Targeting count and noncount nouns in English through textual enhancement and elaboration tasks: Effects on L2 development and text comprehension

by

Samira Tanaka

Department of Integrated Studies in Education

McGill University, Montreal

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Abstract

This study investigated the effects of input enhancement in isolation and in combination with output elaboration tasks on the accuracy of count and noncount nouns and text comprehension in English as a Second Language.

Participants were twenty-three Spanish adult ESL learners who were divided into one control and two intervention groups. The intervention lasted two weeks, and learners were required to read materials with input enhancement and to participate in classroom tasks that elicited output practice. Pre- and post-tests included a grammaticality judgment task, a written task and a decontextualized task. A note-taking activity along with questionnaire and interview materials provided qualitative support for the data analyzed quantitatively.

Results from a two-factor ANOVA with repeated measures revealed the following: (a) no significant effect in regard to participants’ mean scores on the grammaticality judgment tasks for Group, Time, or the Group x Time interaction; (b) participants’ mean scores on the writing tasks showed a significant effect for Time, irrespective of group. Findings from the decontextualized task were not analyzed statistically, but they suggest beneficial effects on the performance of the intervention groups. Finally, findings from this study demonstrated improvement in text comprehension over time, irrespective of group (and no Group x Time interaction), which provided empirical support that this type of treatment is relatively unobtrusive to comprehension.
Résumé

Cette étude portrait sur les effets de la mise en évidence visuelle seule et en combinaison avec les tâches de production langagière sur la précision des noms comptables et des noms massifs et de la compréhension des textes en anglais comme langue seconde.

La cohorte de participants était composée de vingt-cinq hispanophones adultes apprenants en ALS divisés en un groupe-témoin et deux groupes expérimentaux. L’intervention a duré deux semaines et les apprenants devaient lire des documents avec une mise en évidence visuelle de la structure langagière et participer à des tâches en salle de cours qui requéraient des exercices de production langagière. Des tests avant et après l’intervention incluaient des tâches de jugement grammatical, des tâches écrites et une tâche décontextualisée. Les documents pour la prise de notes, les questionnaires et les entrevues fournissaient le support qualitatif pour les données analysées quantitativement.

Les résultats d’une ANOVA (analyse de variance) à deux facteurs avec mesures répétées ont révélé ce qui suit : (a) aucun effet significatif quant aux scores moyens des participants pour les tâches de jugement grammatical pour le Groupe, le Temps ou l’interaction Groupe x Temps; (b) les scores moyens des participants pour les tâches d’écriture ont donné un effet significatif pour le Temps, mais sans égard au Groupe. Les constatations de la tâche décontextualisée n’ont pas été analysées statistiquement, mais elles suggèrent des effets bénéfiques à en juger par la performance des groupes d’intervention. Enfin, les constatations de cette étude ont démontré une amélioration de la compréhension du texte avec le Temps, mais sans égard au Groupe (et aucune interaction Groupe x Temps), ce qui représente une preuve empirique indiquant que ce type de traitement n’a pas d’effet néfaste sur la compréhension.
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Chapter 1

Introduction

In this chapter I will present the purpose of the present study and its motivation by discussing the vocabulary learning issues that I am interested in. I will also define the context of the present study while presenting relevant issues in teaching and learning vocabulary in a second and/or foreign language.

1.1 Purpose of the Study

The important role that lexis plays in language education has been acknowledged by the vast literature on theoretical and empirical vocabulary research in Second Language Acquisition (SLA). Some authors suggest that vocabulary size is crucial in learning a language, hence the bold statement that “the single most important task facing language learners is acquiring a sufficiently large vocabulary” (Lewis, 2000, p. 8). However, others believe that vocabulary use is more essential than vocabulary size, as suggested by Hunt and Beglar (2005, p. 24) who stated that “the heart of language comprehension and use is the lexicon.” Despite the different views on this topic, it remains clear that the relevance of lexis has been well established both in the literature (theoretical and empirical) and in actual classrooms (Barcroft, 2004).

According to Sánchez and Manchón (2007), the SLA literature in L2 vocabulary has flourished from theoretical and pedagogical perspectives. From a theoretical perspective, scholarly discussions have revolved around different concerns, such as: the concept of vocabulary knowledge and lexical competence
(Nation, 2005); the reasoning of analysis and teaching the “word” as the unit (Almela & Sánchez, 2007; Gardner, 2007; Hunt & Beglar, 2005); and the dimensions of breadth and depth in lexical competence (Laufer & Goldstein, 2004). Other areas of theoretical interest lie in the representation of the mental lexicon in the bilingual and/or multilingual mind (Navracsics, 2007) as well as in its accessibility for comprehension and production (Meara, 2005). Numerous empirical studies have also gained importance in the field of L2 vocabulary. For instance, the effectiveness and the variables that influence the use of learners’ strategies in acquiring and using L2 vocabulary have been prominent areas of research (Nation, 2005). Individual differences have also been investigated in terms of gender and age in relation to L2 vocabulary learning (Grace, 2000; Gu, 2002, Miralpeix, 2007). Finally, research on the role of second versus foreign language contexts has also contributed to the vast literature (Kojic-Sabo & Lightbown, 1999).

From the perspective of pedagogy, many researchers have focused on vocabulary teaching and have devoted their efforts “to ascertaining the best pedagogical practices in promoting the students’ lexical development” (Sánchez & Manchón, 2007, p. 8) (e.g. Bogaards & Laufer, 2004; Carter & McCarthy, 1988; Coady & Huckin, 1997; Gairns & Redman, 1986; Nation, 1990; Nation, 2001; Takač, 2008). This branch of vocabulary research in SLA explores different teaching methods and learners’ strategies, such as the effectiveness of word translation, dictionary use, first language influence, and the inference of meaning from contexts. It is also concerned with the best approach for L2 vocabulary
learning, such as through input, interaction, repetition, list learning, communicative tasks, and so on. Testing and assessment are also an area of research in SLA that explore further implications involved in vocabulary studies (Laufer & Goldstein, 2004; Meara, 2005; Mochida & Harrington, 2006; Moreno Jaén, 2007; Read, 2007).

In addition, empirical studies echo a discussion in SLA regarding intentional versus incidental focus on form (Alcón, 2007; Wesche & Paribakht, 1999; Pulido, 2003; Pulido, 2004), both of which have generated much insight into these two types of lexical instruction. Furthermore, other studies explore the issue of explicit versus implicit learning process (Hunt & Beglar, 2005; Paribakht & Wesche, 1997) as well as receptive and productive learning functions (Webb, 2005) in vocabulary acquisition.

The diverse topics of discussion that integrate teaching and learning L2 vocabulary into mainstream SLA are of interest to me and have prompted me to select the topic of this study. Despite the abundance of literature on L2 vocabulary in SLA, there still exist broad areas to be explored through classroom research that can be pedagogically beneficial for teachers in the practical world of L2 education. The purpose of this study is to contribute to the SLA literature through classroom research on vocabulary, while providing pedagogical evidence for teaching and learning count and noncount nouns in English L2 through individual reading and elaboration tasks in small groups.

Motivation to conduct this study is largely due to one of the major issues in L2 vocabulary learning, which is precisely its heterogeneous lexical nature.
Višnja Pavičić Takač (2008) states that a vocabulary consists of a wide range of lexical forms that includes but is not limited to: morphemes (e.g. farm) and their combinations (e.g. farmer); compounds (e.g. taxi driver); idioms (e.g. piece of cake); fixed expressions (e.g. read between the lines); catch phrases (e.g. think outside the box); prefabricated routines (e.g. if I were you); greetings (e.g. How do you do?); and proverbs (e.g. silence is golden).

In addition to the heterogeneous lexical nature, learning noun countability in L2 English presents another layer of difficulty because it is a part of vocabulary that requires both lexical and syntactic knowledge from learners. In other words, L2 learners need to build on their lexical knowledge to then be able to process the classification of a noun into count, noncount or both. It is crucial for a learner to know what “water” means so that he/she can understand that “water” is a noncount noun (mass noun) and, therefore, cannot be counted. Moreover, a learner needs to understand that English allows for a combination of noncount nouns with numerals (e.g. two liters of water) or quantifiers (e.g. glasses of water), making it possible to quantify a noncount noun. Finally, the most striking characteristic in the linguistic feature selected for this study is that noun countability is embedded in the word itself, rather as count, noncount or both. In other words, while some grammar rules can be generalized and/or seen in written format (e.g. adding -ed to form the past tense of regular verbs), the same does not occur in teaching and learning count and noncount nouns, thus presenting a challenging task in second or foreign language education. Further details on noun countability are presented in the next chapter along with the literature review.
1.2 Defining the Context of the Study

The relevance of exploring different teaching methods and understanding learners’ strategies in L2 vocabulary development is justified by the explosion of theoretical and empirical research carried out in the two last decades (Alcón, 2007; Boogards & Laufer, 2004; Carter & McCarthy, 1988; Coady & Huckin, 1997; Gairns & Redman, 1986; Hulstijn, 2001; Hunt & Beglar, 2005; Laufer, 2005; Meara, 2002; Nation, 1990; Nation, 2001; Nation, 2005; Read, 2004; Takač, 2008; and others). However, while the importance of L2 vocabulary is well established by researchers and practitioners, much debate has revolved around the issue of explicitness and/or implicitness in teaching L2 vocabulary.

On the one hand, explicit L2 lexical instruction involves activities such as the study of decontextualized lexis, use of dictionaries, or inferring meaning from contexts (Hunt & Beglar, 2005). On the other hand, implicit L2 lexical instruction involves engaging students in language use activities, particularly in reading and listening.

