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# Investigating Incidental Vocabulary Learning in Conversation Classes: A Qualitative and Quantitative Analysis

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This study examined incidental receptive and productive vocabulary gains within conversation class interactions. Sixteen Mexican learners of English attended four videotaped conversation lessons where 40 target words were incorporated into different types of exposure. Stimulated recall interviews with students highlighted the effect of cognates, learners' access to passive vocabulary, and use of their vocabulary knowledge in learning related words. Posttests revealed a correlation between frequency of exposure and receptive/productive gains. Mean scores showed that students most often learned task-essential words, followed by words mentioned with synonyms, and last, those mentioned without an explanation. A two-way ANCOVA revealed main effects for cognates, and a statistical interaction between cognate status and types of exposure to target words, and a moderate effect of frequency of mention on receptive knowledge. Results provide implications for ESL teachers who consider incidental learning of vocabulary within their conversation lessons.

In vocabulary acquisition reviews, there are usually references to distinctions between intentional and incidental modes of learning new words. Incidental vocabulary acquisition was defined by Wesche and Paribakht (1999) as what happens when learners are focusing on understanding meaning rather than on the explicit goal of learning lexical items. Gass (1999) maintained that incidental learning suggests reduced cognitive processing in that the learner does not exert that much energy to commit an item to memory as it is the case with intentional strategies of learning vocabulary. Hulstijn (2001, 2003) drew a methodological distinction that incidental learning occurs when learners are not told beforehand of an upcoming test after a given treatment. Based on

this distinction, one assumes that a typical conversation class, which mainly involves meaning-based communication—with no intention to teach vocabulary—can be considered an optimal setting for incidental learning.

Reviews of vocabulary studies usually indicate that incidental vocabulary learning is much rarer than teachers might like to think, and is often slower than explicit learning (Horst, 2005; Hulstijn, 2001; Macaro, 2003). Horst (2010), however, maintained that there are certain opportunities for incidental vocabulary acquisition in a communicative class and from the teacher's speech. Similarly, Nation (2001) posited that a vocabulary-learning goal can be integrated into speaking tasks to encourage incidental learning. The present study evaluates

the opportunities that conversation classes can afford for incidental vocabulary development by examining the factors of input and interaction that could encourage incidental intake and retention of new words while students are engaged in meaning-based interaction and speaking tasks.

The main route by which students are able to learn vocabulary incidentally in the classroom is through their interaction with the teacher and other students in the target language. The interaction hypothesis (Long, 1996) claimed that input becomes comprehensible through interaction. If there is a breakdown in communication, this actually helps learners notice gaps or deficiencies in their ability to communicate. They can subsequently try to repair these, and thus the process can facilitate language acquisition. Many studies have validated this theory and found evidence that interaction can lead learners to notice problems in their interlanguage and attain higher skills in the second language (Gass & Varonis, 1994; Mackey & Philp, 1998; Mackey, 1999; Pica, 1994; Pica, Young, & Doughty, 1987; Polio & Gass, 1998; Swain & Lapkin, 1998).

Following the assumptions of the interaction hypothesis, a number of studies have investigated the question of whether vocabulary acquisition occurs incidentally during interaction and meaning negotiation of target words. However, the majority of these studies have looked at the question only through controlled lab experiments. For example, Ellis, Tanaka, and Yamazaki (1994) found that in all cases, the group that was exposed to interaction showed the highest comprehension and acquisition scores of target words. A similar study by Ellis and He (1999) showed that negotiated input yielded better learning

than baseline input, but the kind of negotiation that allowed students to produce and modify their own output yielded the highest scores in comprehension and retention of target vocabulary. LaFuente (2002) set up an information-gap activity with participants divided into groups that received modified input, negotiated input, and pushed output. Results confirmed the general advantage of negotiation over the modified input in the scores for comprehension and receptive acquisition. Negotiation with pushed output had the advantage of higher scores for productive acquisition and retention.

Taken together, the results of these previous studies seem to indicate that, through a process of hearing and producing meaningful input and output in tasks where learners need to exchange information, vocabulary can be incidentally comprehended and acquired. However, if we are to know whether such acquisition can take place in the classroom, we have to look at situations that are not limited to negotiation, but that also involve spontaneous interaction where vocabulary is likely to occur naturally in different instances and contexts. One study that closely touched upon spontaneous interaction was Brown, Sagers, and LaPorte (1999). The authors investigated natural oral and written journal exchanges between a teacher and nine advanced EFL learners over a whole semester. A comparison was made between the nature of input in the oral and the written modes and the nature of output produced by students. The new vocabulary items produced and used by students after the teacher had used them were considered possibly acquired because of this interaction. The number of words acquired from oral

input was greater than that from the written input. There was better acquisition when students recognized their lexical gaps, meaning that they indicated that they did not know the exact word they wanted to use. Several exchanges on a single topic led to better acquisition, and the topics chosen by students yielded better results than those stemming from topics chosen by the teacher.

One study that has analyzed real classroom interaction and the acquisition of vocabulary was (Dobinson, 2001). In this study, teachers carefully prepared four lessons that included the target vocabulary that they would teach in their English class, and the sessions were videotaped. The author collected lesson plans from the teachers to record the vocabulary items they targeted and compare them to what students actually gained. The study found that learners recalled and retained words better when they were mentioned, focused on, or repeated within class interaction. The study intended to examine intentional vocabulary acquisition, but evidence of incidental learning was also found when learners recalled words that came up spontaneously in class and were not intended by the teacher.

