

***Implicit or Explicit Instruction of Spanish Lexicon for
Beginners, a Study on Vocabulary Acquisition in the
Classroom.***

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Abstract

Under the premise that vocabulary learning in a Spanish as a second language in-class environment may be affected by the instructional approach, this study explores the influence of rather distant teaching styles as implicit and explicit approaches, on the learning outcome of Spanish lexicon.

Research has shown successful results in studies undergoing both approaches. However, explicit style shows better results in early stages of learning, whereas implicit style proves to be more effective in a more advanced stage of learning. Explicit approach facilitates breadth knowledge of the content, in opposition to implicit approach, which facilitates a depth of knowledge. As a result, we may have students with vocabulary breadth knowledge, who gloss a Spanish word in English, unable to apply or recognize words in context; as opposed to students with depth of knowledge, who may know the Spanish glosses of English words and their meaning variations depending on context.

Article

Traditionally, L2 curriculum designs have typically shown grammar to be weighted more heavily over vocabulary and especially phonetics. Reviews of research (Gass & Selinker, 2001; Richards & Renandya, 2002) indicate the tendency of students to favor the learning of words in order to convey meaning and the greater importance that teachers and foreign language curricula place on grammar instead of vocabulary. As a result, the teaching of vocabulary has generally been subordinated to the presentation of grammar rules in the majority of the teaching methodologies, so that the lexicon tended to be the means to grammar and not the main focus of study (Schmitt 2000). A consequence of this practice is the traditional lack of attention to vocabulary research in favor of grammar in SLA literature. Likewise, since lexicon is a broad area to be investigated, researchers such as Meara (1984), Gass (1989), Huckin and Coady (1999) in their state of the field review works have repeatedly agreed on the lack of studies on vocabulary during the decades previous to the 1990s.

However, a different tendency in the field may be observed in more recent years. A close look at recent publications shows that L2 lexical acquisition has been thoroughly researched given the sheer number of research publications since the late 1980s. Authors such as Carter and McCarthy (1988), Nation (1990, 2001), Huckin and Coady (1997), Schmitt (2000), and Hiebert and Kamil (2005) have focused extensively on the teaching and learning of vocabulary with the aim of providing pedagogical suggestions for teachers and learners. During the last decade, researchers Paribakht and Wesche (1993, 1996, 1997, and 2000) have extensively examined the importance of the instructional approach in contextualized reading as the main source of input to learners, as well as Ellis (1994) and Barcroft (1994) whose studies have also focused on the use of contextualized and decontextualized input in instructional approaches.

Nevertheless, the majority of research outlined in the following section, which constitutes the

framework for this dissertation, has focused primarily on “the evidence about implicit learning from psychological experiments that do indeed suggest that some possibility exists for training to influence implicit learning” (Gasparini 2004). Consequently, conflicting views have been established among researchers concerning the relative superiority of two approaches to learning L2 vocabulary: learning words in context vs. learning words out of context. Thus, instructional approaches vary from contextual treatments (Krashen 1989), enhancement of input (Wong 2005), and extensive readings (Paribakht & Wesche 2000), to using mnemonic techniques (Hulstijn 1996), and presenting isolated word lists for translation of items (Van Benthuisen, 2002).

The implicit vs. explicit learning process is a concept based on cognitive psychology research (Rieder, 2003). Explaining the concept of implicit learning is especially controversial among researchers (Hulstijn, 2005). The definition of both terms is always offered explaining each concept opposite to the other in its procedure for a person to gain knowledge. In other words, there is a tendency to introduce implicitness in the knowledge process through examples of knowledge produced in situations where humans are aware of facts or procedures, however they are unable to explain the way such facts or procedures were achieved. This includes how children end up speaking, or how cultural customs are comprehended and reproduced with nobody telling us what to do. Williams (2005) entitles a paper *Learning without awareness*, in which he explains that implicit learning occurs without intention to learn and without awareness of what has been learned. Ellis (1994: 1) defined implicit learning as “acquisition of knowledge about the underlying structure of a complex stimulus environment by a process which takes place naturally, simply and without conscious operation”, while explicit learning is said to be characterized by “more conscious operation where the individual makes and tests hypotheses in a search for structure”.

In this sense, Krashen’s Acquisition-Learning Hypothesis, as a part of the Theory of Second Language Acquisition (1983), established the difference between two ways to L2 attainment. On one hand,

acquisition as the product of a subconscious process similar to the process that children undergo when they acquire their first language; and *learning* as the process of formal instruction that comprises conscious processing, which results in knowledge about the L2. These concepts introduce an important difference; the former is knowledge of “how to”, whereas the latter is knowledge “about”, to create or recognize paradigms. In 1989, Krashen revisits his Input Theory, originally part of the 1983 Theory of Second Language Acquisition: “when the Language Acquisition Device is involved, language is subconsciously acquired; while you are acquiring, you don't know you are; your conscious focus is on the message, not form. Thus, the acquisition process is identical to what has been termed “incidental learning”.” (39)

Thus, it is a concept that establishes focus on the absence or presence of conscious operations as a crucial distinguishing factor intervening in the learning process, and so, intervening as well in the pedagogical style used for instruction of content. Therefore, to make implicit learning different from explicit learning in the classroom context is a problematic subject because of the difficulty to delimit up to what point the mind is making an effort to learn, or just acquiring stimuli as part of the knowledge corpora (Ellis, 2005).

Lexicon in SLA

Lexicon in SLA has its starting point for vocabulary acquisition in the mapping between form and meaning. This process of mapping forms and meanings leads to the nature of lexical knowledge in a second language, which is the same issue of understanding what it actually means for a language learner to know a word and guiding the learner to achieve so (Nation 1990, Wesche and Paribakht 1996). As in general Semantic Field Theory, lexicon in SLA and the mechanics of vocabulary learning are still something of a mystery; no clear and unequivocal consensus exists as to the nature of lexical knowledge (Laufer and Paribakht 1998, Schmitt 2000). Among many other things, knowing a word implies different mental processes (Nation 1990) that a learner needs to accomplish in order for that

learner to recognize a given letter string, both in written and oral format as a legitimate word in the target language and to know the meaning of this particular letter string. Words represent complex and, often, varied meanings. In addition, these complex and varied meanings of words need to be understood in the context of other words in sentences and paragraphs in texts. The goals for vocabulary learning include recognizing the words in context and understanding the nuances of meaning variation in addition to, or instead of students not only recognizing isolated words, but also understanding in contexts where the varied meanings of a word may occur. Knowing elaborations¹ for L2 words does not guarantee successful access for use in an L2 context, since knowing a word is not just to know the translated meaning or its L2 synonyms (Prince, 1996). Vocabulary instruction may have become relegated to a secondary status due to the difficulty of treating the lexicon in an L2 syllabus (Krashen, 1989). Likewise, agreeing on a clear definition of what is to know a word in terms of SLA instruction has proved difficult to achieve (Nation, 1990; Meara, 1995).

