of using dictionaries, out of statements 5 and 18 (see Appendix 1), results reveal that the most used strategy among second language learners is statement 18, whereas 86% of respondents agree and strongly agree that they use an electronic dictionary. None of them are unsure, but 13% of them disagree with the statement. In reply to statement 5, only 53% of respondents agree and strongly agree. However, 26% are unsure and 20% of them disagree and strongly disagree with the claim. With regard to using strategy of word parts for remembering new words, the results are very similar to the strategy of guessing words. In response to statement 15, the data shows that 60% of advanced learners use forms of words to retrieve their meaning, 13% are not sure and 6% of them disagree and strongly disagree with the statement. However, in reply to statement 13, it is only 40% who agree, but 33% strongly disagree with the statement that affixes are helpful in remembering the meanings of new words. In order to answer the research question (what types of strategies do successful L2 learners use most to remember meanings of a new vocabulary?), the graph below illustrates the most used strategy for recalling words by advanced second language learners.

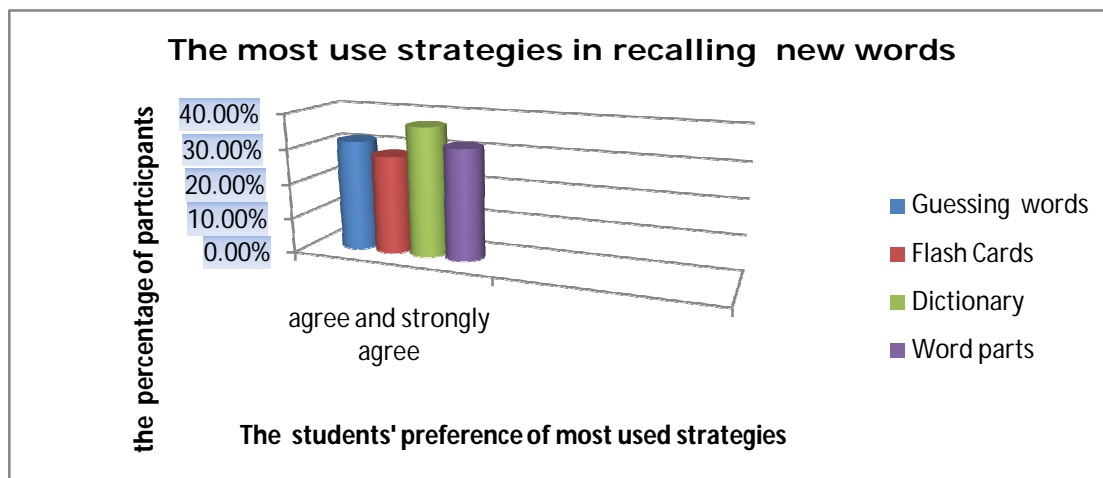


Figure 1: Summary of the Participants' Responses to the most used Strategy by Advanced Learners under the Cognitive Strategy

According to the graph, using an electronic dictionary is the most popular strategy among the second language learners to retrieve the meaning of new words.

3.7. Findings and Discussion

Based on the results above, cognitive strategy into recalling and learning vocabulary is used by second language learners from different cities. The majority of such learners have awareness of different kinds of cognitive strategies, such as guessing words from their contexts, flashcards, dictionaries and word parts. These strategies, according to empirical evidence mentioned above, are highly significant in maintaining forms and meanings of new words in the long-term memory.

Similarly, as Nation (2011) and O'Malley & Chamot (1999) mentioned earlier, these strategies are vital for improving vocabulary. However, results indicate that the strategy most used by advanced learners for remembering meanings is the electronic dictionary. The reason given for this is that an electronic dictionary is easier to use and it helps to directly retrieve the meanings. It is believed that a bilingual dictionary is also helpful for learners to check the meaning of words.

As Marzano (2004) and Schmitt(2010) investigated, using dictionaries aid foreign language learners because it provides not only the meaning, but also helps with using words correctly, for instance, how words are used in grammar and in phonemic transcription. The findings show that the strategy of using flashcards has received little attention because some learners might have background information. However, the results contradict what Coxhead (2006) investigated in her study. Flashcards are more useful for youngsters rather than adult learners for recalling meanings of new words. As expected, some L2 learners used a variety of strategies for improving their ability in mastering vocabulary. Based on the responses of the participants, using the word part strategy in some circumstances is required to investigate the meaning of the word in the text, because morphological rules can assist learners to find out the meanings. For example, the affixes in demotivation or cultivated clearly change the meanings of the words. This strategy, however, has not been highly appreciated by participants, but it still works well in investigating the meanings of new words. The positive results from the variability of this study are fundamentally important for learners to recall the meanings. However, some strategies might not benefit learners to retrieve word meanings; therefore the strategies used within the cognitive theory greatly help learners to be able to retrieve words that they have encountered in their contexts. There are still many challenges, though, that affect the validity of the questionnaire, because some respondents have ignored answering some of the basic questions. This might affect the validity of the research results.