A considerable bulk of research has been done on incidental learning of vocabulary through reading. The findings of such studies related acquisition to context clues, type of task, time on task, frequency, proficiency, or vocabulary size (Brown, Waring & Donkaewbua, 2008; Kweon & Kim, 2008; Paripakht & Wesche, 1999; Rott, 1999; Sanchez & Schmitt, 2010; Watanabe, 1997; Webb, 2008). However, there seems to be a lack of research on incidental vocabulary acquisition from oral input, particularly within classroom interaction. Horst (2010) conducted a

corpus-based appraisal of the opportunities that in-class teacher talk can afford for incidental acquisition of newly encountered words. Using vocabulary frequency profiles, the study considered factors of comprehensibility, repetition, and type of talk. The results suggested that attending to the teacher's speech is not an assured method of acquisition because important academic words and frequent words are unlikely to be encountered within the teacher's discourse exchanges with students in class. However, the study provided implications for the possibility of integrating these important words in meaning-based speaking tasks and activities.

Although few studies have looked at incidental vocabulary acquisition in the language learning classroom, the studies that have been conducted on incidental acquisition point to several factors that researchers should take into account when investigating this question. Ellis (1994) posited four factors that influence incidental vocabulary acquisition from oral input. He referred to these factors as intrinsic word properties, learner factors, input factors, and interaction factors. Ellis suggested that learners can also acquire vocabulary from noninteractional input through the various techniques of teacher-discourse, which include definition, conjunction, elaboration, apposition, and parallel structures. However, Ellis expressed concerns that most of these factors could just be ways that guarantee comprehension, but not necessarily acquisition. Gass (1999) summarized some of the more important intrinsic word factors by noting that a word is more likely to be learned incidentally if there are cognates between the L1 and L2, if a considerable number of exposures occur, or if a number of other

related L2 words are known. If none of these conditions hold, the learner then resorts to intentional learning techniques.

In a post-hoc analysis of research results, Schmitt (2008) pointed out that the tasks that were more effective for vocabulary learning in interaction studies (e.g., Ellis & He, 1999) and reading studies (e.g., Watanabe, 1997) were more engaging than other less effective tasks. In this sense, he highlighted the fact that engagement with vocabulary is the key for incidental learning, and that any intervention that makes target words essential in a task or a class activity would evoke more engagement with lexical items on the part of the learner.

Many researchers have used the classroom interaction setting in focus on form research, first introduced by Long (1991). Loewen (2005) and Nassaji (2010) investigated incidental focus on form in class interaction and both found evidence of the effectiveness of form-focused episodes (FFE) on the acquisition and development of target linguistic features, vocabulary being one of them. In their meta-analysis, Mackey and Goo (2007) found that interaction and feedback were more beneficial when the target features were lexical items rather than grammar items. In the present study, the concept of planned focus on form is used in the sense that vocabulary items are planned to be embedded into various types of exposure, and subsequent measures of retention are likely to point to the most effective modes of exposure in classroom setting.

### **Research Hypotheses**

One relevant hypothesis of the study is that learners are likely to notice new words as they are mentioned in context without explanation, manage to guess

their meanings, and show retention of these words in a vocabulary posttest. This review shows several lines of support for hypothesizing that incidental learning can take place naturally in the classroom. Mackey, Gass, and McDonough (2000) found that learners were more likely to attend to lexical feedback more than to syntactic or phonetic feedback. In line with these results, Gass and Alvarez Torres (2005) investigated the different effects of attending to input and interaction on the acquisition of grammar and vocabulary. One relevant implication these researchers cited was that vocabulary required less attention and less externally driven focus because the learner's internal mechanisms are more helpful in attending to vocabulary as a non-complex and non-abstract area of language.

Another hypothesis is that students acquire words used in conjunction with or appositive to a synonym more easily than words encountered without explanation. Support for this hypothesis comes from Watanabe's (1997) study of written input, which found that words provided with synonym glosses or embedded in appositives in reading passages were learned better than words that were simply read as part of the context of the passages. This finding can be tested orally by looking at what happens when words are mentioned in context only, when mentioned with a definition or explanation, and when in conjunction with or appositive to synonyms.

A further hypothesis is that students can retain task-essential words in speaking activities more often than other non-essential words. Task-essentialness has been validated through earlier studies on the interaction hypothesis. Several studies on

vocabulary acquisition have found that when learners produce their own meaningful input and output through interaction tasks and engage in negotiation of meaning, they retain words better than just hearing native speaker input (Ellis & He, 1999; Ellis, Tanaka, & Yamazaki, 1994; LaFuente, 2002; Newton, 1995). Given that speaking tasks are common practice in second language classrooms, and particularly in conversation classes, it would be a further support for assumptions of task-essentialness to investigate tasks conducted naturally in the classroom rather than lab-controlled environments.

### **Research Questions**

Based on the above hypotheses, the present study is intended to answer the following questions:

1. Does classroom interaction afford opportunities for learners to attend to novel words mentioned in context and show recognition and retention of their meanings?
2. Are words mentioned with synonyms or appositives more likely to be noticed and retained than words mentioned in context without explanation?
3. Do task-essential words yield better acquisition and retention than other non-essential words in the context of classroom interaction?
4. In general terms, what interaction factors afford more opportunities for incidental learning of new words as they occur in the classroom context?