Not only these issues, but also the way in which learners acquire knowledge of vocabulary is still poorly understood (Bot, Paribakht, Wesche, 1997). As a consequence, vocabulary used to be presented in lists of terms related to the main topics of the chapters in textbooks, but in general “the vocabulary is regarded merely as the means of exemplifying other features of the language. It serves all the other syllabuses strands” (Sinclair and Renouf 1988). This approach to vocabulary reflects that, whereas the grammar of a language is largely in place by the time a child is 10 years old (Crystal 1987), vocabulary continues to be learned throughout the person’s lifetime. This is because the grammar of a language is made up of a limited set of rules, but a person is unlikely to ever run out of words to learn (Schmitt, 2000).

¹ Elaboration is relating a new word to relevant information previously stored in memory. For example, the word in English *wield* -or *blandir* in one of its Spanish translations- may come across a student who only look it up in the dictionary, yet it may not be remembered anymore because it was given a small amount of elaboration.

Knowledge of a word

Words may be considered differently according to pedagogy of the vocabulary. Nation (1990:24) distinguishes between receptive and productive use of a word: “Receptive carries the idea that we receive language input from others through listening or reading and try to comprehend it, productive that we produce language forms by speaking and writing to convey message to others”. He then lists different aspects of meaning that must be mastered in order to have fully “learned” a word. Those aspects are: spoken form, written form, grammatical behavior, collocational behavior, frequency, stylistic register constraints, conceptual meaning, and word associations.

The next chart is offered in Nation (2005:584), where his eight aspects of word knowledge are divided in subdivisions of *form*, *meaning* and *use*, which are broken down into two further aspects, receptive vs. productive control. Receptive knowledge means being able to recognize one of the aspects of knowledge through reading and listening, and productive knowledge means being able to use it in speaking and writing (Richards & Renandya, 2002).

Form	Spoken	R What does the word sound like?
		P How is the word pronounced?
	Written	R What does the word look like?
		P How is the word written and spelled?
Word parts	R	What parts are recognizable in this word?
	P	What parts are needed to express the meaning?
Meaning	Form & meaning	R What meaning does this word form signal?
		P What word form can be used to express this meaning?
	Concept & referents	R What is included in the concept?
		P What items can the concept refer to?
	Associations	R What other words does this make us think of?
		P What other words could we use instead of this one?
Use	Grammatical functions	R In what patterns does the word occur?
		P In what patterns must we use this word?

	Collocations	R	What words or types of words occur with this one?
		P	What word or types of words must we use with this one?
	Constraints on use	R	Where, when, and how often would we expect to meet (register, frequency) this word?
		P	When, where, and how often can we use this word?

Table 1: Receptive and productive knowledge of a word. *Note:* R= receptive knowl., P= productive knowl.

Lexical knowledge and ability to appropriately employ words are the ultimate goal for SLA vocabulary achievement. A distinction between depth of knowledge and breadth of knowledge is then made (Wesche and Paribakht); by which quantitative versus qualitative approach to teaching and learning has been established. In other words, a quantitative approach aims for number of words to know, whereas qualitative aims for assimilated words to know and use in a different contexts. Wesche and Paribakht (1996, 1997, 1999, 2000) have conducted extensive research based on this distinction regarding the teaching of vocabulary in reading contexts. They have designed a measuring instrument, the Vocabulary Knowledge Scale, which will be later explained, in order to test L2 lexical acquisition on two dimensions. These two dimensions explore the knowledge that individuals may obtain in the knowledge of words in the long term vs. the knowledge in the short term. Both are compatible since one may lead to the other as long as learners are getting experience *savoir faire* in the discipline of study.

Vocabulary Breadth and Vocabulary Depth

Vocabulary Breadth	Vocabulary Depth
Number of words known and used	Understanding of multiple word meanings
Ease with which these words are used or understood	Flexibility with words
	Generativity with language

Table 2. Vocabulary breadth vs. vocabulary depth diagram

As outlined in Table 2, vocabulary breadth and vocabulary depth are two separate categories that indicate the extent to which a lexical item is known or not known by the learners. Nation and Waring (1997) discuss these categories and define breadth of knowledge as responding to the question; how much vocabulary does a second language learner need. In Schmitt and McCarthy, vocabulary depth is described in this statement as “knowing a word requires more than just familiarity with its meaning and form” (1997:4). Read (1993) states that the vocabulary depth perspective shows the learner’s ability to account for more than the word meaning and its form. In other words, it shows the quality of the learner’s vocabulary knowledge.

As discussed above, knowledge of SLA vocabulary implies a large variety of pedagogical approaches that are not always accounted for by the Curriculum or given the appropriate weight in the time of classroom instruction. This dissertation aims to measure the knowledge of vocabulary teaching so that the word learning produced is both qualitative for depth of knowledge, and quantitative for breadth of knowledge.

Purpose of the study

The current study is intended to examine variables that may help explain the acquisition of Spanish vocabulary by beginner students of Spanish at the university level. I intend to determine empirically whether an implicit methodology for teaching L2 vocabulary relates to more effective vocabulary acquisition for subjects in the experimental sections in comparison to L2 vocabulary gains evidenced by those subjects who were taught L2 vocabulary under an explicit methodology. In addition, I examine extraneous variables external such as: motivation and subject use of learning strategies and how these variables relate to the acquisition of L2 vocabulary and instructional methodology. Other variables such as gender, Spanish course required, and previous knowledge of Spanish are also included as factors that may relate to the acquisition of L2 vocabulary. The analysis of all these

variables is expected to show results that correlate the personal factors with each of the teaching approaches, so that it may be possible to predict success in vocabulary learning. As a result, teachers may be able to modify their methodologies and materials to maximize L2 vocabulary acquisition

Research questions

1. Do the students undergoing the implicit approach treatment show significant L2 vocabulary gains?
2. Do the students undergoing the explicit approach treatment show significant L2 vocabulary gains?
3. Does the implicit group show a more significant L2 vocabulary gain than the explicit group?