I advocate for counterbalance between both types of instruction since learners can potentially benefit from different types of activities in L2 vocabulary learning. This balance of both types of instruction is also documented by Nation (2005) in his assertion that “every course should involve some deliberate attention to vocabulary as well as opportunities to meet the words in meaning-focused use” (p. 585). The present study entails an instructional intervention that includes reading activities with enhanced input of count and noncount nouns followed by explicit instruction to focus on the enhancement.
In addition to the issue of explicitness and implicitness, another discussion in teaching and learning L2 vocabulary involves the difference between receptive and productive learning (Mondria & Wiersma, 2004). For L2 vocabulary, teachers are more likely to explain to learners the meaning of a word, provide them with a definition, or use the word in a sentence. Furthermore, classroom activities for vocabulary learning such as using the dictionary, matching words with their meanings/definitions, guessing from contexts and learning word pairs (L2-L1 pairs) are more common than cloze exercises or writing tasks. In other words, most L2 vocabulary instruction targets receptive knowledge through reading or listening (Jenkins, Stein, & Wysocki, 1984; Nagy, Anderson, & Herman, 1987) rather than productive knowledge through writing and speaking (Webb, 2005). If we consider that the type of learning has an effect on the type of knowledge developed by learners, then it is plausible to assume that L2 vocabulary activities that engage receptive learning will lead to receptive knowledge.

Another interesting discussion explores both intentional and incidental focus on form in L2 vocabulary learning (Alcón, 2007; Hulstijn, 2001; Pulido, 2003; Pulido, 2004). Although not all studies compare both approaches, this topic contributes to a better understanding of its pedagogical benefits in L2 vocabulary. An example of comparative empirical evidence is presented by Alcón (2007), whose results suggest that teachers’ pre-emptive focus on form has an effect on learners’ noticing and subsequent use of vocabulary items in a Spanish EFL setting, while teachers’ reactive focus on form does not seem to affect learners’ noticing but has a facilitating effect on vocabulary learning. Teachers’ intentional
and/or incidental focus on form during class will not be assessed in the present study as they are not the main goal of investigation here. However, the tasks selected for the intervention engage learners in focus on form (count and noncount nouns) as well as meaning (text comprehension) through input enhancement (reading) and output (writing) activities.

In this study I will implement two types of tasks (reading and writing) to encourage learners to develop both receptive and productive knowledge of count and noncount nouns in L2 English. Furthermore, both reading and writing activities will be used to provide learners with opportunities to receive input (reading) and to produce output (writing) related to L2 vocabulary on certain topics that were adapted from the textbook used by the teacher during her participation in this study.

Finally, input enhancement as suggested by Sharwood Smith (1991, 1993) and the pushed output hypothesis as proposed by Merrill Swain (1985) provide theoretical support for this study, which will be carried out within a pedagogical framework of L2 vocabulary learning based on exposure to language input through reading and instructional activities that entail output elaboration tasks.

In summary, in this chapter I introduced the purpose and motivation of this study while defining the context in which it was carried out. Next, in chapter 2, I outline the pedagogical relevance of teaching and learning count and noncount nouns as well as a review of the literature for theoretical support of this project. Chapter 3 describes the methodology with detailed information about the research
design, participants, instruments and data collection procedures. Results of grammar scores and text comprehension are presented in chapter 4 with an analysis of the quantitative data. Following, in chapter 5, is the discussion of the results for each research question with the integration of qualitative data. Finally, a conclusion is presented in chapter 6 along with pedagogical implications and limitations of this project that lead to suggestions for future research in the field.
Chapter 2

Literature Review and Rationale

2.1 Teaching and Learning Count and Noncount Nouns

Before looking into the literature on teaching methods and learning strategies pertaining to count and noncount nouns, it is relevant to consider the philosophical aspect of the same. Laycock (1998, 2005) argues that from a linguistic perspective count nouns are either singular or plural; therefore, noncount nouns are semantically non-singular and non-plural. However, from a philosophical perspective, making this distinction is far from simple, because count and noncount nouns are not mutually exclusive. Table 1 was adopted from Laycock (1998) to show that, semantically, plural nouns are evidently non-singular (*clothes*), but so are noncount nouns (*clothing*). Moreover, being non-plural, the noncount noun is never reduced to a canonical form (*piece of clothing*, *clothing*).

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Non-singular</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plural</td>
<td></td>
<td><em>clothes</em></td>
</tr>
<tr>
<td>Non-plural</td>
<td><em>piece of clothing</em></td>
<td><em>clothing</em></td>
</tr>
</tbody>
</table>

In addition, the distinction between count and noncount can be quite exhaustive according to Downing and Locke (2002) who state that this contrast is “made on the perceptive, cognitive plane, and which constitutes a feature that for
English speakers is salient in their experience of things” (p. 420). Therefore, understanding this property of noun countability may present a challenge when learning L2 English vocabulary because the “experience of things” may not be the same for all learners. In other words, for L2 learners, the understanding of noun countability is possible only within the bounds of experience.

In the example below, a learner’s experience with and understanding of the English word “light” are the foundation to think of it as count, noncount, or both.

*There are two lights in our bedroom.* (“lights” – count noun)

*Close the curtain. There’s too much light!* (“light” – noncount noun)

If a learner understands *light* to be the brightness from the sun and another learner defines it as a piece of electrical equipment that produces brightness, aren’t they both correct? The answer is yes, but their experiences with the word *light* are still different and could affect the way they understand noun countability. Finally, the distinction between count and noncount should not be made in terms of what a noun refers to, but rather how a noun presents its entity.

From the perspective of applied SLA, there are a variety of methods for teaching count and noncount nouns, which include the plural formation of count nouns, the use of adverbs of quantity, learning the article system, and the use of word pairs with translation. When we look further into these methods we find that they might not be sufficient for learning countability of nouns in isolation, and should be introduced in conjunction with other teaching methods, such as rule presentation, input enhancement, and output production tasks.
Some of the different ways of teaching plurals are as follows. The plural form of most nouns is created simply by adding the morpheme –s (e.g. more than one snake = snakes). Words that end in -ch, x, s or s-like sounds, however, will require an -es for the plural (e.g. witch and witches, box and boxes, kiss and kisses). In addition to these rules, there are several nouns that have irregular plural forms (e.g. child and children, mouse and mice). And, finally, there are nouns that maintain their Latin or Greek form in the plural (e.g. phenomenon and phenomena). With words that end in ‘y’ preceded by a consonant, the y changes to i and es is added (e.g. baby and babies). Words that end in ‘o’ create special problems (e.g. potato and potatoes, but memo and memos and for words where another vowel comes before the ‘o’ stereo and stereos). Plurals of words that end in -f or -fe usually change the f sound to a v sound and add s or –es (e.g. knife and knives); however, there are exceptions (e.g. dwarf and dwarfs).

Despite the apparent simplicity in learning plurals, this does not seem to be an effective system for learning count and noncount nouns as some of the plural formations might be misleading, as seen below:

1. Some nouns have identical singular and plural forms (e.g. salmon, aircraft, and spacecraft) and can be counted. For example: The fisherman sold two salmon.

2. A handful of nouns appear to be plural in form but take a singular verb (e.g. news, gymnastics and statistics) and cannot be counted. For example: No news is good news.
3. Some count nouns are always used in the singular form after numerals (e.g. *dozen, hundred* and *pair*). For example: He bought three dozen eggs.

4. A few collective nouns, though singular in form, are always used as plurals (e.g. *cattle, poultry* and *people*). For example: These cattle are expensive.

5. Some nouns have singular and plural forms but can be both count and/or noncount (e.g. *time, glass* and *light*). For example: How much time do you need to cook dinner? How many times have you been to Brazil?

A different method to help learners how to differentiate count from noncount nouns is to draw their attention to adverbs of quantity and quantifiers, as shown in ESL resource books for teachers (Richards, Hull & Proctor, 2005; Richards, Hull, Proctor, Cory-Wright, Dorado & Pianco, 2005). While the contrast between *too many/too much* and *a few/a little* seem very straightforward to use with either count or noncount nouns, some adverbs of quantity and quantifiers do not necessarily make any such distinction (e.g. *lots of, some* and *none*). For example: There are lots of apples in the fridge (apples are countable). There is lots of smoke in the room (smoke is uncountable). Teaching quantity or quantifiers requires learners to also understand the use of the verb “to be” in singular and plural (*there is/there are*).

An interesting view from Miller (2005) is that, by encouraging learners to address the notion of countability and by identifying the articles, the teacher in her study was able to assist learners to understand and to use more accurately the article system in English L2. In other words, learners had to identify whether a noun is count or noncount and then decide what article to use (e.g. *a/an* with
singular count nouns). Even though her study provided positive results in the use of the article system in English, it is also recognized by the author that noun countability does not necessarily entail a simple definition and that there is no clear-cut distinction between count and noncount nouns. Miller points out some difficulties presented by the zero article with noun countability, and cites Master (1997) who divides the zero article into two: the zero article and the null article. For instance, “[z]ero articles are used before uncountables and plurals, such as “sand” (“There was sand everywhere”) and “pebbles” (“Pebbles are found on beaches”). Null articles are used before singular countables (“Counting of the votes began later”) and proper nouns. Since the null article is often used in scientific writing (as in “Use of this method implied...”) it can present an additional problem to students” (Miller, 2005, p. 82).

The use of word pairs with picture or translation seems to be an effective tool for the first stage of vocabulary acquisition, but knowing the meaning of words is only an initial step in being able to classify them as count and/or noncount nouns. For instance, Spanish speakers might know that popcorn is a type of food made from dried grains of maze that swell when they are heated but its meaning does not necessarily imply that it cannot be counted. The Spanish word palomita is countable and usually said in plural (palomitas), unlike its word pair in the English translation (popcorn). Furthermore, according to Downing and Locke (2006), “[o]ther languages make a count–mass distinction, but we must never assume that particular items are conceptualised and lexicalised in the same way in different languages” (p. 405). That is, word translation is not a reliable
way of understanding countability, especially if the nouns in L1 do not match
with count and noncount nouns in L2. For example, the word *informations* would
be correct in French (*renseignements*) but not in English.

Other strategies for teaching count and noncount nouns include, but are
not limited to, the use of dictionaries, extensive reading activities, semantic maps,
and vocabulary lists.

### 2.2 Pushed Output Hypothesis

Stephen Krashen’s SLA work remained quite influential in the late 1970s
and through the *Comprehensible Input Hypothesis* he proposed that
comprehensible input is the single most important source of language acquisition
(Krashen, 1985). In the 1990s, Krashen continued to defend his argument
concerning the necessity of comprehensible input while also rejecting any role for
learner output in language acquisition: “only comprehensible input is consistently
effective in increasing proficiency” (Krashen, 1994, p. 48). Evidently, Krashen’s
work provoked a lot of debate and several SLA researchers have counter-argued
that input alone may not be sufficient for learners to further develop their L2
competence (e.g. Ellis, 1994; Ellis & He, 1999; Long, 1991; Long, 1996; and
others), as not all input is utilized as intake for further language processing. As a
result, Krashen’s idea of implicit learning through comprehensible input has been
extended by other researchers and, in this regard, various researchers have
investigated the effects of input and other components in SLA.