### **Method**

#### **Participants**

The participants for the present study were recruited from a pool of Mexican English as a Second Language (ESL) students who were at an intensive summer program at an American

university for a period of four weeks. Sixteen students (12 females and 4 males) consented to participate in the study. Their ages ranged from 19 to 28. They were placed in the intermediate and upper-intermediate proficiency level in English in their program.

#### **Materials**

**Vocabulary checklist.** Vocabulary items were drawn from the most and least frequent words in the academic word list, supplemented with other general use words. They were added to a checklist in which the students had to check the words that they knew. The test consisted of two hundred words. After participants completed the test, a total of 35 words that all the learners had checked as unknown were chosen to be embedded into the teaching sessions. Five additional words that spontaneously came up during the treatment were added to the analysis. The list of target words is given in Table 1 below.

**Topic checklist.** A checklist was prepared with suggestions of general topics that could be the focus of the lessons. Four topics that were preferred by all the participants were selected for the lessons. These topics were distributed in the sessions in the following order:

Session 1: Culture and concepts from our life

Session 2: Relationships and gender roles in different cultural views

Session 3: Pollution, weather change, and natural disasters

Session 4: Dreams, luck, and superstitions

**Classroom context.** Standard ESL textbooks, websites, and activities were used for the lesson plans. Four two-hour meetings were scheduled with the students to conduct the lessons after they signed the consent forms. The

Table 1

*Target Words for the Sessions*

bond	comprise	notion	attain	sustain
ethic	assess	perspective	assign	advocate
bias	priority	core	exceed	adequate
encounter	norm	deviation	devote	expand
confine	diminish	emerge	utilize	distort
isolate	assemble	vivid	ambiguous	intervene
reveal	widespread	exploit	precise	anticipate
chores	errand	conscript	strive	distort

sessions were videotaped using three video cameras, each camera capturing one group of three or four students, along with the teacher's work and talk. The target words were embedded in different ways during the sessions to test their effects. In one type of exposure, certain words were made task-essential, as the students would have to use them to complete tasks. Only a few words were intended to be explicitly defined or elaborated on, given the typical nature of a conversation class. In another planned type of exposure, certain words were intended to be mentioned in conjunction with or in apposition to a synonym. Examples of contexts in which a word is said in conjunction with a synonym can be drawn from the transcript of the sessions:

Today I want to expand or extend this a little bit by talking about our relation to our environment

An example of a word said as an appositive to a synonym or explanation is the following:

Yes, which means they could utilize, make good use of their own resources for...

The rest of the target words, which was most of them, were intended to be only mentioned in context without further explanation. This is due to the typical nature of a conversation class, where vocabulary does not usually show up as the focus of instruction. In addition to the target words, other words occurred naturally without being planned.

Because it was almost impossible to plan and control everything that happened in class, the video sessions had to be transcribed to investigate the types of exposure and frequencies of target words and relate them to recall and retention results. A complete chart was produced that contained the target words and described their occurrences, frequencies of mention, and how they were presented in class. This chart is shown in the appendix below.

### **Procedures**

**Conversation sessions.** Students attended four class meetings on four successive days. Each session lasted about 2 hours and included warm-up activities, video or audio sections, topic discussion, and group activities. Students were arranged in groups before

each session started to allow for setting up the video cameras.

**Testing.**

***Stimulated recall protocol (SRP).*** SRP is a methodological procedure that has been advocated by Gass and Mackey (2000, 2005), two leading researchers in the field of second language research. The researchers described SRP as an introspective method for collecting data. In this method, the participant is given a reminder of a specific situation so that mental processes used during this situation are stimulated and recalled.

For testing immediate recall of vocabulary, SRP sessions were held individually after each teaching session in a linguistics lab with five randomly selected participants. In each interview, the participant generally watched the video recording of a given session right after class or in the morning before the following class. The participant would watch the video segment of his or her group on a 17-inch laptop with headphones on. The participant was instructed to stop the video at any time to give a comment of any type about vocabulary, structure, or pronunciation points. No attempt was made to interrupt the silence of students while watching. The researcher asked questions only when the learner gave a comment. The questions were “Did you guess the meaning?”, “Did you write the word down?”, “Did you look it up in a dictionary?”, and other questions relevant to students’ comments.

***Productive vocabulary test.*** This test consisted of fill-in-the-gap sentences. To avoid any ambiguity in picking the intended target word, the first two or three letters of each target word were provided in each sentence. The sentences were created by selecting the most frequent academic usage of

target words in the Corpus of Contemporary American English (COCA). Two points were given for a correct answer, one point for a semantically appropriate response (a word similar in meaning and appropriate for context), and zero for an incorrect or blank response.

***Receptive vocabulary test.*** This test was intended to collect more self-reports from the participants about their own learning of the target words. It was adapted from the vocabulary knowledge scale (Wesche & Paribakht, 1996), which uses a 5-point scale from 1 (have never seen the word) to 5 (full familiarity and usage of the word in a sentence). The receptive posttest only contained the 40 target words, and was conducted right after the productive section. Both the productive and receptive tests were conducted in a meeting one day after the last teaching session.