Methodology

The data for this study were collected during the fall semester of the 2008-2009 academic year at Texas A&M University-Commerce (TAMU-C). In this study, I examine explicit and implicit vocabulary instruction in Spanish in relation to end-of-the-semester vocabulary gains by first semester students studying Spanish as a foreign language at TAMU-C. Variables such as motivation, learning strategies, and instructional methods (implicit or explicit approach) will be examined to help explain the acquisition of vocabulary for students in their first year of learning Spanish. Thus, this research explores whether either of the two methodologies (implicit or explicit) relate to a more effective lexical acquisition and how personal factors may impact the learning outcomes. The vocabulary used in this experiment was the same for all the participants. The words are those presented in Chapters 1-6 of the textbook *Puntos de Partida: An Invitation to Spanish, 8th edition*. Within this framework, students enrolled in two separate sections of first semester level participated in the study. Two sections made up the experimental groups undergoing the treatment: Experimental Group I was taught using an implicit

approach; Experimental Group II: using an explicit approach.

Statistical Analyses

The results obtained were analyzed following two statistical analyses: a Mann-Whitney *U* test to compare results between the pretest and the posttest of the groups themselves as well among the groups. A multiple nonparametric correlation analysis is also performed. The software SPSS 16.0 is used to run these tests. Two groups are created: the implicitly instructed, and the explicitly instructed. The Mann-Whitney *U* test will show whether both groups part from the same level of working knowledge, if there has been any knowledge gain in each group, and finally, whether either group has acquired significantly more knowledge. Multiple correlation analysis will allow a look at the two groups simultaneously in order to determine which of the two groups evinces statistically significant increases in L2 lexical acquisition. Multiple nonparametric correlations is an statistical technique that predicts a single dependent variable by a set of independent variables. In this study the non-language influences (learning strategies, motivation and aptitude) are the independent variables that will predict the dependent variable which will be the measured L2 vocabulary gains in each learning group, as defined by teaching methodology experienced: implicit vs. explicit.

Procedure

Implicit Instructional Method Group = Group 1

The experimental group undergoing the implicit approach treatment will be presented the vocabulary following a battery of techniques meant to fulfill the implicit learning approach instruction requirements. The vocabulary from chapters 1, 2, 3, 4, 5, and 6 of the textbook, which correspond to the first semester, will be presented according to the typology of exercises proposed by Paribakht & Wesche (2000) in the Table 2: either number your tables successively throughout the diss, in which case this is Table 5 or 6, or within each chapter, In which case this is table 1.

Category	Description
1. Selective attention	Draws learners' attention to target words; ensures that they notice it.
Examples	underlining, bold-facing, circling, italicizing, use of colors
2. Recognition	Requires association of the written target words form with at least one of its meanings.
Examples	matching word with definition or synonym, recognizing meaning of target words from multiple-choice responses
3. Manipulation	Requires structural analysis of target words to rearrange/organize given elements.
Examples	changing grammatical category of target words; constructing words using stems and affixes
4. Interpretation	Involves semantic and syntactic analysis, including the relationship of target words with other words in given contexts (e.g., collocations, synonyms, antonyms).
Examples	guessing the meaning of target words in context, multiple-choice cloze exercises
5. Production	Requires retrieval and production of target words in appropriate novel contexts.
Examples	open cloze exercises, answering a question requiring the target word

Table 5. Typology of Vocabulary Exercises (from Paribakht & Wesche, 2000:200)

Explicit Instructional Method Group = Group 2

The experimental group undergoing the explicit approach treatment will be presented the vocabulary of each chapter according to guidelines outlined by Meara (1995), Nation & Newton (1997), Lewis (1998), and Thornbury (2002) who claim that subjects can acquire L2 lexical items successfully through the presentation of new words by means of decontextualized lists of words. The decontextualization of the target words refers to its presentation in isolation as glossaries or dictionaries do. That is, the word is not seen in a paradigmatic relationship to other words as part of a continuum in the discourse. The student will receive the written form accompanied by the oral input. The lists of

words will consist of a concise presentation and translation of the vocabulary highlighted with transparencies included with the textbook for Chapters 1 through 6. Teachers relate words in both languages; first by offering a mnemonic cue to link the Spanish term to the English one; second, by requiring students to find their own bridge linking term to do the same process of relating one word to the other.

Along with the presentation, the teacher will instruct the students to implement two of the most studied vocabulary learning methods (Sagarra & Alba, 2006), which are rote memorization and mnemonic elaboration techniques also known as the keyword method. Teachers will explain to students the mechanics of these techniques: Rote memorization consists of memorizing the L1 translation of an L2 word by oral or visual rehearsal. For example, students will memorize the word “book” as the appropriate translation of the Spanish word “libro” either orally by repetition of the oral input, or visually by association to pictures or translation provided on the list. Thus, this method requires the instructor to focus students in the transparency presentation, the book presentation, or a self-elaborated word list hand out. Students will be “able to articulate some kind of verbal description of the stimulus environment” (Gasparini, 2004).

Design of classes for Implicit and Explicit Approach treatments

The Implicit and Explicit experimental groups will be instructed using the Presentation, Practice and Production (PPP) model. Typically, a PPP lesson consists of three stages delineated in the Table 6 below.

1. The Presentation Stage, where the target vocabulary is presented by the teacher.
2. The Practice Stage, where the students complete activities of recognition, manipulation and interpretation.
3. The Production Stage, where the students produce the L2 they were just exposed to and practiced in previous stages.

The main difference between the implicit and the explicit treatment is in the first stage of the class design; that is, in the Presentation Stage. The Practice Stage consists of the same recognition, manipulation and interpretation activities, and the Production Stage will have both treatments to share the activities where no contextualization is needed.

Statistical Analysis and Results

Next, table 6, offers a detailed vocabulary instruction programming. Timing for each stage corresponds to each day that new vocabulary is introduced. Vocabulary will be introduced when starting a new chapter of the textbook. Thus, the timing and sequencing of vocabulary instruction presented in this chart is planned like this: Presentation is done the first day that students are introduced to the new vocabulary. In the same session, following to Presentation, a set of activities are used as Practice, to finally end the session in the Production stage. Subsequent days of instruction will share class time with other contents, as grammar or culture information. As a result, vocabulary will have less time allotted for those sessions. However, different activities in the stages of vocabulary Practice and Production will be presented, nonetheless, along with other contents not specifically focused on vocabulary.