The goals of research that emerged in the following decade looked beyond
the general interest in the need for comprehensible input, and highlighted other
influential factors in language learning. It was in the early 1980s that Michael Long first presented his *Interaction Hypothesis* (updated in Long, 1996), which suggests that interactional opportunities facilitate SLA as it allows for a negotiation of meaning and comprehension between interlocutors. In addition, Merrill Swain provided much insight through her work in French immersion schools, and formulated in the mid-1980s what is known as the *Pushed Output Hypothesis* (Swain, 1985), which supplemented the research in the field and promoted instructional activities to foster grammatical and sociolinguistic competence. Her work favored the processing of form in content-based classroom and use of language in meaningful ways (more details on Swain’s hypothesis will be provided below). In the 1990s, L2 instruction flourished in the literature of instructed SLA, and many researchers contributed to it with theoretical and/or pedagogical proposals; for example, Long (1991) presented the idea of *focus-on-form*.

Through her *Pushed Output Hypothesis*, Swain (1985) proposed that producing language through speaking and writing may trigger learner’s syntactic processing to a greater extent in order to convey the intended meaning (p. 249). In other words, through pushed output learners may switch from semantic to syntactic processing. During comprehension learners may pay attention to key words in the content of the message, but lexical reliance is less possible during production. The use of the target language in output tasks (production tasks) may engage learners’ attentional mechanisms, or cognitive processes, to notice
linguistic problems and “push” learners to formulate messages more accurately (Swain & Lapkin, 1995).

Since the Pushed Output Hypothesis was first proposed, Swain has refined it and specified three functions of output (Swain, 1995, 2005). The first one, the hypothesis-testing function, allows learners to test their hypothesis in the target language when they can judge the comprehensibility and well-formedness of their interlanguage utterances based on feedback obtained from their interlocutors. The second one, the metalinguistic function, refers to the reflection on target language use in which learners engage and which may deepen their awareness of forms and rules. The last one, the noticing/triggering (or consciousness-raising) function, is when learners notice a gap in what they want to say and what they can say, which might prompt them to search for existing knowledge or to attend to the relevant information in different ways.

All three functions of output have been of interest to researchers who have investigated them empirically, and results have been positive and promising: the hypothesis-testing function (Ellis & He, 1999; Nobuyoshi & Ellis, 1993; Pica, 1988; Pica et al. 1989; Shehadeh, 1999, 2001), the metalinguistic function (Kowal & Swain, 1994; LaPierre, 1994; Swain, 1995, 1998; Swain & Lapkin, 2001), and the noticing/triggering function (Izumi, 2000, 2002; Izumi & Bigelow, 2000, 2001; Izumi et al. 1999; Swain & Lapkin, 1995).

Following Swain’s proposition, Izumi (2003) investigated the psycholinguistic rationale of the output hypothesis, and other researchers have empirically tested the hypothesis in language acquisition. While some researchers
have demonstrated the role of output in language acquisition (DeKeyser & Sokalski, 1996; Pica et al., 1989; Tanaka, 2001), others have presented conflicting results in their comparative studies between output and other types of instruction, namely, interaction-based, task-based, computer input-based, and others (Erlam, 2003; Nagata, 1998; Salaberry, 1997).

When testing the Pushed Output Hypothesis, results from Pica et al. (1989) showed that, when responding to requests for clarification, learners were more likely to modify their output by producing more grammatically accurate language. In addition, Nobuyoshi and Ellis (1993) pushed some learners to reformulate their past-tense errors through requests for clarifications during a storytelling task, which resulted in a more accurate use of such linguistic feature one week later. The output group from Kim (2001) showed greater gains over the control group on timed production with the use of relative clauses in English. On the other hand, results from DeKeyser and Sokalski (1996) show no significant differences between the output and the control groups when assessing Spanish direct object pronouns and the conditional through comprehension and production tasks.

When comparing output-based instruction with other types of instruction, the literature provides conflicting empirical data. For example, Erlam (2003) investigated structured-input and output-based instruction and her work provides insight into the relative effectiveness of each type of instruction based on learners’ ability to comprehend and produce direct object pronouns in French as a foreign language. Results assessed from listening and reading comprehension as well as
written and oral productions tasks showed greater gains for the output-based instruction group over structured-input instruction and control groups. Toth (1997) and Nagata (1998) also provide positive support for output effectiveness when compared to a task-based group and computer-based input group, respectively. Results from both studies show that the output group outperformed their counterparts in production tests. Learners from Toth (1997) who belonged to the output group had a slight advantage over the task-based group in free-production with the Spanish morpheme *se*, and Nagata’s (1998) learners from the output group also showed greater gains than the control group on production tests with the use of the Japanese honorific system.

In regards to vocabulary learning, empirical data from Ellis and He (1999) provided much insight when comparing the effects of input and output and their study supports the positive effects of modified output on comprehension of directions and the acquisition of new words in English L2. Moreover, results show that the modified output group achieved higher scores than two different input groups (premodified input and interactionally modified input).

### 2.3 Input Enhancement

In SLA, input refers to the language that learners are exposed to through various means. Even though researchers have proven comprehensible input to be necessary but not sufficient for language acquisition, as mentioned earlier, input remains an important component in SLA. Gass and Mackey (2007) describe input as “the *sine qua non* of acquisition” and claim that it remains an indispensable and
“essential component for learning in that it provides the crucial evidence from which learners can form linguistic hypotheses” (p. 177).

In addition to comprehensible input and pushed output, many researchers have been interested in attributing a central role to attention in language learning. Richard Schmidt (1995) proposed that attention to formal details is also important in SLA, and he then presented the *Noticing Hypothesis* which claims that noticing of language features concedes an opportunity for L2 intake (or uptake) and, consequently, for L2 learning. In other words, the field of SLA research has begun to explore whether and how attentional processes may be influenced for learners’ interlanguage development. Such consideration is at the core of pedagogical proposals in instructed SLA, such as input enhancement (Sharwood Smith, 1991; 1993), which is central to the present study.

Sharwood Smith (1991, 1993) proposed *Input Enhancement*, based on the premise that learners lack noticing ability and that a way to stimulate input processing for both form and meaning is through improving the quality of input via enhancement and/or saliency of linguistic features. In other words, input enhancement is premised on three major aspects of language learning associated with target language input:

1. L2 learners’ lack of sensitivity to grammatical features of target language input;

2. Non-saliency of certain grammatical features in the input;

3. Underlying assumption that noticing is a prerequisite for intake.
Sharwood Smith hypothesizes that improving the quality of the input may stimulate learners’ input processing for both form and meaning. In other words, the ultimate goal of Input Enhancement is to implicitly draw learners’ attention to highlighted forms, theoretically promoting further processing/noticing (Sharwood Smith, 1991, 1993).

In an attempt to better understand the conflicting findings from empirical research, it is crucial to understand how input enhancement may differ in its effectiveness. Sharwood Smith (1993) suggests that there are different ways of making input salient (i.e., input enhancement strategies) which may affect the learners’ knowledge and performance in a second language. He posits two variables: degree of elaboration and explicitness; that is, duration and metalinguistic depth, respectively. He further proposes that input saliency can be created both internally (i.e. the learners themselves) or externally (i.e. teacher, researcher). Furthermore, results from Barcroft (2003) suggest that distinctiveness might moderate the effect of enhancement to some extent, and that further research is needed in this regard. Lastly, Brown (1993) also investigated frequency and saliency of words as influencing factors in the acquisition of vocabulary.

Pedagogical intervention through visual input enhancement (VIE) is also known as written or textual enhancement. Various researchers have made use of typographical cues in an attempt to make input more salient to learners – such techniques include: **underlining**, **boldfacing**, **italicization**, **CAPITALIZATION**, or
other strategies such as color-coding, or employment of different font sizes or font types.

Most studies have investigated whether visual input enhancement of certain linguistic features promotes further input processing (or intake) or not (Han, Park, & Combs, 2008; Lee & Huang, 2008). Unfortunately, findings in the field of input enhancement are inconclusive. In Alanen’s study (1995), textual enhancement had positive effects but not strong enough to be distinguished from those of the control group; Izumi (2002) suggested that input enhancement promoted noticing, but failed to show measurable gains in learning; the experiment carried out by Jourdenais et al. (1995) proposed that textual enhancement not only promoted noticing of the target form but had also an effect on learners’ subsequent output; on the other hand, Leow et al. (2003) claimed in their study that textual enhancement had no significant benefit over the unenhanced input. In other words, visual input enhancement (textual enhancement) was highly effective in some studies, but had a moderate or no significant effect on noticing and/or processing of input in others.

Since learners’ attention to form has been vastly accepted in the SLA research as an important component of language learning, some researchers have also measured noticing in their studies. It is important to mention that measuring noticing is a challenging task, and has generated different opinions in regards to its methodology and validity. Nonetheless, researchers have empirically investigated the effects of visual input enhancement on learners’ noticing, and have shown discrepancies in their findings. On the one hand, Izumi (2002)
investigated the potentially facilitative effects of internal and external attention-drawing devices on the acquisition of English relativization by adult ESL learners, and claimed that input enhancement promoted noticing, even though “it failed to show measurable effect on learning” (p. 565). On the other hand, Leow (2001) indicated “no significant benefits of written input enhancement over unenhanced written input for (1) amounts of reported noticing of the Spanish formal imperatives, (2) readers' comprehension of text content or (3) readers' intake as measured by the recognition task” (p. 507) and further explained that this nonsignificant difference may result from similar amounts of reported noticing of targeted forms from both enhanced and control groups.

In addition to linguistic features, another important aspect of language learning lies in comprehension. Some studies have, therefore, focused on the effects of visual input enhancement on both form and meaning (Jourdenais et al., 1995; Lee, 2007; Leow, 2001; Wong, 2003). Although most studies have reported that VIE had no significant effects on comprehension, Lee (2007) suggested that VIE negatively affected learners’ meaning comprehension; as per Lee and Huang’s (2008) meta-analytic review, such findings are also in accordance with a study by Overstreet (1998) with adult learners of Spanish.