***Analysis.*** Qualitative data from the stimulated recall interview was used as an indicator of what should be expected in a quantitative post test. Major themes were coded from students’ responses, and a list of recalled words was used to identify what factors encouraged more recall of target words. The interviews brought up other factors that were interesting to add to the quantitative analysis besides the type of exposure. These were cognate status and frequency of mention of target words. Based on that, scores of receptive and productive knowledge were analyzed into two sets of two-way ANCOVA with cognate status (2 levels), type of exposure (3 levels) as the independent variables, and frequency of mention as a covariate in order to isolate its effect from the type of exposure variable. Post-hoc analyses were made when significant values were found.

## **Results**

### **Qualitative Data**

The stimulated recall sessions provided an initial view on immediate vocabulary intake after each class. On average, learners recalled 11 words from the target vocabulary over the course of the four sessions. For the type of exposure, it was found that the words recalled by the most participants were those words that had been made task-essential within the sessions. Examples are words like bond, chores, errand, vivid, and ambiguous. From the naturally-occurring non-target words, students also recalled words that were task-essential in different activities. Examples were words like surgeon, newscaster, flatter, and bargain. Students recalled words from the listening and video tasks that required filling information into a table or taking notes for discussion. Examples of these words were chipped, unfold, storage, conservation, and tremendous. For other text-based words that were less essential to meaning, students reported that they either consulted a dictionary or asked their classmates for a quick translation or explanation. Examples of these words were cashier, threat, measure, and efficient. On the other hand, some students reported that they encountered unknown words but they did not have to use the dictionary because they understood the whole meaning from context.

The least recalled words were the words that were just mentioned in context or in conjunction with a synonym. From these, only four words were recalled by any participant as newly-learned words in the stimulated recall sessions. These words were assess, assign, conscript, and intervene. However, students recalled words mentioned in context more easily if they

were cognates, a fact that was explicitly pointed out by some of the students. Examples were words like essence, decade, and inevitable. These words, however, were not targeted for the treatment, but they occurred naturally in teacher's talk, speaking tasks, or class discussion.

Students reported learning new words as a result of realizing their morphological relations to already known words. Some examples are like the following: perceiving the word distant to be related to the word distance, the word costly to be related to the known word cost, and the word pollutant to be related to pollution.

Interaction and exposure to vocabulary aided students to remember words, to access new meanings, to confirm their knowledge of partially known words, and to recognize meanings for words they had heard before but did not know understand. Examples of students' comments were statements like: "I remembered I studied this word long ago," "I remembered it in class," "I think I heard this word before but I did not learn it," or "I only know one meaning of this word, but I learnt it can have another meaning in a different topic." Students reported that they knew some words, but that it was the first time that they had heard them within a certain expression. Examples of these were the expressions culture shock or extended family and the phrase it has to do with, which a student reported to have guessed from context.

### **Quantitative Results**

Scores in the receptive knowledge test were entered into a two-way ANCOVA with cognate status and type of exposure as independent variables, and frequency of mention as a covariate. Results showed a statistical main effect



for type of exposure,  $F(2, 38) = 8.07$ ,  $p = .02$ , partial eta-squared = 0.37, and a statistical effect for cognates  $F(1, 39) = 21.9$ ,  $p < .001$ , partial eta-squared = 0.45. The interaction between cognates and type of exposure approached significance,  $F(2, 38) = 3.17$ ,  $p = 0.058$ , partial eta-squared = 0.35. The effect of frequency was significant  $F(1, 39) = 32.17$ ,  $p < .001$ , partial eta-squared = 0.54. A Scheffé post-hoc test showed a significant difference between task-essential words and no explanation words ( $p = .002$ ).

For type of exposure, descriptive statistics showed that task essential words were learned most often, followed by words mentioned with a synonym, and last, those mentioned with no explanation. Mean scores and standard deviations are shown in Table 2. A visual representation of receptive test is shown in Figure 1.

The same type of two-way ANCOVA was also performed on the dependent variable of productive gain. The main effect of type of exposure was statistically significant,  $F(2, 38) = 12.57$ ,  $p < .001$ , partial eta-squared = .43, with high power (0.93). There was a significant effect of cognate status,  $F(1, 39) = 18.7$ ,  $p < .001$ , partial eta-squared = .36. The effect of frequency was not statistically significant,  $F(1, 39) = 1.03$ ,  $p = .32$ , partial eta-squared = .030. A Scheffé post-hoc test showed a significant difference only between task-essential words and no explanation words ( $p < .001$ ).

Mean scores of productive gain showed that minimal learning took place during the treatment. Descriptive statistics of productive scores are shown below in Table 3 and are represented visually in Figure 2.

Overall, task-essential words yielded better gains both receptively or

productively. Words mentioned with synonyms were more salient to learners than words mentioned with no explanation. The factor that some words were mentioned more frequently than others- ranging between two and twelve encounters- had a moderate effect on how words were retained, but it was through interaction with other factors that results could be interpreted. The factor of cognates largely determined the percentage of learned words. When words were cognates, chances were higher that learners would guess and retain them under any type of exposure within class interaction. This was noticeable mainly in receptive knowledge while there was a very low productive gain overall, except when words were cognates and used essentially in speaking tasks.