Stages Procedures	Time	Implicit group	Explicit group
Presentation	20 min	Input-based lesson: target words embedded in a text to be read followed by reading comprehension task.	Lists of words to be memorized by use of mnemonic techniques explicitly exposed by the teacher.
Practice	10 min	<ol style="list-style-type: none"> 1. <u>Recognition activities:</u> <ol style="list-style-type: none"> a) matching words to definitions b) TPR task for listening recognition. 2. <u>Manipulation activities:</u> word classification diagrams. 3. <u>Interpretation activities:</u> <ol style="list-style-type: none"> a) cloze passage b) word not corresponding in a series c) multiple choice cloze passage 	<ol style="list-style-type: none"> 1. <u>Recognition activities:</u> <ol style="list-style-type: none"> a) work in groups to find keywords to target words b) matching words to definitions 2. <u>Manipulation activities:</u> categorizing words in diagrams 3. <u>Interpretation activities:</u> <ol style="list-style-type: none"> a) cloze passage b) word not corresponding in a series

			c) multiple choice cloze passage
Production	15 min	a) Open cloze passages b) Controlled composition c) Information gap d) Dictogloss	a) Open cloze passages b) Controlled composition

Table 6: Implicit group and explicit group treatments class design.

Results for Research Questions

The first result to seek out of the statistical analysis consists of establishing the beginner level of the participants in the study. Students were randomly assigned to each group. It is expected that students in both groups have the same level of knowledge previous to start the instruction period. In order to establish that beginner level, a Mann-Whitney *U* test was run.

The VKS test used in this study for measuring vocabulary knowledge represents ordinal data not normally distributed. The use of a non-parametric method of measure, as the Mann-Whitney *U*, is appropriate in this study because the VKS does not measure the means of a series of numerical results, but results in an ordinal scale that offers the measuring of a level of knowledge, not a numeric score.

The VKS test offered 30 words for students to recognize and use in a meaningful sentence if possible.

Test Statistics^a

	W1	W2	W3	W4	W5	W6	W7
Mann-Whitney U	177.500	197.500	185.500	194.000	146.500	197.000	200.500
Wilcoxon W	408.500	428.500	416.500	425.000	377.500	407.000	410.500
Z	-.924	-.366	-.669	-.435	-1.762	-.352	-.259
Asymp. Sig. (2-tailed)	.355	.714	.503	.664	.078	.725	.795

a. Grouping Variable: Code

Test Statistics^a

	W8	W9	W10	W11	W12	W13	W14
Mann-Whitney U	203.000	151.000	209.500	169.500	187.500	192.500	170.500
Wilcoxon W	434.000	382.000	440.500	400.500	418.500	402.500	401.500
Z	-.191	-1.622	-.014	-1.124	-.625	-.521	-1.079
Asymp. Sig. (2-tailed)	.849	.105	.989	.261	.532	.602	.281

a. Grouping Variable: Code

Test Statistics^a

	W15	W16	W17	W18	W19	W20	W21
Mann-Whitney U	186.000	197.000	209.500	152.000	156.000	117.000	173.000
Wilcoxon W	417.000	407.000	440.500	383.000	387.000	348.000	404.000
Z	-.679	-.357	-.016	-1.568	-1.462	-2.504	-1.017
Asymp. Sig. (2-tailed)	.497	.721	.987	.117	.144	.012	.309

a. Grouping Variable: Code

Test Statistics^a

	W22	W23	W24	W25	W26	W27	W28
Mann-Whitney U	181.000	169.500	164.000	206.000	192.000	187.500	183.000
Wilcoxon W	412.000	400.500	395.000	416.000	423.000	418.500	414.000
Z	-.792	-1.115	-1.270	-.112	-.495	-.615	-.733
Asymp. Sig. (2-tailed)	.428	.265	.204	.911	.621	.539	.464

a. Grouping Variable: Code

Test Statistics^a

	W29	W30
Mann-Whitney U	173.000	188.500
Wilcoxon W	404.000	419.500
Z	-1.018	-.598
Asymp. Sig. (2-tailed)	.309	.550

a. Grouping Variable: Code

Table 7. Test Statistics results from the Pretest to Pretest Mann-Whitney *U* test to compare the initial state of learning from both implicit group and explicit group.

The table 7 offers the Test Statistics presenting the comparison word to word from the pretest of the

implicit group and the pretest from the explicit group. In table 12, W1 to W30 corresponds to each of the vocabulary items from the VKS. The significance difference for each pair of words has been established at $p < .05$, which gives a chance of a 5% or less for considering that the null hypotheses (no relationship or no difference) is not true in the population, so the null hypotheses is rejected. In Statistics, the null hypothesis (H_0) always suggests the absence of effect, this is, the lack of relationship between elements that may indicate a cause and effect tendency in a given result (Urdan, 2001).

Table 7 shows $Sign > .05$ in all the items from W1 to W30. This value does not reject the null hypothesis for this analysis. A $p > .05$ value shows no difference between the items compared. The null hypothesis in a statistical analysis establishes a no difference between measurements of data by default. The comparison of the pretest from the implicit group and the pretest from the explicit group does not reject the null hypothesis, so it means that both groups were at the same level of knowledge because there is no significant difference between one and the other.

Would null hypothesis have not been rejected for this first analysis, it should had shown a difference of vocabulary between groups that would caused the instructional treatments not to have been valid since groups would not start their learning process from an equal level of knowledge.

RQ1 Response: Do the students undergoing the implicit approach treatment show significant L2 vocabulary gains?

This question asks if there was a difference in learning for the students in the implicit group. This is, whether from the pretest to posttest they acquired a level of knowledge of the vocabulary that would allow the instructor to conclude that they had learned it. To respond to this question, a Mann-Whitney U was run to test for a significant difference between the pretest and posttest of the implicit group. The null hypothesis in this analysis would reject a significant difference between the results of both tests.