A shift of attentional resources might in fact be challenging for some learners under specific conditions, and the textual enhancement might require learners to redistribute (relocate) their attentional resources in an uneven fashion between form and meaning processing. This idea is in line with predictions from information processing theory (as suggested by VanPatten and Skehan) that “L2
learners’ meaning processing might be undermined when their attention is drawn to formal aspects of input, for they might have difficulty distributing their resources simultaneously in the two directions of form and meaning” (Lee, 2007, p. 109).

Given the limited information processing capacity and learners’ predilection for meaning-oriented input (VanPatten, 2007), some SLA researchers have considered different types of designs to measure the effects of input enhancement through simultaneous versus sequential processing, thus focusing on incidental versus intentional processing, respectively.

In Lee (2007), participants read texts with or without familiar topics and “teachers were instructed to avoid any reference or mention to the targeted forms during the 2-week period of the experiment” (p. 101); this is an example of a treatment that created conditions for intentional focus on meaning and incidental focus on form (simultaneous processing). Results suggested that textual enhancement hinders learners’ comprehension. On the other hand, Izumi (2002) opted to have participants perform content-based processing prior to a focus-on-form treatment; hence, a sequential design. Results showed that textual enhancement was able to promote noticing without taxing comprehension. These studies have yielded conflicting results on the effect of textual enhancement over reading comprehension, and it is worth examining further if the simultaneous versus sequential information processing design might have influenced the performance of the participants.
To date, empirical research also presents conflicting results in regards to learners’ prior knowledge of the grammatical feature in association with textual enhancement effect. Lee (2007) concluded that “rich-exposure regime of textual enhancement aided these L2 learners to attend to formal aspects of the English passive voice, a grammatical target that they had already encountered during years of instruction but that they needed yet to master” (p. 109), therefore suggesting that some prior exposure to the target form can be beneficial in this context.

Although in line with the benefits of enhanced input, the participants in Alanen’s (1995) study worked with artificial Finnish, thus presuming no prior knowledge of the language, and the researcher concluded that “the fact that all learners in Enhance actually had acquired a suffix, regardless of its form, in contrast with those learners in Control who had not, suggests that input enhancement had some effect on the learning process” (p. 294). While it remains unclear whether some prior knowledge on the part of the participants is necessary or not (and if so, to what extent), it is clear that other variables may have contributed to differences in results, such as the choice of linguistic feature and/or structure targeted in their studies.

An interesting finding by Leow et al. (2003) demonstrates the importance of choosing appropriate linguistic elements when investigating the effects of textual enhancement on certain target features. In their study, two structures were selected (Spanish present perfect and Spanish present subjunctive) for investigation with the presence or absence of textual enhancement. Results from recognition tasks and think-aloud protocols were analyzed and revealed more
noticing and learning of one structure over the other for both the enhanced and unenhanced group. Taking such findings into consideration, it is likely that some linguistic elements are more susceptible than others to this type of input enhancement intervention. In addition, saliency of linguistic features is to be taken into account, as some forms are more likely to be noticed than others. Studies in corrective feedback have highlighted such consideration in their investigation; for example, Mackey’s (2006) study revealed low levels of noticing the English past tense, and suggested its lack of perceptual saliency in oral input provided via recasts as a reason.

One of the difficulties in the generalizability of the findings lies in the research methodology, in that some have treated textual enhancement as the main independent variable (e.g. Leow, 2001), while others have adopted a comparative approach between visual input enhancement and other strategies, such as output activities (e.g. Izumi, 2002), topic familiarity (Lee, 2007), text length (Leow, 1997), or explicit directions to focus on form (Shook, 1994), thus increasing the difficulty to isolate the effects of textual enhancement from another independent variable, and to tease apart the relevant findings from all studies. Given the inconclusive findings of the benefits of textual input enhancement in language education, it is understandable that researchers have decided to investigate its effect in combination with other teaching strategies. For example, White (1998) worked with Francophone learners of English and concluded that students would have benefited from more explicit information about possessive determiners than that made available through enhanced input alone. In a subsequent study by Spada
et al. (2005), students provided with metalinguistic information in the form of a “rule of thumb” about possessive determiners indeed performed better.

Other methodological idiosyncrasies contribute to understanding the limitations of the generalizability of findings from previous studies, and they include but are not limited to: treatment duration, number of sessions, total exposure time to the target feature, time between pre-test and first day of treatment, and time between last day of treatment and post-test. Nonetheless, the field of instructed SLA continues to promote the need for empirical research, precisely to better understand the potential benefits of input enhancement and to investigate how it should be employed in language teaching.

2.4 The Present Study

As mentioned earlier, input enhancement as suggested by Sharwood Smith (1991, 1993) and the pushed output hypothesis as proposed by Merrill Swain (1985) provide theoretical support for this study, which will be carried out within a pedagogical framework of L2 vocabulary learning based on language input (reading) and instructional activities (output elaboration tasks).

As highlighted by Sharwood Smith (1991), enhancing the input does not guarantee learners’ intake, but it may increase the chance for its occurrence. In addition, Leow (2001) reported that while noticing of the enhanced input “contributes to subsequent processing (intake) of grammatical information, it seems that to process beyond intake, some meta-awareness may be required” (p. 506). In addition to enhanced exposure to input, this study will also provide opportunities for learners to use language and the target feature in production
tasks, thus assisting learners to move from semantic processing and attempting to trigger their syntactic processing as suggested by the pushed output hypothesis.

The overall objective of the study is to evaluate whether textual input enhancement in isolation or in combination with output elaboration tasks affects learners’ accuracy of L2 forms without taxing reading comprehension. Specific aims target count and noncount nouns in English through textual input enhancement and output elaboration tasks in order to increase learners’ awareness and to evaluate possible effects on learners’ accuracy of L2 forms and text comprehension. The target feature of count and noncount nouns was selected for the following reasons: (a) the rule is not too complex to be employed with input enhancement; (b) their frequency in written texts is potentially high; (c) learners have prior knowledge.

Based on the literature review and taking my own interests into account, input enhancement and pushed output theory both form the background for this study which lies within a pedagogical framework. The pedagogical implications for teaching count and noncount nouns underpin my research questions:

1) Does textual input enhancement either in isolation or in combination with output elaboration tasks increase learner’s accuracy of count and noncount nouns?

2) Does textual input enhancement either in isolation or in combination with output elaboration tasks affect learner’s reading comprehension?
Chapter 3

Methodology

3.1 Research Design

The research is a mixed-method design and includes both qualitative and quantitative data collection and analysis that represent an explanatory sequential model. Data were collected from an actual classroom in a university in Madrid. The grammar rule selected is the use of count and noncount nouns in English, and the learner participants were exposed to target forms through textual input enhancement either in isolation or in combination with output elaboration tasks. Learners were asked to read texts containing textually enhanced nouns and then take notes about the textual enhancement. Then, output elaboration tasks were undertaken in the classroom in order to promote further processing of the target feature. Data collection instruments included tests, questionnaires, and interviews. Data analysis is both qualitative and quantitative.

3.2 Participants

The population for this study comprises primarily Spanish-speaking adults who are pre-service teachers and learners of English as a foreign language at a university in Madrid. The teacher who participated in the study is a Spanish native speaker with over 10 years of experience teaching English as a Foreign Language (EFL) to adults. Moreover, the teacher has conducted extensive research in the field of second and foreign language acquisition and content and language integrated learning (CLIL). It is important to clarify that the word participants
will be used to describe the learner participants hereafter and the teacher participant will be referred to as the teacher.

In total, 26 students from the same classroom agreed to participate in the study; however, 2 were removed from the statistical analysis due to their absenteeism rate (higher than 50%) and 1 native speaker of English registered as an independent student was also excluded from the data.

Before the commencement of the intervention, all participants were randomly divided into three groups as follows:

- The Unenhanced (U) group read unenhanced (unmodified) texts;
- The Enhanced-only (E) group read enhanced texts and was asked to take notes;
- The Enhanced + Tasks (E+T) group read enhanced texts and was asked to take notes; in addition, this group participated in output elaboration tasks.

Individual participants will be identified in later chapters by their group name followed by ID numbers assigned to them. For example, E5 is the participant from Enhanced group (E) learner number 5, and U2 is the participant from Unenhanced group (U) learner number 2.

A total of 23 learners (20 female and 3 male) whose ages ranged from 20 to 37 years participated in this study. Table 2 provides the means and standard deviations of participants' age per group.

Over 95% of the participants share the same descriptive variables, namely: country of origin (Spain), mother tongue (Spanish), language spoken at home (Spanish), and second language (English). All participants had been studying
English for a minimum period of 4 years when the project started. The participating school where data collection took place has its own language assessment tools for placing the students at their English course levels adequately. Therefore, participants were asked to simply self-evaluate their proficiency level in English by choosing one of four categories, namely, Advanced, High, Intermediate-High and Low. No further explanation was provided as to what each category entails. Finally, participants ranked themselves as follows: Advanced (13%), High (43.5%) and Intermediate-High (43.5%). Table 3 details the distribution of proficiency levels per group.

Table 2
Means and standard deviations of participants' age per group

<table>
<thead>
<tr>
<th>Group</th>
<th>M</th>
<th>SD</th>
<th>Min.</th>
<th>Mdn</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>U (n = 8)</td>
<td>22.5</td>
<td>2.61</td>
<td>20</td>
<td>22</td>
<td>26</td>
</tr>
<tr>
<td>E (n = 8)</td>
<td>24.25</td>
<td>5.65</td>
<td>20</td>
<td>21.5</td>
<td>35</td>
</tr>
<tr>
<td>E+T (n = 7)</td>
<td>28</td>
<td>7.76</td>
<td>20</td>
<td>26</td>
<td>37</td>
</tr>
</tbody>
</table>

Table 3
Distribution of proficiency levels in English per group

<table>
<thead>
<tr>
<th>Group</th>
<th>Advanced</th>
<th>High</th>
<th>Int.-High</th>
</tr>
</thead>
<tbody>
<tr>
<td>U (n = 8)</td>
<td>0</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>E (n = 8)</td>
<td>2</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>E+T (n = 7)</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>
3.3 Instruments

Grammar tests were developed by the researcher with grammaticality judgment task items and with controlled and spontaneous production tasks in order to measure the participants’ knowledge of the target feature prior to and after the intervention. A newspaper article was selected and questions were developed in order to have an initial assessment of the participants’ level of text comprehension. For the instructional intervention, two short stories from the textbook used by the teacher were included along with text comprehension questions formulated by the researcher. A guided note-taking activity also took place in class for further processing of the target feature. Output elaboration tasks were developed for participants in the E+T group, while similar tasks were given to the other two groups to be performed orally (without any written task) and with different linguistic targets. Finally, questionnaires were administered and audio-taped interviews were conducted in order to assess the participants’ perceptions regarding the project. All the instruments are outlined in detail in the next sections where I explain the testing materials and the instructional materials.