### **Discussion**

The main question of this study considered the assumption that a conversation class would afford opportunities for incidental vocabulary acquisition in a variety of different contexts, subject to a number of factors. Results provided initial implications for the significance of the type of exposure and word properties, especially cognate status. The factor of frequency of exposure as well was not a target variable, but the data that the study provided indicated that it was important to test it. A significant effect was shown for frequency of mention in receptive, but not productive gains. This comes in line with literature on the effect of exposure frequency on the quality of vocabulary acquisition (e.g., Folse, 2006; Horst, Cobb, & Meara, 1998; Webb, 2007). The more a learner encounters a novel word, the more likely it will be acquired and retained.

Table 2  
Descriptive Statistics for Receptive Acquisition

	<i>N</i>	<i>Mean</i>	<i>SD</i>
<b>No explanation</b>			
Cognates	18	2.33	2.91
Noncognates	7	0.71	1.11
Total	25	1.88	2.62
<b>With synonym</b>			
Cognates	4	4.50	4.65
Noncognates	5	2.80	2.77
Total	9	3.55	3.57
<b>Task-essential</b>			
Cognates	3	10.66	.58
Noncognates	3	3.00	3.60
Total	6	6.83	4.79

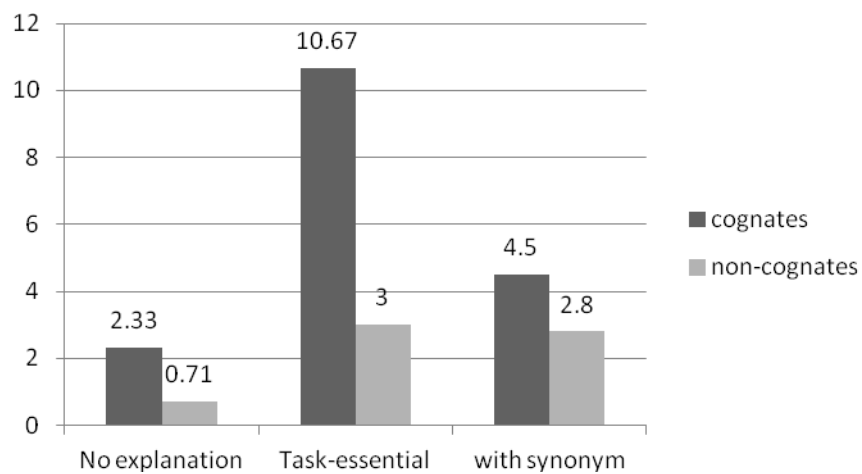


Figure 1. Receptive vocabulary learning.

Table 3  
Descriptive Statistics for Productive Acquisition

	<i>N</i>	<i>Means</i>	<i>SD</i>
<b>No explanation</b>			
Cognates	18	0.50	0.86
Noncognates	7	0.43	0.53
Total	25	0.48	0.77
<b>With synonym</b>			
Cognates	4	.25	.50
Noncognates	5	1.20	1.64
Total	9	.78	1.30
<b>Task-essential</b>			
Cognates	3	7.0	2.65
Noncognates	3	0.67	1.15
Total	6	3.83	3.92

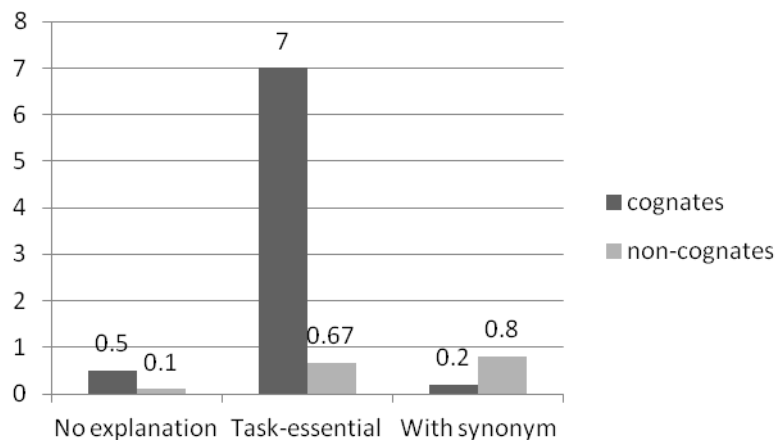


Figure 2. Productive vocabulary learning.

An important concern, however, was the possibility of having productive gains in vocabulary from a conversation class and the factors that could determine the feasibility of this finding. Overall, receptive gains were considerably higher than productive gains. The results from the productive test support the conclusions of the earlier studies on interaction and vocabulary acquisition, since most of the produced words were task-essential cognates. This implies that only the words that learners actually used in class and were more intrinsically salient were more likely to move from the level of recognition to the level of production.

One specific hypothesis of the study was that students in a conversation class can notice new words as they are mentioned in context without explanation, infer their meanings, then retain them in a posttest. This hypothesis was not confirmed. The least frequently acquired words were the ones mentioned in context without explanation. This could imply that students did not notice these words because they did not hinder comprehension, and thus learners did not need to pay attention to these new words, or that there was not enough context to guess the meanings of words. In support of this finding, Laufer (2005) raised a strong case in favor of form-focused learning, claiming that learners, by comprehending the overall message, are less likely to pay attention to individual words. If learners do so, the chances are not high that they will guess meanings correctly, especially if they do not know 98% of the discourse, and thus no considerable incidental learning would be expected in this case. In light of the noticing hypothesis (Schmidt, 1990), initial learning or intake takes place only when the learner notices the

word and the relationship between its form and meaning, and thus attention is involved, even if it is only through an incidental process.