Test Statistics^b

	W1	W2	W3	W4	W5	W6
Mann-Whitney U	127.000	124.000	64.000	97.500	80.500	95.000
Wilcoxon W	337.000	334.000	274.000	307.500	290.500	305.000
Z	-2.143	-2.210	-3.820	-2.932	-3.376	-2.963
Asymp. Sig. (2-tailed)	.032	.027	.000	.003	.001	.003
Exact Sig. [2*(1-tailed Sig.)]	.049 ^a	.040 ^a	.000 ^a	.005 ^a	.001 ^a	.004 ^a

a. Not corrected for ties.

b. Grouping Variable: Code

Test Statistics^b

	W7	W8	W9	W10	W11	W12
Mann-Whitney U	48.500	74.000	43.000	108.000	61.500	66.000
Wilcoxon W	258.500	284.000	253.000	318.000	271.500	276.000
Z	-4.246	-3.535	-4.369	-2.559	-3.866	-3.787
Asymp. Sig. (2-tailed)	.000	.000	.000	.010	.000	.000
Exact Sig. [2*(1-tailed Sig.)]	.000 ^a	.000 ^a	.000 ^a	.012 ^a	.000 ^a	.000 ^a

a. Not corrected for ties.

b. Grouping Variable: Code

Test Statistics^b

	W13	W14	W15	W16	W17	W18
Mann-Whitney U	91.000	58.500	32.500	42.000	92.000	60.000
Wilcoxon W	301.000	268.500	242.500	252.000	302.000	270.000
Z	-3.160	-4.000	-4.785	-4.503	-3.396	-3.916
Asymp. Sig. (2-tailed)	.002	.000	.000	.000	.001	.000
Exact Sig. [2*(1-tailed Sig.)]	.003 ^a	.000 ^a	.000 ^a	.000 ^a	.003 ^a	.000 ^a

a. Not corrected for ties.

b. Grouping Variable: Code

Test Statistics^b

	W19	W20	W21	W22	W23	W24
Mann-Whitney U	49.000	25.500	70.500	45.000	22.500	43.000
Wilcoxon W	259.000	235.500	280.500	255.000	232.500	253.000
Z	-4.221	-4.917	-3.625	-4.320	-4.949	-4.361
Asymp. Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
Exact Sig. [2*(1-tailed Sig.)]	.000 ^a					

a. Not corrected for ties.

b. Grouping Variable: Code

Test Statistics^b

	W25	W26	W27	W28	W29	W30
Mann-Whitney U	63.500	73.500	39.500	84.000	52.500	38.500
Wilcoxon W	273.500	283.500	249.500	294.000	262.500	248.500
Z	-3.984	-3.541	-4.534	-3.251	-4.197	-4.491
Asymp. Sig. (2-tailed)	.000	.000	.000	.001	.000	.000
Exact Sig. [2*(1-tailed Sig.)]	.000 ^a	.000 ^a	.000 ^a	.001 ^a	.000 ^a	.000 ^a

a. Not corrected for ties.

b. Grouping Variable: Code

Table 8. Test Statistics from the Pretest to Posttest Mann-Whitney *U* test to compare the results from implicit group pretest and posttest.

Table 8 shows Exact Sign $< .05$ in all the items from W1 to W30. This value rejects the null hypothesis for this analysis. A $p < .05$ value shows significant difference between the items compared. As stated before, the null hypothesis in a statistical analysis establishes a no difference between measurements of data by default. The comparison of the pretest and the posttest from the implicit group rejects the null hypothesis. Thus, it means that a significant difference from the starting point to the end of the treatment has been established. This is to say that students acquired the knowledge of the vocabulary presented.

RQ2 Response: Do the students undergoing the explicit approach treatment show significant L2 vocabulary gains?

Similarly to Research Question 1, this question asks if there was a difference in learning for the

students in the explicit treatment group. Results show whether from the pretest to posttest students acquired the knowledge of the vocabulary so that the instructor can believe that they have learned it. To answer this question, a Mann-Whitney U was run to test for a significant difference before pretest and posttest of the implicit group. Test results show that the comparison of the pretest and the posttest from the implicit group rejects the null hypothesis. Thus, it means that a significant difference from the starting point to the end of the treatment has been established. This is to say that it can be assured that students in explicit group also acquired the knowledge of the vocabulary presented, as the students in implicit group did.

RQ3 Response: Does the implicit group show a more significant L2 vocabulary gain than the explicit group?

Research Question 3 seeks to determine if there is a difference between the implicit instruction approach and the explicit instruction approach. Students from each group underwent a treatment for a complete semester. The implicit group was presented words in order to acquire them from a comprehensive prospective, going from its meaning to its recognition in a context and the ability to use that word in a contextualized written or oral production activity. In other words, the implicit approach for the lexical acquisition seeks to improve the learner's ability to account for more than the word meaning and its form (Read, 1993), but rather also to impart an understanding of multiple word meanings, flexibility with words, and generativity with language, as Vocabulary Depth knowledge is stated in table 2 in Chapter 1 of this study.

On the contrary, explicit approach was intended for the students to make relations of Spanish vocabulary with its meaning in English not taking into account its global knowledge, rather a number of words to be used and an ease with those words to eventually use or understand, as Vocabulary Breath knowledge is likewise stated in table 2 in Chapter 1 of this study.

The response to Research Question 3 is based upon the compared analysis of the data between the

posttest from implicit group and the posttest from explicit group. The null hypothesis in this question, as in previous questions, would offer a no difference between one group and the other. It would mean that no relationship could be established between the effect and the result. In other words, learning vocabulary following an implicit instructional approach or an explicit one would make no difference in the final outcome.

The statistics tests to answer this question shows $Sign > .05$ in all the items from W1 to W30. This value does not reject the null hypothesis for this analysis. A $p > .05$ value shows no difference between the items compared. The null hypothesis in a statistical analysis establishes a no difference between measurements of data. The comparison of the posttest from the implicit group and the posttest from the explicit group does not reject the null hypothesis, so it means that both groups reflect the same level of knowledge because there is no significant difference between one and the other.

Would null hypothesis have been rejected for this analysis, it should have shown a difference of vocabulary knowledge depth and breadth between groups. That would have shown the instructional treatments to be successful in order to make the implicit group more knowledgeable with the flexibility of words, the generativity with language and understanding multiple word meanings. On the other hand, results from the Mann-Whitney U test comparing both posttests show that both groups obtained a similar outcome.