4. The Implications for Kurdish University Students

Within the Kurdish university context, the strategy for vocabulary learning was random. Learning and teaching strategies are not taught by teachers. In my experiences as a student, I used random strategies for learning vocabulary. Some Kurdish university students lack the strategy for retrieval of new words. Therefore, the major issue for the Kurdish university students is this struggle to retrieve the meanings of vocabulary. From the results and literature review, there are other strategies which could be used by advanced Kurdish learners to uphold the meanings within their long-term memory and to recall the words more straight forwardly. In practice, this study recommends learners at university level should pay more attention to the different type of cognitive strategies, in particular the strategies of using dictionaries, word parts and guessing words from contexts. These are all the moderate factors which enable learners to recall the meanings of new words. Teachers can also play the role in helping students train in skills to utilize appropriate strategies for increasing and remembering the meanings of words effectively. This could be done by doing some practical exercises and activities in classrooms.

5. Conclusion

This research reveals insights into various strategies for remembering the meanings of new vocabulary. Advanced L2 learners are aware about using cognitive strategies. The findings of the research reveal that all strategies are used for recalling vocabulary. According to the results, the most desirable strategy for advanced learners is dictionaries. However, little attention has been given to the strategy of using flashcards by advanced learners. Throughout this study, the researcher used the quantitative method and the questionnaire composed of 20 variable items, in order to make sure the validity is relevant between research questions and results. However, some items were not answered, which affected the validity and the accuracy of results. The aim of this paper is to investigate which strategies are used most by successful second language learners under the cognitive theory in remembering the meaning of words. This study argues that L2 learners need to use a cognitive strategy when learning vocabulary, such as guessing words, word parts and dictionaries. This paper recommends that the Kurdish university students should be familiarized in using guessing techniques and the skills of searching words via dictionaries. This will help them to retrieve and keep meanings and forms in the long-term memory. Owing to limitations, further research needs to be done in the role of strategy in remembering the meaning of new words for university students in Kurdistan.

List of References

- Bryman, A. and Cramer, D. (2009) *Quantitative Data Analysis with SPSS 14, 15&16: A Guide for Social Scientists*. Madison: Routledge.
- Chamot, A. (2009) *CALLA HANDBOOK: Implementing the Cognitive Academic Language Learning Approach*. 2nd ed. White plains, N.Y: Pearson Education.
- Chamot, A., Barnhardt, S., El-Dinary, P. and Robbins, J. (1999) *The Learning Strategies*. Harlow: Longman.
- Cohen, A. (2011) *Strategies in Learning and Using a Second Language*. Harlow: Pearson.
- Coxhead, A. (2006) *Essentials of Teaching Academic Vocabulary ENGLISH FOR ACADEMIC SUCCESS*. Thomson Corporation: Boston.
- Creswell, J. (2014) *Research Design*. London: SAGE.
- Davies, M. and Hughes, N. (2014) *Doing A successful Research Project: Using Qualitative and Quantitative Methods*. London: Macmillan.
- Dörnyei, Z. (2007) *Research Methods in Applied Linguistics*. Oxford: Oxford University Press.
- Lavasani, M. and Faryadres, F. (2011) Language Learning Strategies and Suggested Model in Adults' Processes of Learning Second Language. *Social and Behaviour Science* 15(2011):pp.192-199.
- Lawson, F. and Hogben, D. (1996) The Vocabulary-Learning Strategies of Foreign- Language Students. *Language Learning* 46(1):pp.101-135.
- Lee, C. (2010) An Overview of Language learning Strategies. *Arecls* 2010(7):pp.132-152.
- Marzano, R. (2004) *Building Academic Background Knowledge Through Direct Vocabulary Instruction*. New York: Alexandria.
- Min, M. (2012) The Reflection on the Domestic Research Status of Language Learning Strategies Used by Foreign Students Learning. *Physics Procedia* 24(2012): pp.2309-2314.
- Nation, I.S.P. (2001) *Teaching ESL/EFL Reading and Writing*. London: Routledge.
- Nation, I.S.P. (2011) Research into Practice: Vocabulary. *Language Teaching* 44(04): pp.529-539.
- O'Malley, J. and Chamot, A. (1990) *Learning Strategies in Second Language Acquisition*. Cambridge: Cambridge University Press.
- Oxford, R. and Nyikos, M. (1989) Variables Affecting Choice of Language Learning Strategies by University Students. *The Modern Language Journal* 73(3): pp.291-300.
- Schmitt, N. (2010) *An Introduction to Applied Linguistics*. 2nd ed. London: Hodder Education.
- Schmitt, N. and Schmitt, D. (1995) Vocabulary Notebooks: Theoretical Underpinnings and Practical Suggestions. *ELT Journal* 49(2):pp.133-143.
- Spada, N., Barkaoui, K., Peters, C., So, M. and Valeo, A. (2008) Developing a Questionnaire to Investigate Second Language Learners' Preference for Two Types of Form-Focused Instruction. *Science Direct System* 37(2009): pp.70-81.
- Yang, D. (1999) The Relationship Between EFL Learners' Beliefs and Learning Strategy Use. *Journal Pergamon* 73(1999): pp.515-535.