An insignificant exception within the results for the 'mentioned in context' type of exposure came from individual learners when one or two participants learned some of these words. These students reported having written down the words and checked them in a dictionary. This suggested individual vocabulary learning motivation on the part of these learners. In this sense, it seems that this does not fit into the concept of incidental learning. By noticing the word, writing it down, and checking it in a dictionary, the learners were intentionally trying to add a new vocabulary item into their lexicons. The amount of deliberate attention and intentional focus does not seem to be classified as incidental learning. This calls for further research on learner strategies and self-reports of incidental learning and the fine line between intentional and incidental learning conditions.

Another hypothesis of the study was that students could notice words mentioned in conjunction with or apposition to synonyms, recognize their meanings, and show retention of these words in a posttest. This hypothesis was initially supported. The mentioned with synonyms type of exposure yielded a significantly increased rate of acquisition. These words were shown to be more salient for the students and yielded better vocabulary gains than those for which the words were mentioned in context. This makes sense because some students were able to find the relationship between words and their synonyms. More studies are required to investigate whether oral input could be more or less supportive

of incidental learning of vocabulary in different contexts.

A further hypothesis was that students would retain task-essential words better than other words. Task-essential words yielded significant vocabulary recall and retention rates within the treatment. This can be explained in terms of salience. When students had to use the words for the completion of tasks, words became salient to them and were more likely to be retained. The set for learning was further facilitated when these task-essential words were cognates. Task-based interaction was validated here as a factor related to vocabulary gain, as has been found in experimental studies. The more students had to use the words, the more they were likely to retain and produce them in a later test.

Concerning word properties, cognate status was a significant factor in reception and production. This implies that cognates in this study actually facilitated learners' access to new words and improved performance. For reception, learners showed better performance in all types of exposures when words were cognates. In production, learners did almost the same on words mentioned with synonyms and words mentioned without explanation, but a difference emerged when the word was task-essential. Further studies need to address the factors that encourage noticing and recognition of cognates, which could involve frequency of mention, closeness of cognates, proficiency, aptitude, phonological awareness, or meta-cognitive language skills. Ellis (1999) referred to cognates as the learner's potential vocabulary, but research needs to explore how learners perceive cognates in different contexts, from oral input as well as written input.

Qualitative results from the stimulated recall sessions provided further support for factors of incidental learning and introduced additional factors that need to be explored in later research. Students recalled words that occurred naturally within classroom interaction without being targeted for the treatment. Learners recalled words that were close cognates in addition to being task-essential, as well as the words that teachers explained explicitly. The listening tasks that required focus or filling of gaps yielded recall results for newly-learned words. Students also recognized words that were morphologically related to already known words. They were aided by interaction in class to remember meanings of words, to access new meanings, and to confirm their knowledge of partially known words. This could be explained in terms of access to the learner's passive vocabulary, which would include those words that the learners had already encountered, but were not internalized as part of their active or productive lexicon. Most of these results are in line with what Gass (1999) proposed about the factors that encourage incidental learning: frequency of exposure, cognates, and knowledge of related words. All these factors facilitate the process of making certain words salient to learners so that the minimum amount of attention required for incidental learning takes place (Ellis, 1994; Gass, 1999; Hulstijn, 2003).

### **Conclusions**

The present study has provided preliminary observations about the nature of incidental vocabulary learning within a real conversation class situation. It has introduced a primary idea that incidental learning in conversation

classes is possible, to a certain extent, under certain conditions. ESL teachers can consider this factor when they prepare their lesson plans for conversation sessions under the assumption that these lessons can be used for practicing speaking and communication as well as providing opportunities for new learning. The teacher should also consider the possibility that surfaced in the study: that students can be aided by interaction to access their passive vocabulary, remember meanings of words, or discover new meanings. This, in turn, may gradually enhance the spoken proficiency of learners by moving passive vocabulary items from perception to the realm of production through the teacher's incidental revisiting of partially known words on the part of the learners.

However, the implications provided by the study do not undermine or ignore the importance and efficiency of intentional learning of vocabulary because it was not hypothesized that the participants in this study would necessarily retain the acquired words over longer periods. As Nation (2001) posited, productive learning of vocabulary has to do with repeated exposure and practice. Schmitt (2008) maintained that incidental and intentional learning approaches are complementary and that they require one another. A question not yet answered is what the ordering effects of incidental exposure and explicit focus would be on the quality of vocabulary acquisition.

#### **Limitations and Future Directions**

A major limitation of the study is the small sample size, which makes the study close to a pilot experiment that provides observations and directions for a wider-scale and longer-term research. The study could also count as a case

study in that it studied Mexican students in particular in an ESL context with Spanish as the L1. This variable particularly brought up the effect of cognates and examined its significance. Other contexts with different L1s and in other ESL or EFL settings are likely to reveal other aspects of a conversation class and its interaction patterns.

The goal of the study was to replicate a naturalistic classroom setting while controlling, as much as possible the way several words were presented and used in class. The application of this methodology was less controlled than anticipated. The distribution of the types of exposure did not show equal numbers of words in each category. Cognate status was not controlled either because target words were randomly selected based on a pretest checklist. Additionally, the target words for the study focused on a selection from the academic word list, which does not cover the typical corpus of naturally occurring vocabulary in class activities (Horst, 2005) or their frequency distributions. Further research is required to refine the methods and designs that should be used in natural classroom research.