The treatments have not proved determinant to make students in the implicit group have a comprehension of words beyond it was expected. Though they acquired vocabulary knowledge, it does not seem that they did so in a way different from the knowledge acquired by the explicit group, whose expectations were also met because they proved to have acquired vocabulary knowledge as well.

Instead, statistical analysis shows that both groups undergoing different treatments did not show a significant result from one another in the final outcome. Reasons to explain this result are offered in the discussion of findings next.

Discussion and conclusion

RQ1 & 2 Explanation: Do the students undergoing the implicit approach treatment show significant L2 vocabulary gains?, and do the students undergoing the explicit approach treatment show significant L2 vocabulary gains?

The answer to these questions is 'yes'. Both questions may be answered under the same perspective.

These findings are indicated by the results of the use of the statistical non-parametric method of measure, Mann-Whitney *U*. These findings suggest that following an accurate and consistent instructional approach is enough to produce vocabulary gaining in an in-class SLA setting.

Comparatively, no group shows a quantitative higher learning than the other. The test used to measure vocabulary learning, the VKS, is designed not to offer a numeric score in the sense of countable items, but a scale that reflects how well a lexicon item is learned in terms of a holistic knowledge of a word (Nation, 1990). By looking at these results, it can be inferred that regardless the instructional approach, a focus on vocabulary input has guided learners appropriately so that they grasp what a word in a foreign language may convey. This study, thus, offers results in the same positive path that reviewed vocabulary acquisition studies in Chapter 1 did.

RQ3 Explanation: Does the implicit group show a more significant L2 vocabulary gain than the explicit group?

The answer to this question is 'no'. Given that the VKS test measures the breadth vs. depth knowledge of words, the statistical analysis showed that the different theoretical approaches based on the implicitness or the explicitness in the instruction to facilitate the vocabulary intake process (Van Patten, 1993) has not proved to be determinant in this long term study. For one part, the answer to this question shows that this study has shared common ground with others that claim that explicit approach is more beneficial to beginning students (Van Benthuisen, 2002; Coady, 1997). In this sense, a possible explanation to this fact can be found in what Coady (1997) calls the beginner's paradox. In other

words, they need explicit instruction which is essential for beginning students whose lack of vocabulary limits their reading ability. Thus, the main concern of beginning students may be in building up a corpus of words that will allow them to be fluent in reading and acquiring the vocabulary depth required to infer meanings in a text. Liu & Nation (1985) claim that a successful process of guessing words out of context occurs when a learner know about 19 out of 20 words in a basic level text, for which is required knowing the 3,000 most common words.

Another factor that did not help the implicit approach group can be found in Kelly: “unless the context is very constrained, which is a relatively rare occurrence, or unless there is a relationship with a known word identifiable on the basis of form and supported by context, there is little chance of guessing the correct meaning” (1990:203). This explanation can be applied to the fact that students in both groups have obtained significant word breadth knowledge. This is, they have learned a similar number of words and similar ease to basic use and understanding of those words. The input received by the implicit approach group has not proved to develop the Nation’s (1990) full scale of knowledge of a word (see page 12 of this dissertation).

Having established that the present study has obtained different results to others that claim that the implicit learning of vocabulary through reading can benefit language learners at all levels (Paribakht & Wesche, 1997, 1999; Woodinsky & Nation, 1988), a possible reason not to obtain the same findings than those studies may lie in the exposition frequency to the new lexical items. Despite the emphasis given to vocabulary in the programming of this course, other aspects of learning a L2 cannot be neglected. Instruction, then, is constrained to cover the whole curriculum in the assigned time.

Considering that beginners seem to need to build up a corpus of vocabulary to start getting lexical knowledge out of reading texts, together with a longer exposition to the lexical items, it may have occurred that many students in the implicit approach group may never have done extensive reading beyond required in the classroom activities. Hence, depth vocabulary knowledge has not been attained

as anticipated. As unexpected as this result can be, a positive consideration may be in the actual attainment of a receptive knowledge of words, potentially productive in a forthcoming and consistent reading approach to facilitate implicit knowledge. As a consequence, a Spanish program should consider that once students develop the ability to read in a sustained fashion, then most of the reading should be done outside of class (Richards & Renandya, 2002).

Pedagogical implications

A general implication from this study is that the appropriate input consistent with a given SLA instructional approach may be enough to facilitate L2 vocabulary acquisition. As VanPatten and Leiser (2006) point out, “the business of language teaching is to help acquisition in any way it can.” (59). Nevertheless, the goals are to maximize acquisition and to get learners to use all their potential once they are enrolled in a course of Spanish as a foreign language. The hypothesis underlying this study was that implicit learning through contextualized input could produce a more profitable and durable effect in learners’ acquisition process in the long term, which could be more visible depending on individual motivation and attitude towards the second language they are learning as well as to the strategies they apply to face the learning of new vocabulary.

The first pedagogical implication that can be taken from the findings in this study is that consistency in the application of the instructional procedures should be applied to the assessment procedures as well. The learners, first of all, are students registered in a beginner course and as such, they want to be successful in grade terms. Exams are important for them. Exams did not follow a format such as the VKS test used to measure their learning. Exam designs are designed in a drill-like style that may have conditioned their study strategies regarding the vocabulary. Not to mention that vocabulary is not the only course content required to learn. Whereas the class instruction emphasized the vocabulary part of the curriculum, the course assessment took into account all the aspects of language: vocabulary, grammar, pronunciation, oral comprehension, and writing skills. In a long run treatment as this one, the

focus of the study must have seemed diluted to the student when many different aspects are required from him/her to show proficiency. In other words, an implicit approach instructional style should have required the same assessment procedures as practice activities in class were in order to obtain the hypothesized achievements. Likewise, the amount of words required to implicitly acquire has been remarkable. A selection of less words, and more frequency of exposure (after one chapter, the selected vocabulary was very likely not to be encountered anymore until the exam, or the VKS posttest at the end of the treatment) would probably lead to a more profitable acquisition in terms of vocabulary breadth knowledge.

Second, also regarding the long term treatment format, personal factors, such as motivation and learning strategies, may vary during the course depending on partial results from the official exams. Motivation may be lost if student is confronting a teaching style which does not lead him/her to good grades. Learning strategies may change along the treatment depending on the teaching style itself and the exam results obtained. In any case, a long term treatment must implement a program of consistent actions to keep students motivated and to guide them with learning strategies that might be applied to the actual instructional approach that the teacher has decided to work under.