3.3.1 Testing materials. I developed three tests (1 pre-test and 2 post-tests) for the pre-testing of grammar knowledge of count and noncount nouns and for the post-testing of L2 grammar development after the intervention. Each test included 30 grammaticality judgment task items (20 items focused on the target feature and 10 items were distracters) where participants had to analyze several sentences and perform grammatical judgements in three different exercises. The
first exercise asked participants to simply decide whether the sentences were grammatically correct or incorrect (see example 1); the second exercise included ill-formed sentences only, and participants had to decide where the grammar errors were in each sentence in order to correct them (see example 2); the third exercise was similar to the previous two, where participants had to decide whether the sentences were grammatically correct or incorrect and then to make the necessary corrections according to their grammar judgement in English (see example 3).

Example 1: Please mark (✓) on correct and (X) on incorrect sentences.

I can’t believe all the suspects in this crime have amnesias! (   )
How can I make this cake if I am missing flour and eggs? (   )

Example 2: Circle the error in the following sentences and write the correct form.

We were all tired after the party, but at least we took out the garbages and empty bottles.
We have sold two kilos of potato and seven pounds of coffee.

Example 3: Use check mark (✓) if the sentence is right and an (X) if it’s wrong.

Correct the sentences you believe are wrong.

Studies show that many soldiers suffer from post-war depressions. (   )
You should consider their pieces of advices because they are older and wiser. (   )
In addition to the grammaticality judgement tasks, I included two production task items in all three testing materials. The first one, a spontaneous production task, consisted of a brief description of a picture which resulted in the elaboration of a context for the next writing task. In the second one, a controlled production task, participants were asked to write a short text using specific words related to the picture – the words selected for the production of the short story were count and noncount nouns plus *much* and *many* to express quantity (see Appendix 1 for an example of a production task item).

For the pre-testing of text comprehension, I selected a recent newspaper article of 641 words and formulated seven short-answer questions to be answered in an hour time.

After completing the grammar and text comprehension pre-tests, all participants were asked to fill out a vocabulary check-list by simply answering “Yes” or “No” to the question: “Do you know the meaning of these words?” The list contained nouns found in their texts and tests, so that I could later differentiate between words that were either familiar or unfamiliar to the participants at the time of assessment.

Finally, at the post-testing phase, all participants were asked to classify several nouns by simply adding a check-mark to the box “count” or “noncount” next to each noun extracted from the vocabulary check-list previously filled out during the pre-test phase.

A questionnaire was formulated using a 4-point Likert scale as part of the assessment materials, and the question items elicited information about textual
input enhancement and the elaboration tasks used in classroom during the intervention. The interviews were audio-taped and questions elicited information about the participants’ insights in regards to the project.

3.3.2 Instructional materials. For the reading comprehension intervention, I selected two texts from the students’ textbook (Gude, Stephens, Davies & Falla, 2008) and modified them with input enhancement (boldface) on either count or noncount nouns, according to the week of the intervention. Example 4 displays an excerpt from a short-story used in the first week when the focus of the text was placed on count nouns through the input enhancement. The first text length was 713 words in total with 64 tokens of count nouns, some of which repeated up to 9 times. As for the second text, the length was 802 words in total with 27 tokens of noncount nouns, some of which repeated up to 5 times. The enhanced texts were given out only to participants from the E and E+T groups, whereas the U group read a baseline (unenhanced) version of the same text. After the reading, all participants responded to seven text comprehension questions.


“Despite the fail-safe mechanism built into the robots, which prevents them from harming humans, the detective suspects one of them was
responsible for the **scientist’s death**. Further investigation leads him to believe that **robots** may even be planning to take over the **world**.”

Finally, the E and E+T groups participated in a guided note-taking activity which consisted of explicit instructions in question format. Questions such as “Why do you think some words are typographically enhanced?” or “Do you know what the criterion is for selecting such words?” elicited information from the learners about their thoughts on the enhanced input from the text. During the week of the intervention targeting count nouns, the guided note-taking activity included the question, “Why do you think some words such as **chemistry**, **intelligence**, and **food** are not typographically enhanced?” in an attempt to have learners deepen their syntactic processing while comparing and/or contrasting the unenhanced with the enhanced nouns. During the week of the intervention targeting noncount nouns, a similar question was asked about unenhanced items (count nouns). The U group completed a non-guided note-taking activity that also focused on form but not specifically on the grammar target, and questions elicited information about verb tenses, nouns, and adjectives.

Part of the intervention was executed through the use of output elaboration tasks designed or adapted by the researcher. The first task entitled **Who am I?** was selected for further processing of count nouns for the E+T group. Cards were made with descriptions of count nouns (see Example 5), and participants played individually in turns. The person holding a card had to give one piece of information at a time which described a count noun; if no one responded, another
clue was provided. The person who guessed the right answer had also to provide the word in the plural form in order to gain points. As each answer was given, all participants were asked to write down one sentence with the word revealed (whether in singular or in plural). The E and U groups did the same task with their own teams but their cards included verbs and adjectives in addition to nouns. Also, these two groups were not required to produce any written output.

Example 5: *What am I?* [Card with count nouns for the E+T group]

A hard round fruit. It is white inside. It has a smooth skin which is called a peel when it has been removed. The skin can be red, yellow or green. The middle part containing seeds is called the core. It grows on trees. Answer: an apple (singular) and apples (plural).

In an attempt to combine entertainment and language learning, the second output elaboration task was changed from *What am I?* to *Taboo* for further processing of noncount nouns for the E+T group. Cards selected for this task consisted of noncount nouns as the secret words. Participants played individually in turns. The person holding a card had to prompt the other players to guess as many keywords as possible in the allotted time until the answer was revealed, but without using the secret word itself or five additional taboo words listed on the card (see Example 6). After each turn, participants from the E+T group were asked to write down a sentence with the secret word revealed (noncount noun). Again, the E and U groups did the same task with their own teams but their cards
included verbs and adjectives in addition to nouns. Again, these two groups were not required to produce any written output.

Example 6: *Taboo card with noncount nouns for the E+T group*

Secret word: wine

Taboo words: alcohol, grape, red, white, vineyard, vinery

### 3.4 Data Collection/Procedure

Prior to the commencement of this study, participants were recruited at a university in Madrid and data were collected in an English classroom following their agreement with informed consent forms signed by the teacher and students (see Appendix 2). A Spanish version of the consent forms was also available, but all participants opted to read and sign an English-written form.

On the first day, participants were asked to complete a grammar pre-test in order to measure their prior knowledge of count and noncount nouns. The grammar test consisted of 30 grammaticality judgement task items and two production tasks. On the second day, participants were asked to complete a text comprehension test, based on a recent newspaper article, in order to investigate whether some learners had outstanding difficulties with this type of activity prior to the intervention. After completing the grammar and text comprehension pre-tests, all participants were asked to fill out a vocabulary check-list that contained nouns found on their texts and tests so that I could differentiate between familiar and unfamiliar items.
On the first day of the first week of the intervention, all participants were asked to read a short story in English. The text was selected by the researcher from their own textbook and adapted for the intervention. The E and E+T groups read a text where all the count nouns were enhanced with **boldface**, while the U group read a baseline (i.e., unenhanced) version of the same text. After the reading, all participants responded to seven text comprehension questions also formulated by the researcher. Afterwards, the E and E+T groups participated in a guided note-taking activity where they reported their comments on the enhanced input, while the U group completed a non-guided note-taking activity that also focused on form but not specifically on the grammar target.

On the second day of the first week of intervention, the E+T group participated in an output elaboration task entitled *Who am I?* that targeted the use of count nouns. This game prompted learners to produce language by speaking with their group members and by writing sentences. It also provided an opportunity to create an entertaining environment in a classroom setting which allowed learners to think about language and about vocabulary, more specifically. The other two groups participated in a similar task, as explained in the previous section.

The second week of intervention followed the same structure and dynamic as the previous week: reading of another short-story and note-taking activity on the first day and elaboration task on the second day. However, the input enhancement (**boldface**) from the short story targeted noncount nouns (rather than count nouns) for the E and E+T groups, while the U group read an unenhanced
version. As for the note-taking activity, it was similar to the first week of intervention: guided for E and E+T groups and non-guided for the U group.

On the second day of the second week of intervention, the output elaboration task was changed from *What am I?* to *Taboo*. This game prompted learners from E+T group to produce language and to use L2 vocabulary both in oral and written format. Again, the other two groups participated in a similar task, as explained in the previous section.

The post-tests were designed by the researcher in the same fashion as the pre-tests which included grammaticality judgment tasks items and output production tasks. Due to a high absenteeism rate on that week of post-tests, only 18 out of 23 participants wrote the first post-test five days after the end of the intervention; the same issue re-occurred the following week and another 5 participants missed the second post-test that was given fourteen days after the end of the intervention. Because all participants wrote at least one post-test, I then decided to categorize them as post-test 1 and post-test 2 rather than immediate and delayed post-tests. Thirteen participants wrote both post-tests, but the analysis of their higher score did not demonstrate any statistical significance in the group results. For that reason, I analyzed the average score of the 13 participants who had written both post-tests. Finally, all participants were also asked to classify several nouns by filling out a noun categorization check-list. The list contained words from the vocabulary check-list previously filled out during the pre-test phase, and learners were asked to simply check the box “Count” or “Noncount” next to each noun, according to their knowledge of noun countability.
After the post-testing phase, all participants completed a questionnaire that was formulated using a 4-point Likert scale, and the question items elicited comments about textual input enhancement and the elaboration tasks used in classroom during the intervention. During the following week I conducted semi-structured audio-taped interviews and questions elicited participants’ insights in regards to the project.