The present study did not measure levels of proficiency because students were placed at the intermediate level in their program. The question arises whether there is a threshold of proficiency that qualifies learners to notice and acquire new words in conversation classes and thus dispose them to boosting their lexicons from natural sources. Another promising area of research would look at aptitude and individual differences in phonological short-term memory and how these relate to the quality of incidental vocabulary acquisition. Along similar lines, vocabulary size measures were

hypothesized to be a predictor of subsequent learning of new lexical items.

Certain methodological challenges are usually involved in natural classroom research.

Some of these challenges surfaced as limitations for this study. Working with a larger sample for longer class hours could reveal more factors and effects in the long run. Recording more classroom data and coding different instances of vocabulary-focused conversation also seems to be a promising area to investigate incidental learning. Theoretical and empirical accounts are still needed towards a more refined operationalization of the distinction between incidental and intentional modes of vocabulary acquisition. Further research would be interesting to follow incidental learning from natural exposure to novel words, as opposed to classroom interaction.

### References

- Brown, C., Sagers, S. L., & LaPorte, C. (1999). Incidental vocabulary acquisition from oral and written dialogue journals. *Studies in Second Language Acquisition*, 21(2), 259–283.
- Brown, R., Waring, R., & Donkaewbua, S. (2008). Incidental vocabulary acquisition from reading, reading-while-listening, and listening to stories. *Reading in a Foreign Language*, 20, 136–163.
- Dobinson, T. (2001). Do learners learn from classroom interaction and does the teacher have a role to play? *Language Teaching Research*, 5(3), 189–211.
- Ellis, R. (1999). Factors in the incidental acquisition of second language vocabulary from oral input. In R. Ellis (Ed.), *Learning a second language through interaction* (pp. 35–61). Amsterdam, The Netherlands: John Benjamins.
- Ellis, R. (1999). *Learning a second language through interaction*. Amsterdam, The Netherlands: John Benjamins.
- Ellis, R., & He, X. (1999). The roles of modified input and output in the incidental acquisition of word meanings. *Studies in Second Language Acquisition*, 21(2), 285–301.
- Ellis, R., Tanaka, Y., & Yamazaki, A. (1994). Classroom interaction, comprehension, and the acquisition of L2 word meanings. *Language Learning*, 44(3), 449–491.
- Folse, K. (2006). The effect of type of written exercise on L2 vocabulary retention. *TESOL Quarterly*, 40(2), 273–293.
- Fuente, M. J. d. l. (2002). Negotiation and oral acquisition of L2 vocabulary: The roles of input and output in the receptive and productive acquisition of words. *Studies in Second Language Acquisition*, 24(1), 81–112.
- Gass, S. (1999). Incidental vocabulary learning. *Studies in Second Language Acquisition*, 21(2), 319–333.
- Gass, S. M., & Alvarez-Torres, M. J. (2005). Attention when? An investigation of the ordering effect of input and interaction. *Studies in Second Language Acquisition*, 27(1), 1–31.
- Gass, S., & Mackey, A. (2000). *Stimulated recall methodology in second language research*. Mahwah, NJ: Lawrence Erlbaum.
- Gass, S., & Mackey, A. (2006). Input, interaction and output: An overview. *AILA Review*, 19, 3–17.
- Gass, S., Mackey, A., & Pica, T. (1998). The role of input and interaction in second language acquisition: Introduction to the special issue. *The*

- Modern Language Journal*, 82(3), 299–307.
- Hill, M., & Laufer, B. (2003). Type of task, time-on-task and electronic dictionaries in incidental vocabulary acquisition. *IRAL*, 41, 87–106.
- Horst, M. (2005). Learning L2 vocabulary through extensive reading: A measurement study. *The Canadian Modern Language Review*, 61(3), 355–382.
- Horst, M. (2010). How well does teacher talk support incidental vocabulary acquisition? *Reading in a Foreign Language*, 22, 161–180.
- Horst, M., Cobb T., & Meara, P. (1998). Beyond *A Clockwork Orange*: Acquiring second language vocabulary through reading. *Reading in a Foreign Language*, 11(2), 207–223.
- Hulstijn, J. (2003). Incidental and intentional learning. In C. Doughty & M. Long (Eds.), *The handbook of second language acquisition* (pp. 349–381). Malden, MA: Blackwell.
- Hulstijn, J. H. (2001). Intentional and incidental second language vocabulary learning: A reappraisal of elaboration, rehearsal and automaticity. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 258–286). Cambridge, England: Cambridge University Press.
- Kowen, S., & Kim, H. (2008). Beyond raw frequency: Incidental vocabulary acquisition in extensive reading. *Reading in a Foreign Language*, 20(2), 191–215.
- Loewen, S. (2005). Incidental focus on form and second language learning. *Studies in Second Language Acquisition*, 27, 361–386.
- Long, M. (1996). The role of the linguistic environment in second language acquisition. In W. Ritchie & T. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 413–468). San Diego, CA: Academic Press.
- Macaro, E. (2003). *Teaching and learning a second language: A review of recent research*. London, England: Continuum.
- Mackey, A. (1999). Input, interaction, and second language development: An empirical study of question formation in ESL. *Studies in Second Language Acquisition*, 21(4), 557–587.
- Mackey, A., Gass, S., & McDonough, K. (2000). How do learners perceive interactional feedback? *Studies in Second Language Acquisition*, 22(4), 471–497.
- Mackey, A., & Gass, S. (2005). *Second language research: Methodology and design*. Mahwah, NJ: Lawrence Erlbaum.
- Mackey, A., & Goo, J. (2007). Interaction research in SLA: A meta-analysis and research synthesis. In A. Mackey (Ed.), *Conversational interaction in second language acquisition* (pp. 433–464). Oxford, England: Oxford University Press.
- Mackey, A., & Philp, J. (1998). Conversational interaction and second language development: Recasts, responses, and red herrings? *Modern Language Journal*, 82(3), 338–356.
- Nassaji, H. (2010). The occurrence and effectiveness of spontaneous focus on form in adult ESL classrooms. *The Canadian Modern Language Review*, 66(6), 907–933.
- Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge, England: Cambridge University Press.
- Newton, J. (1995). Task-based interaction and incidental vocabulary learning: A case study. *Second Language Research*, 11(2), 159–177.
- Paribakht, T. S., & Wesche, M. (1999). Reading and "incidental" L2