Lastly, maximizing L2 vocabulary acquisition is highly dependent on the level of the student. General belief (Richards & Renandya, 2002) is that a more focused vocabulary program requires a higher level of proficiency. Hence, in a beginner's vocabulary long term study results are going to be conditioned to build up a corpus of 3,000 to 5,000 words (Liu & Nation, 1985).

Conclusion and directions for future research

This study attempted to explore how two methodological designs could benefit the learner potential to maximize his/her vocabulary learning. As learning has been produced in both teaching approaches, the outcome for one of them -implicit approach- did not reach the expectations. Personal factors that may influence the learning process have not helped in the expected form to maximize learning in the

implicit approach group. This study has shed light on the reasons why implicit learning seems not to be superior to explicit instruction in facilitating the learning process.

Future research can investigate the implicit learning processing mechanism with more limited content and a more production-oriented assessment. A programming which considers both instructional approach and reinforcement of personal factors affecting SLA is also recommendable. It is hoped that this study will serve as a springboard to further research on a variety of personal factors affecting instructional approaches as well as to gain a clearer picture of the role of these instruction types in promoting learners' accurate production.

BIBLIOGRAPHY

- Atkinson R. C. & M. R. Raugh. (1975). An Application of the Mnemonic Keyword Method to the Acquisition of a Russian Vocabulary. *Journal of Experimental Psychology: Human Learning and Memory*, 104, 126-133.
- Ahmed, M. O. (1989). Vocabulary Learning Strategies. In P. Meara (ed.), *Beyond Words* (pp 3-14). London: CILT.
- Barcroft, J. (2003). Effects of Questions about Word Meaning during L2 Spanish Lexical Learning. *Modern Language Journal*, 87, 546-61.
- Barcroft, J. (2004). Second language vocabulary acquisition: A lexical input processing approach. *Foreign Language Annals*, 37, 200-208.
- Brecht, R., Davidson, D., & Ginsberg, R. (1993). *Predictors of foreign language gain during study abroad*. Washington, DC: National Foreign Language Center.
- Coady, J. (1997). L2 Vocabulary Acquisition: A Synthesis of Research. In J. Coady & T. Huckin (Eds.), *Second Language Vocabulary Acquisition* (pp 273-290). Amsterdam: John Benjamins.
- Davis, J. N. (1989). Facilitating effects of marginal glosses on foreign language reading. *Modern Language Journal*, 73, 41-48.
- De Groot, A. M. B., & Van Hell, J. G. (2005). The learning of foreign language vocabulary. In J. F. Kroll & A. M. B. de Groot (Eds.), *Handbook of bilingualism: Psycholinguistic approaches* (pp. 9-29). New York: Oxford University Press.

- Ellis, N. C. (1994). Introduction: implicit and explicit language learning – an overview. In Ellis, N. (Ed.). *Implicit and explicit learning of languages*. London: Academic Press.
- Ehrman, M. E., Leaver, B. L., and Oxford, R. (2003). A brief overview of individual differences in second language learning. *System* 31, pp 313–330.
- Gass, S. (1989). Second Language Vocabulary Acquisition. *Annual Review of Applied Linguistics*, 9, 92-106.
- Gass, S. & Selinker, L. (2001). *Second Language Acquisition, an introductory course*. London: Lawrence Erlbaum Associates.
- Hiebert, E. & Kamil, M. (2005). *Teaching and learning vocabulary: Bringing research to practice*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Hirsh, D. and Nation, P. (1992). What vocabulary size is needed to read unsimplified texts for pleasure? *Reading in a Foreign Language* 8(2), 689-696.
- Hulstijn, J. H., Hollander, M., Greidanus, T. (1996). Incidental Vocabulary Learning by Advanced Foreign Language Students: The Influence of Marginal Glosses, Dictionary Use, and Reoccurrence of Unknown Words. *The Modern Language Journal*, Vol. 80, 3, 327-339.
- Hulstijn, J. H. (1997). Mnemonic methods in foreign language vocabulary learning: Theoretical considerations and pedagogical implications. In J. Coady & T. Huckin (Eds.), *Second language vocabulary acquisition: A rationale for pedagogy* (pp. 203-224). Cambridge: Cambridge University Press.
- Hulstijn, J. H. (2005). Theoretical and empirical issues in the study of implicit and explicit second language learning. *Studies in Second Language Acquisition*, 27, pp 129-140.
- Jourdenais, R., Ota, M., Stauffer, S., Boyson, B., and Doughty, C. (1995). Does Textual Enhancement Promote Noticing?: A Think Aloud Protocol Analysis. In Richard W. Schmidt (Ed.), *Attention and Awareness in Foreign Language Learning* (pp. 183-216). Honolulu, HI: University of Hawai'i, Second Language Teaching and Curriculum Center.
- Kelly, P. (1990). Guessing: No Substitute for Systematic Learning of Lexis. *System*. Vol. 18, No. 2, pp 199-207.
- Krashen, S. (1981). *Second Language Acquisition and Second Language Learning*. New York: Prentice-Hall.
- Krashen, S. (1985). *The Input Hypotheses: Issues and Implications*. London: Longman.