Please refer to Appendix 3 for a complete overview of the timeframe along with the instruments used for each group during the weeks of intervention and testing phases.

### 3.5 Data Analysis

Quantitative analysis was required for data collected through grammar and text comprehension tests, as well as a cross-reference of the vocabulary check-list with the noun categorization task, and part of the questionnaires. As such, the researcher performed a two-factor analysis of variance within-group and between-groups in regards to their performance in the grammar and text comprehension. In other words, a two-factor ANOVA (group and time) with repeated measures with an alpha level of 0.5 allowed the researcher to analyze any possible statistically significant effects of each of the independent variables (i.e., textual input enhancement and output elaboration tasks) on the dependent variables (i.e., grammar accuracy of count and noncount nouns and text comprehension). The vocabulary check-list was presented in percentages, while results from the noun categorization task were analyzed with tabulated statistics, that is, the percentage of correct answers by group for each noun. Finally, the results from
questionnaires were also presented as percentages, where I combined level 1 (strongly disagree) with level 2 (disagree) and level 3 (agree) with level 4 (strongly agree) in order to present the data in a more meaningful and interpretable way.

Analyzed qualitatively were data collected through the note-taking activity, an open-ended item from questionnaires, and the transcribed interviews. These qualitative data were first transcribed and then analyzed for recurring themes, which provided further empirical support to the quantitative data. This analysis helped to investigate the feasibility of applying textual input enhancement and output elaboration tasks as strategies in language education. Qualitative data were also useful to analyze the participants’ insight in regards to textual input enhancement and its possible effects in text comprehension.
Chapter 4

Results (Analysis of Quantitative Data)

4.1 Results of Grammar Tests

The quantitative data are reported in this chapter, which is divided into two sections that provide descriptive and statistical analysis for each of the research questions. The first question pertains to the scores of the grammaticality judgment tasks and written tasks during pre- and post-tests as well as the noun categorization task; the second question pertains to the scores from the comprehension tests administered during week 1 and week 2 of the intervention.

Research Question 1: Does textual input enhancement either in isolation or in combination with output elaboration tasks increase learner’s accuracy of count and noncount nouns? In answer to this research question, the means and standard deviations obtained on the grammar tests are displayed in Table 4 and Table 5, for participants’ grammaticality judgment scores and writing scores, respectively. In addition, a two-factor ANOVA (Group by Time) with repeated measures was conducted.
<table>
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<td>6.1</td>
<td>88.0</td>
<td>100.0</td>
<td>100.0</td>
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</tbody>
</table>

Results of the two-factor ANOVA with repeated measures of participants’ mean scores on the grammaticality judgment tasks showed no significant difference for Group \( p = .28 \) nor for Time \( p = .38 \), and no significant Group x Time interaction, \( F(2,19) = 0.71, MSE = 97.46, p = .50 \). Results revealed the groups means did not differ significantly at any of the testing times, confirming
also that the three groups were equivalent at the time of pre-testing ($p = .17$) before the input enhancement and output elaboration tasks were administered.

Statistical analysis of participants’ mean scores on the writing tasks showed no significant effect for Group ($p = .19$) but a significant effect for Time ($p = .001$) and again no significant Group x Time interaction, $F(2,19) = 1.47$, $MSE = 116.7$, $p = .25$. Thus, the participants’ mean scores on writing tasks improved significantly over time, but irrespective of group. Results also confirmed that the group means were not significantly different at the time of pre-testing ($p = .15$).

Before the total scores were partitioned for a more refined analysis of participants’ scores on the grammaticality judgement tasks and writing tasks, a statistical analysis was conducted with the mean scores from the distracter items combined with the target feature items. This analysis was considered important to investigate whether the distracter items presented in the grammar tests were obtrusive for any of the groups. Results from this statistical analysis showed a significant positive effect for Time ($p < .01$) but not Group ($p = .35$), and no significant Group x Time interaction, $F(2,19) = 2.51$, $MSE = 30.72$, $p = .10$, confirming no statistical significances between control and intervention groups.

In summary, results from the two-factor ANOVA with repeated measures indicate the following: (a) no significant effect in regard to participants’ mean scores on the grammaticality judgment tasks for Group, Time, or the Group x Time interaction; (b) participants’ mean scores on the writing tasks showed a significant effect for Time, irrespective of group.
In addition to the scores from the grammaticality judgment tasks and written tasks, I also reviewed the participants’ answers to the vocabulary list along with their results from the noun categorization task. As seen in Figure 1 below, I analyzed only the nouns that were known to all participants according to their own answers from the vocabulary list that confirms prior semantic knowledge to these words. Unfamiliar or novel items were not submitted to further analysis on the assumption that if the meaning of a word is unknown to the participants, they would likely be less certain of how to classify the nouns as count or noncount. In other words, removal of unfamiliar nouns lessened the likelihood of learners simply guessing the classification of a noun. Only the correct answers that were accurately classified during the noun categorization task were then split into two categories: count and noncount. Nouns considered both count and noncount (i.e., obsession, pressure, speculation, etc.) were removed from the results of the noun categorization task prior to the analysis. Finally, I analyzed the scores from the noun categorization task with tabulated statistics, that is, the percentage of correct answers by group for each noun.
Figure 1: Presentation of vocabulary list and results from noun categorization task by group.
According to the participants’ answers, 78 out of 122 words provided in the vocabulary list were known to all participants, which accounts for 63.41% of the total number of nouns presented to them in texts used during the intervention.

Of the 78 words known to all participants, 34 were classified with 100% accuracy by all groups: (a) 29 count nouns: airplane, airport, animal, assistant, bag, beach, chimpanzee, conclusion, condition, consequence, cup, day, decade, detective, field, movie, piece, report, robot, rule, shop, sister, situation, step, story, way, website, wedding, writer; and (b) 5 noncount nouns: caffeine, fitness, happiness, milk, obesity.

The remaining 44 words known to all participants yielded different results on the noun categorization task. Tables 6 and 7 provide the percentage of correct answers for each of the count and noncount nouns, respectively, tabulated by group.
Table 6
Percentages of correct answers for count nouns per group

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<td>n</td>
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<td>n</td>
<td>%</td>
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<td>80</td>
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Table 7

Percentages of correct answers for noncount nouns per group

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<th>E+T Group</th>
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<td>n</td>
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<td>80</td>
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<tr>
<td>tea</td>
<td>5</td>
<td>40</td>
<td>6</td>
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</tbody>
</table>

Mean percentages of correctly classified count nouns are highest for the U group (79.8%), followed by E+T group (76.38%) and E group (74.91%).

However, mean percentages of correctly classified noncount nouns do not reveal the same pattern; that is, the highest score is from E group (80.04%), followed by E+T group (77.74%) and U group (65.26%). The same pattern of mean
percentages is maintained for the overall performance of count and noncount nouns categorization: highest for the E group (77.47%), followed by E+T group (77.05%) and the U group (72.52%).

Implications of this decontextualized activity are provided in the next chapter, where a discussion of the results leads to a possible association between count/noncount nouns and concrete/abstract nouns in the analysis of the participants’ completion of this task.

4.2 Results of Text Comprehension

Research Question 2: Does textual input enhancement either in isolation or in combination with output elaboration tasks affect learner’s reading comprehension? To answer this research question, the means and standard deviations obtained on the text comprehension tests are displayed in Table 8. In addition, a two-factor ANOVA (group and time) with repeated measures was conducted.
Table 8
*Means and standard deviations of text comprehension scores per group*

<table>
<thead>
<tr>
<th>Group</th>
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<td>100</td>
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<td>10.0</td>
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<td>100</td>
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<td></td>
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<td>93.6</td>
<td>10.7</td>
<td>70</td>
<td>95</td>
<td>100</td>
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</table>

Results of the two-factor ANOVA with repeated measures showed no significant effect for Group ($p = .41$) but a significant effect for Time ($p < .01$), and no significant Group x Time interaction, $F(4,35) = 1.98$, $MSE = 58.03$, $p = .11$. Thus, the text comprehension mean scores of all groups increased significantly over time but no differences emerged between groups. The results also confirmed that the mean text comprehension scores of the U group ($M = 75.6$, $SD = 7.8$), E group ($M = 83.1$, $SD = 10.7$) and E+T group ($M = 87.1$, $SD = 8.6$) were not significantly different at the time of pre-testing ($p = .06$). In other words, the three groups were equivalent before the input enhancement and output elaboration tasks were administered.

4.3 Analysis of Individual Results

Given the absence of significant differences between groups, I decided to analyze the individual scores of a selection of participants whose performance
between testing phases was outstanding. Table 9 presents the results from some of the participants’ performance on the grammaticality judgement tasks and production tasks during both pre- and post-testing phases. Even though there were no significant group differences, some individual learners demonstrated outstanding performance either by achieving the highest scores on the post-tests (e.g. participants U2 and E7, followed by participants E6, U8 and E+T7) or by achieving the highest increase in scores between pre- to post-tests (e.g. participants E5 and E+T4) on the grammaticality judgement tasks and written tasks.

Table 9

<table>
<thead>
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<th>Participant</th>
<th>Grammaticality judgement tasks</th>
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<td>93.75</td>
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<td>E6</td>
<td>85.71</td>
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<td>E7</td>
<td>92.86</td>
<td>100.00</td>
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</tr>
<tr>
<td>E+T7</td>
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</tr>
</tbody>
</table>

It is important to note that both participants with the highest final score (U2 and E7) had also performed well during the pre-testing phase (more than 92% on grammaticality judgement tasks and more than 83% on production tasks),
which may suggest that their prior knowledge of the target form was already well established. However, a more interesting observation is that both learners with the highest increase in performance were participants from the intervention groups (participants E5 and E+T4 belonged to the E and E+T groups, respectively) yet did not have the lowest scores on pre-tests, thus precluding the possibility of having the most room for improvement compared to other participants. For instance, participant U5 obtained a lower score (64.29%) than participant E5 (71.43%) and participant E+T4 (71.43%) on the grammaticality judgement task, and a score equal to that of participant E+T4 (66.67%) on the production task.