- vocabulary acquisition: An introspective study of lexical inferencing. *Studies in Second Language Acquisition*, 21(2), 195–224.
- Pica, T. (1994). Research on negotiation: What does it reveal about second-language learning conditions, processes, and outcomes? *Language Learning*, 44(3), 493–527.
- Pica, T., Young, R., & Doughty, C. (1987). The impact of interaction on comprehension. *TESOL Quarterly*, 21(4), 737–758.
- Polio, C., & Gass, S. (1998). The role of interaction in native speaker comprehension of nonnative speaker speech. *The Modern Language Journal*, 82(3), 308–319.
- Rott, S. (1999). The effect of exposure frequency on intermediate language learners' incidental vocabulary acquisition and retention through reading. *Studies in Second Language Acquisition*, 21(4), 589–619.
- Sánchez, P. & Schmitt, N. (2010). Incidental vocabulary acquisition from an authentic novel: Do Things Fall Apart? *Reading in a Foreign Language*, 22(1), 31–55.
- Schmidt, R. W. (1990). The role of consciousness in second language learning. *Applied Linguistics*, 11(2), 129–158.
- Schmitt, N. (2008). Review article: Instructed second language vocabulary learning. *Language Teaching Research*, 12(3), 329–363.
- Swain, M., & Lapkin, S. (1998). Interaction and second language learning: Two adolescent French immersion students working together. *The Modern Language Journal*, 82(3), 320–337.
- Webb, S. (2007). The effects of repetition on vocabulary knowledge. *Applied Linguistics*, 28(1), 46–65.
- Webb, S. (2008). The effects of context on incidental vocabulary learning. *Reading in a Foreign Language*, 20, 232–245.
- Watanabe, Y. (1997). Input, intake, and retention: Effects of increased processing on incidental learning of foreign language vocabulary. *Studies in Second Language Acquisition*, 19(3), 287–307.

### Appendix

#### Target word occurrences and results

##### *Amount and Type of Exposure vs. Acquisition*

Word	Frequency	Type of exposure	Recalled in SRP by	Retained receptively by	Produced by
ambiguous	3	Task-essential	8	11	5
priority	3	Task-essential	4	11	4
vivid	4	Task-essential	9	10	5
perspective	9	Mentioned in context	1	10	1
norm	3	In conjunction with a synonym	0	9	0
notion	3	In apposition with a synonym	0	8	0
chores	12	Task-essential + class discussion	2	7	5
bias	9	Defined and elaborated	0	6	4
utilize	4	Mentioned in context	2	6	0
adequate	3	Mentioned in context	1	6	0
assess	3	In conjunction with a synonym	4	5	4
exceed	3	Mentioned in context	3	5	0
intervene	4	Mentioned in context	1	4	3
assign	4	Mentioned in context	1	4	2
sustain	4	Text-based/not task-essential + mention	0	3	1
emerge	1	In conjunction with a synonym	0	3	0
reveal	1	Mentioned in context	0	3	0
errand	9	Task-essential + class discussion	0	2	5
core	2	in conjunction with a synonym	0	1	0
conscript	4	Mentioned in context	0	1	1
encounter	3	Mentioned in context	0	1	0
deviation	1	Mentioned in context	0	1	0
devoted	3	Mentioned in context	0	1	0
confine	3	Mentioned in context	0	1	0
widespread	2	Mentioned in context	0	1	0
bond	5	Task-essential	0	0	5
precise	1	Mentioned in context	0	0	0
comprise	3	Mentioned in context	0	0	0
ethics	1	Text-based/not task-essential	0	0	0
attain	3	Text-based/not task-essential + mentioned	0	0	0
advocate	2	In apposition with a synonym	0	0	0
disrupt	2	Mentioned in context	0	0	0

Word	Frequency	Type of exposure	Recalled in SRP by	Retained receptively by	Produced by
strive	3	Mentioned in context	0	0	0
expand	1	In conjunction with a synonym	0	0	0
distort	1	Mentioned in context	0	0	0
exploit	1	Text-based/not task-essential	0	0	0
diminish	2	In conjunction with a synonym	0	0	0
isolate	2	Mentioned in context	0	0	0
assemble	1	Mentioned in context	0	0	0
anticipate	1	Mentioned in context	0	0	0