- Laufer, B. (1992) How much lexis is necessary for reading comprehension?. In P. Arnaud and H. Bejoint (Eds.), *Vocabulary and applied linguistics*. London: Macmillan.
- Laufer, B. & Yano, Y. (2001). Understanding unfamiliar words in a text: Do L2 learners understand how much they don't understand? *Reading in a Foreign Language*, 13 (2), 549-566.
- Lehman Perry, F. (2005) *Research in Applied Linguistics: Becoming a Discerning Consumer*. London-New York: Routledge.
- Lewis, M. (1993). *The lexical approach*. Hove, UK: Language Teaching Publications.
- Liu, N. & Nation, I. S. P. (1985). Factors affecting guessing vocabulary in context. *RELC Journal*, 16 (1), 33-42.
- Long, M. (1991). Focus on form: A design feature in language teaching methodology. In K. de Bot, R. Ginsberg & C. Kramsch (Eds.), *Foreign language research in cross-cultural perspective* (pp. 39-52). Amsterdam: John Benjamins.
- Macintyre, P. D., and Charos, C. (1996). Personality, attitudes, and affect as predictors of second language communication. *Journal of Language and Social Psychology*, 15, 3-26.
- Meara, P. (1984). The study of lexis in interlanguage. In A. Davies, C. Criper and A. Howatt (Eds.), *Interlanguage*. Edinburgh: Edinburgh University Press.
- Meara, P. (1995). The importance of an early emphasis on L2 vocabulary. *The Language Teacher*, 19 (2).
- Nagy, William E.; Herman, Patricia A.; & Anderson, R. (1985). Learning Words from Context. *Reading Research Quarterly*, Vol. 20, No. 2, pp. 233-253.
- Nattinger, J.R. (1978). Second Dialect and Second Language in the Composition Class. *Tesol Quarterly* Vol. 12, No.1, pp 77-84.
- Nation, I.S.P. (2005). Teaching and Learning Vocabulary. In Hinkel, E. (Ed.), *Handbook of Research in Second Language Teaching and Learning* (pp 581-596). Mahwah, NJ: Lawrence Earlbaum Associates, Inc.
- Nation, I.S.P. (2001). *Learning vocabulary in another language*. New York: Cambridge University Press.
- Nation, I. S. P. (1990). *Teaching and Learning Vocabulary*. Massachusetts: Newbury House.
- Nation, P., & Newton, J. (1997). Teaching Vocabulary. In J. Coady & T. Huckin (Eds.),

Second language vocabulary acquisition: A rationale for pedagogy. Cambridge: Cambridge University Press.

- Paribakht, T. S. and M. Wesche. (1996). Enhancing Vocabulary through Reading: A Hierarchy of Text-related Exercise Types. *The Canadian Modern Language Review*, 52, 2, 155-17.
- Paribakht, T. S. and M. Wesche. (1997). Vocabulary Enhancement Activities and Reading for Meaning in Second Language Vocabulary Acquisition. In N. Schmitt & M. McCarthy (Eds.), *Vocabulary: Description, Acquisition and Pedagogy* (pp 238-254). Amsterdam: John Benjamins.
- Paribakht, T. & Wesche, M. (1999). Reading and “incidental” L2 vocabulary acquisition: An introspective study of lexical inferencing. *Studies in Second Language Acquisition*, 21, 2, 23-38.
- Paribakht, T. & Wesche, M. (2000). Reading-based exercises in second language vocabulary learning: An introspective study. *The Modern Language Journal*, 84 (2).
- Prince, P. (1996). Second language vocabulary learning: The role of context versus translations as a function of proficiency. *The Modern Language Journal*, 80, pp 478-493.
- Pulido, D. (2003). Modeling the Role of Second Language Proficiency and Topic Familiarity in L2 Incidental Vocabulary Acquisition through Reading. *Language Learning*, 53, 233-284.
- Pyrzczak, F. 1995. *Making Sense of Statistics: A Conceptual Overview*. Los Angeles, CA: Pyrczak Publishing.
- Read, J. (1993). The development of a new measure of L2 vocabulary knowledge. *Language Testing*, 11, (3), 55-371.
- Read, J. (1997). Vocabulary and testing. In Schmitt, N. & McCarthy, M. (Eds.), *Vocabulary: Description, Acquisition and Pedagogy*, pages 303–320. Cambridge: Cambridge University Press.
- Read, J. (2000). *Assessing Vocabulary*. Cambridge: Cambridge University Press.
- Richards, Jack C. & Renandya, Willy A. (2002). *Methodology in language teaching: An anthology of current practice*. Cambridge: Cambridge University Press.
- Richards, Jack C. & Rodgers, Theodore S. (2001). *Approaches and Methods in Language Teaching, 2nd edition*. Cambridge: Cambridge University Press.
- Rieder, A. (2003). *Implicit and Explicit Learning in Incidental Vocabulary Acquisition*.

Edinburgh EUROSLA Conference presentation.

- Rodríguez, M. and Sadoski, M. (2000). Effects of rote, context, keyword, and context/keyword methods on retention of vocabulary in EFL classrooms. *Language Learning*, 50, 385–412.
- Sagarra, N. & Alba, M. (2006). The key is in the keyword: L2 vocabulary learning methods with beginning learners of Spanish. *The Modern Language Journal*, 90 (2).
- Schmitt, N. (2000). *Vocabulary in language teaching*. Cambridge: Cambridge Univ. P.
- Schmitt, N. & McCarthy, M. (1997). (Eds.), *Vocabulary: Description, Acquisition and Pedagogy*. Cambridge: Cambridge University Press.
- Schmitt, N. & Zimmerman, C. (2002). Derivative word forms: What do learners know? *TESOL Quarterly*, 36 (2), 145-171.
- Shanker, J.L & Cockrum, W. (2009). *Locating and Correcting Reading Difficulties*, 9th edition. Upper Saddle River, New Jersey: Pearson Education Inc.
- Sharwood Smith, M. (1981). Consciousness-raising and the second language learner. *Applied Linguistics*, 2, 159-168.
- Sinclair, J. McH. and Renouf, A. 1988. A lexical syllabus for language learning. In Ronald Carter and M.J. McCarthy, (Eds), *Vocabulary and language teaching* (pp. 64–79). London: Longman.
- Spolsky, B. (1995). *Measured words: The development of objective language testing*. New York: Oxford.
- Thornbury, S. (2002). *How to teach vocabulary*. Essex: Longman.
- Urduan, Timothy C. (2001) *Statistics in Plain English*. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Van Benthuyzen, R. (2002). Explicit vocabulary instruction: using a word list to focus attention. *Bulletin of Bunkyo Gakuin Tokyo Univ. - Foreign Studies*, 2.
- VanPatten, B. & Leiser, M. (2006). Theoretical and research considerations underlying classroom practice: The fundamental role of input. In Salaberry, M. R. & Lafford, B. A. (Eds.), *The art of teaching Spanish: second language acquisition from research to praxis* (pp 55-78). Washington, D. C.: Georgetown University Press.
- VanPatten, B. & Cadierno T. (1993). Explicit instruction and input processing. *Studies in Second Language Acquisition*, 15, 225-243.

Wong, W. (2005). *Input enhancement: From Theory and Research to the Classroom*. New York: McGraw-Hill.

Zimmerman, C. (1997). Do reading and interactive vocabulary instruction make a difference? An empirical study. *TESOL Quarterly*, 31 (1), 121-140.