Table 10 presents the results of the same individuals on the noun categorization task at the time of post-testing phases. For the categorization of count nouns, participant E5 achieved the highest score (100%), followed by U4 (97.22%), E+T6 (91.89%) and E+T4 (91.85%). Concerning results for noncount nouns, participant E+T7 achieved the highest score (91.89%), followed by E+T4 (89.43), E2 (88.24) and E3 (88.05). As for the overall performance in noun categorization, participants E+T4 and E5 ranked as first and second with 90.64% and 89.06%, respectively, compared to all individuals in all three groups.

Interestingly, six out of eight participants who obtained the highest scores in this task are also from the intervention groups (3 participants from the E group and 3 participants from the E+T group).
Table 10

*Individual scores for noun categorization task*

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</table>

4.4 Questionnaires

Answers to the questionnaires in regard to the first research question (i.e., “Does textual input enhancement either in isolation or in combination with output elaboration tasks increase learner’s accuracy of count and noncount nouns?”) were analyzed in percentages according to the responses provided by 11 participants from the intervention groups. When asked about the effects of textual input enhancement, 90% ($n = 10$) agreed that textual input enhancement (i.e. any type of typographical enhancement) is a good method for recalling words in a text. Moreover, 81% ($n = 9$) agreed that bold enhancement (boldface) in particular is a good method for recalling words in a text. Regarding the effects of textual input enhancement for the target feature, 72% ($n = 8$) agreed that bold enhancement helps them to remember examples of count and noncount nouns highlighted in the text.

In addition, I analyzed the responses provided by 11 participants from the E and E+T groups pertaining to the second research question (i.e., “Does textual
input enhancement either in isolation or in combination with output elaboration tasks affect learner’s reading comprehension?”). Interestingly, 81% \((n = 9)\) disagreed that textual input enhancement (i.e., any type of typographical enhancement) distracts them from the message conveyed in the text. Moreover, 63% \((n = 7)\) disagreed that bold enhancement (boldface) in particular distracts them from the message conveyed in the text.

In regard to the texts used in classroom, 100% of participants who completed the questionnaires agreed that the reading tasks were beneficial for language learning and that text comprehension is important in language education.

Concerning textual input enhancement, 60% \((n = 6)\) of the participants from the intervention groups (E and E+T) agreed that it would be more effective with a grammatical feature other than count and noncount nouns, and 90% \((n = 10)\) agreed that teachers should incorporate textual input enhancement into their language teaching methods.

As for the output elaboration tasks, 100% \((n = 6)\) of the participants from the E+T group who completed the questionnaires agree that the What am I? activity exposed them to a lot of count nouns and that it was not only helpful to remember examples of count nouns but also to practice using them in singular and/or in plural contexts. As for the Taboo activity, 100% agreed that it exposed them to a lot of noncount nouns. Moreover, 66% \((n = 4)\) agreed that Taboo helped them to remember examples of noncount nouns, while 83% \((n = 5)\) agreed that it was helpful to using noncount nouns. Over 80% \((n = 8)\) agreed that the classroom tasks were beneficial and entertaining for language learning.
Finally, 100% \((n = 16)\) of the participants agreed that it is important to combine research and classroom activities in language education.

In summary, participants’ scores generated interesting data according to each of the tasks (i.e., grammaticality judgment and written tasks) for the effects of input enhancement in isolation and in combination with output tasks on the accuracy of count and noncount nouns. Moreover, the data gathered in regard to effects of the intervention on reading comprehension are of equal importance. I will present in the next chapter a discussion of the results according to each of the research questions relevant to this study.
Chapter 5

Discussion (Integrating Qualitative Data)

This chapter is divided into two sections that present the discussion of the results for each of the research questions. Here I also include part of the qualitative data from transcribed interviews and the note-taking activity in order to provide further support for my interpretation and discussion of the quantitative results. Some of the data collected from the questionnaire administered to participants are also included in the sections of this discussion chapter.

5.1 Discussion of Research Question 1

RQ1: Does textual input enhancement either in isolation or in combination with output elaboration tasks increase learner’s accuracy of count and noncount nouns?

As previously mentioned in the results chapter, there were no statistical differences in the mean scores obtained on the grammaticality judgment tasks with respect to group, time, and the interaction of group with time. In other words, there was no statistically significant effect of textual input enhancement either in isolation or in combination with output elaboration tasks on accuracy of count and noncount nouns for adult Spanish learners of L2 English. One of the possible reasons for this result is associated with the target population that participated in this study; that is, a group of strong learners of English L2 and who were highly motivated to improve their language skills. All three groups obtained scores ($M > 75.9$) higher than anticipated at the pre-testing phase of the grammaticality
judgment tasks. These initial scores suggest that participants were not experiencing the expected level of difficulty in the use of noun countability prior to the intervention, resulting in little room for improvement. Furthermore, all learner participants were studying to be teachers of English as a foreign language, which could be associated with a certain predisposition to focus on form and to easily switch between meaning and form; this factor could have had an impact on the performance of the participants throughout the study. In other words, this classroom context of pre-service language teachers may not have been appropriate for this type of study. Further investigation of input enhancement and output tasks with a different target group is needed in the field of L2 vocabulary research, especially concerning noun countability.

Results of this study can be related to other studies that reported no facilitative effects of input enhancement on grammar development or acquisition (Izumi, 2002; Leow, 1997, 2001; Leow et al., 2003; Overstreet, 1998, 2002; Wong, 2003). Even though generalizability of the effects of input enhancement remains inconclusive, the assessment measures used in these studies merit some attention. For instance, among the studies that did not show any positive effects for input enhancement, Izumi (2002) opted for grammaticality judgement tasks and Wong (2003) used form correction tasks, both of which are similar to the assessment materials used in this study. On the other hand, Jourdenais et al. (1995) opted for two different tasks, namely, a written production task and think-aloud protocols, and results from their study suggested that textual enhancement not only promoted noticing of the target form but also had an effect on learners’
subsequent output of Spanish preterit and imperfect tenses. It is possible, therefore, that grammaticality judgment tasks and form correction tasks do not tap into the type of knowledge generated by this type of intervention. In addition, the following excerpt from the interview data gathered from participant E+T1 suggests that repetition of test format (i.e. similarity of test items in the grammaticality judgment task and form correction task) at pre- and post-testing phases may have lowered the motivation or may have caused other disadvantages for the participants, which could have in turn affected their final performance on the written tests.

(E+T1): I feel that the tests proposed were quite repetitive and maybe, for this reason, we were quite resigned to them at the end of the term. (Excerpt 1)

In regard to the written production tasks, participants’ mean scores improved significantly over time, but their increase in performance did not vary significantly according to group. Although the differences were not significant, noteworthy is the finding that the E+T groups nonetheless outscored the other two groups. Results from Shook’s (1994) study, which included 125 participants, suggested that textual enhancement had a positive effect on recognition and production of the present perfect and relative pronouns by adult learners of Spanish. Perhaps a larger sample size in this study would have generated similar results, allowing for statistically significant group differences to emerge. Moreover, the E+T group, which was asked to write sentences following their classroom tasks (What am I? and Taboo), did not have opportunities to fully
benefit from all three functions of output specified by Swain and Lapkin (1995), which could have restrained or limited the desired effects of the intervention. For instance, participants in the E+T group were not in appropriate circumstances to practice the hypothesis-testing function of output because neither the teacher nor the researcher provided any sort of feedback. Yet research has shown that learners are more likely to successfully modify their output when they are pushed to do so through elicitation (Loewen, 2002). In summary, findings from this study show promising results, but the effects of input enhancement in combination or in isolation with opportunities to fully benefit from all three functions of output tasks would have to be further investigated in the field of L2 vocabulary research.

Results of the decontextualized task of classifying count and noncount nouns (based on a list of nouns) generated interesting data: (a) 34 words were classified with 100% accuracy, of which 52% were concrete nouns and 48% were abstract; (b) 44 words were classified with less than 100% accuracy, of which 34% were concrete nouns and 66% were abstract. Table 11 presents these results according to whether the nouns were count or noncount.

Table 11
Percentage of abstract and concrete nouns at the noun categorization task

<table>
<thead>
<tr>
<th>Accuracy</th>
<th>Count/Noncount</th>
<th>Abstract</th>
<th>Concrete</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% Count</td>
<td>41%</td>
<td>59%</td>
<td></td>
</tr>
<tr>
<td>100% Noncount</td>
<td>80%</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>less than 100%</td>
<td>56%</td>
<td>44%</td>
<td></td>
</tr>
<tr>
<td>100% Count</td>
<td>79%</td>
<td>21%</td>
<td></td>
</tr>
<tr>
<td>100% Noncount</td>
<td>79%</td>
<td>21%</td>
<td></td>
</tr>
</tbody>
</table>
On the one hand, from the 34 words classified with 100% accuracy, most countable items were concrete nouns, whereas most uncountable items were abstract. This is not surprising if we consider that count nouns can be pluralized and they may be perceived as physical items (e.g., chair/chairs, book/books, car/cars), whereas noncount nouns may usually be thought of as things we cannot see or touch in the physical sense and that are conceptualized as abstract ideas or feelings (e.g., anger, knowledge, violence). On the other hand, from the 44 words classified with less than 100% accuracy, most countable and uncountable items were abstract. This might suggest that learners experience difficulty understanding abstract items that are countable nouns (e.g. problem, solution). In summary, the learners’ less than full understanding of the distinction between abstract and concrete nouns could have impacted their ability to classify nouns as either count or noncount. It is noteworthy to mention, however, that further research needs to be carried out to examine a possible relationship between count/noncount nouns and concrete/abstract nouns in L2 vocabulary.

Another interesting finding from this decontextualized task is the overall performance of all three groups. Even though it was not possible to compare the results statistically due to small sample sizes, it is worth highlighting that both intervention groups achieved higher scores than the unenhanced group: percentage mean scores were highest for the E group (77.47%), followed by E+T group (77.05%) and the U group (72.52%). As mentioned earlier, questionnaire data revealed that participants believed input enhancement to be helpful for remembering examples of nouns; moreover, both output activities provided
learners with exposure to the target feature and opportunities to practice the use of such. Perhaps the intervention did have an impact on learners’ performance and accuracy of count and noncount nouns, but the number of participants was not large enough to provide sufficient data to detect statistical significance. In summary, findings from the noun categorization task are inconclusive, but it is possible that a similar study with a larger sample size could generate statistical evidence for the effects of input enhancement and output tasks on accuracy of count and noncount nouns in isolation.

To date, empirical research also presents conflicting results concerning learners’ prior knowledge of the grammatical feature relative to the effects of textual enhancement (Alanen, 1995; Lee, 2007). While it remains unclear whether some prior knowledge on the part of the participants is necessary or not (and if so, to what extent), it is clear that other variables may have contributed to differences in results, such as the choice of linguistic feature and/or target structure. As previously mentioned, data obtained from the questionnaires showed that 60% ($n = 6$) of participants from the intervention groups (E and E+T) agreed that textual input enhancement would be more effective with a grammatical feature other than count and noncount nouns. Perhaps this is due not only to their previous knowledge of the target feature but also to the frequency and number of nouns that were highlighted in the texts, which might have been visually overwhelming to some participants. Further investigation is needed into the effects of this type of intervention with a target feature that is less frequent in a text than nouns, or with a target group whose prior knowledge of noun
countability is not as strong. Again, it is also worth mentioning that the population from this study could have been accustomed to focusing on language as they were all studying to be language teachers, and this factor could have had an impact on their performance.

With regard to input enhancement, Simard (2009) investigated the effects of quantities and types of typographical enhancement on the intake of plural markers in English L2 among grade 8 students. Results suggested that learners in the experimental groups who were exposed to different textual enhancement formats demonstrated variable degrees of intake. Although Simard (2009) targeted a different population and linguistic feature, findings from her study suggest that results can vary according to the number and type of typographical cues used. It is possible that another textual enhancement format, such as a combination of two different types of typographical cues (e.g., *italicization* and **boldface**), may have been more salient than boldface alone for some learners, thus generating significant differences among groups. When asked about the effects of bold enhancement (**boldface**), 80% of the participants agreed that it was a good method for recalling words in a text. Perhaps a combination of two typographical cues would be more textually salient and more helpful to recall words than boldface alone. In summary, it is plausible to consider that different amounts and formats of typographical enhancement cues administered to the E and E+T groups in the present study could have led to different results in performance.
As regards the method of assessment, data from interviews generated interesting feedback as participants suggested that an oral test in lieu of a written test could have provided different results. Samples of interview data follow:

Question 1: Do you think that an oral test would have provided different results?
(E1): Yes, because when you are writing you have more time to think and you can also review your answers. (Excerpt 2)
(U8): Yes, in the oral text you have to choose a specific answer and in written test you have the option of explaining why you think a particular answer. (Excerpt 3)

Question 2: Do you feel more comfortable with a written test or an oral test?
(E1): Since my point of view, I feel more comfortable in a written test than in an oral test; because nobody is looking at me. In addition, I am a very shy person and I am afraid of saying something wrong. (Excerpt 4)
(E+T5): I feel more comfortable with a written test because I think I have more time to think. (Excerpt 5)
(U8): I feel much more comfortable with a written text because I have more time to think about the answer or changing it if it is necessary. (Excerpt 6)

The process of rendering thinking into speech may sharpen the learners’ ideas of what they want to say, but their linguistic inconsistencies may surface and become more obvious. According to the participants’ feedback, an oral type of assessment would have provided learners with less time to think about their message and how to convey their intended meaning accurately. It would appear that, from their point of view, during an oral test, once an answer is verbalized it
is final and complete (output is considered here as *product*), whereas in a written test one can think over the answer, formulate it, review or revisit it and also explain it in different ways (output serves here as a *process*). This is partially associated with the noticing/triggering function of output suggested by Swain and Lapkin (1995), even though both oral and written tests are two types of production. The difference in production stressed by the participants is that during a written test there is more time to “notice the gap” and recognize consciously some of their linguistic problems in order to trigger some cognitive processes needed to convey their message coherently, accurately and precisely. An oral assessment of the use of count and noncount nouns, therefore, might have generated different results in this study. In this regard, after completion of the course, the teacher stated, “The group was very homogeneous in their readings and writing skills. There were more differences regarding listening and, mainly, speaking”.

The teacher also suggested that “the treatment was not as extended in time as to provoke easily identifiable changes,” thus raising an additional factor that may have influenced the results of the learners’ performance, which is time limitation. Even though the results of this study did not show any statistically significant differences between groups, some learners from the intervention groups demonstrated outstanding performance not by achieving the highest scores but rather the greatest increase in performance. As mentioned earlier, participants E5 and E+T4 from the intervention groups did not have the lowest pre-test scores yet achieved the greatest increase in performance on the grammaticality
judgement tasks and production tasks. They both also ranked within the highest scores for the noun categorization task. It could be argued, therefore, that longer treatment duration might have also led other learners in the intervention groups to benefit to the same extent, thus generating statistical evidence for the effects of textual input enhancement and output tasks on accuracy development.

According to Gass (1997), learners may notice a form in the target language due to its frequency or saliency. Considering that input enhancement increases saliency of a linguistic feature (Sharwood Smith, 1991; 1993) by assisting learners to notice the form in the target language (Izumi, 2002), and acknowledging that output tasks prompt learners to “notice the gap” between what they can say and what they intend to say (Swain & Lapkin, 1995), then a combination of both input- and output-driven activities would logically assist learners to notice the form and push them to produce language accurately. The idea of counterbalancing input and output, or combining both, is associated with the foundation of the output hypothesis initially proposed in the 80’s when Swain (1985) suggested the inclusion of more opportunities for production in the comprehension-based classrooms of Canadian immersion programs. In addition to questionnaire data that support the benefits of textually enhanced input and output tasks, the following excerpts extracted from the interview data reinforce the importance of combining opportunities for input exposure with output activities in L2 vocabulary instruction. Comments from participants E+T2 and E+T6 about the output tasks are related to the awareness resulting from the noticing function of output, as proposed in Swain and Lapkin (1995), that triggers cognitive processes
through which learners generate new linguistic knowledge or consolidate their current knowledge; in the present study, the latter refers to the count or noncount nouns previously seen in texts during the intervention.

(E1): As for the tasks, you learn new vocabulary or practice grammar in a funny way. Moreover, you improve your level of English. (Excerpt 7)
(E+T2): I enjoyed all the activities, especially the vocabulary activities, so that we can learn some words or consolidate previous knowledge. (Excerpt 8)
(E+T6): About both games, I think they are useful not to learn new vocabulary but to practice the vocabulary previously learned. (Excerpt 9)

Even though there was no statistical evidence to support the effects of the intervention on accuracy in noun countability, this pedagogically-driven study generated an interesting effect that merits attention: a consciousness-raising process (awareness) for the learner participants with regard to the possible benefits of input enhancement and output tasks in language learning. The following excerpts from the interviews with both teacher and students demonstrate their “teacher mentality” concerning the intervention tasks of reading (input enhancement) and writing (output tasks).

(Teacher): I think you were able to raise their awareness towards the value and effect of textual enhancement. Yet, the most longstanding effects will be perceived as part of their long-life learning process. I am sure they'll bring in that knowledge to their own teaching practice in a near future. (Excerpt 10)
(E+T2): I think it is a good idea to use a kind of marker, as for instance, bold letters and different colors, to highlight some important grammar points. We can use it even with children to help them notice and memorize new grammar patterns. (Excerpt 11)

(E+T4): These kinds of activities [output tasks] make pupils to set them in a specific context, they are also funnier and these motivate students to learn.

(Excerpt 12)

(E5): With the first one [input enhancement] you are able to learn the vocabulary, grammar, etc, by your own and this makes you feel more capable in this area. Classroom activities make the students conscious of their own learning and the same happens with the teacher, she or he is able to notice the difficulties in the pupils. (Excerpt 13)

The pedagogical benefits of the consciousness-raising process that this study has highlighted are especially relevant because the learner participants were studying to become L2 teachers of children. As mentioned by the teacher, the pedagogical effects of this study can be expected to carry over through their long-life teaching experience, which explains some of their comments above. Participant E+T2 acquired sufficient knowledge to explore the benefits of textual input enhancement and to adapt it as needed for teaching children. Participant E+T4 realized that output tasks need to be set in a context for meaningful communication, which can be motivating and entertaining for learners. Finally, participant E5 understood the importance of combining both individual learning
(reading) and group activities (output tasks) because the first one makes a learner feel capable while the latter raises consciousness of his/her own learning and also enables the teacher to notice the learners’ difficulties. In summary, educating future teachers and drawing their attention to different methods of teaching L2 vocabulary are perhaps the most significant (though incidental) results of this study.

5.2 Discussion of Research Question 2

RQ2: Does textual input enhancement either in isolation or in combination with output elaboration tasks affect learner’s reading comprehension?

This research question was formulated based on two previous studies that reported observable debilitating effects of visual input enhancement on the processing of meaning (Lee, 2007; Overstreet, 1998). Although there were no statistically significant effects reported, results of both studies were alarming and led the researcher to further investigate whether input enhancement would facilitate or hinder learners’ reading comprehension, either in isolation or in combination with output elaboration tasks.

Many studies have failed to demonstrate any significant differences in comprehension scores between groups who received input enhancement and those who did not (Leow, 1997, 2001; Leow et al. 2003; Wong, 2003). Results of the present study are not different. A two-factor ANOVA (group by time) with repeated measures showed that reading comprehension scores improved significantly over time; however, the increase in performance was not affected by group. The non-interaction of group with time suggests that the greater
performance in reading comprehension that emerged over time was not the result of the treatment administered with input enhancement, whether in isolation or in combination with output elaboration tasks. In other words, there is no empirical support of a facilitating effect of input enhancement with or without output elaboration tasks on learners’ reading comprehension.

As previously explained, the existing literature has not revealed positive effects for input enhancement on reading comprehension; therefore, the primary goal of Research Question 2 was to investigate whether this type of intervention would compromise text comprehension when learners’ attention is directed to a linguistic feature. Results from this study do not support the debilitating effects of input enhancement over processing of meaning as reported by Lee (2007) and Overstreet (1998). On the contrary, findings from this study provide empirical support suggesting that this type of treatment is relatively unobtrusive with respect to comprehension even when learners’ attention is directed at a target form (i.e., count and noncount nouns). These results are in line with the questionnaire data collected from 11 participants in the intervention groups, of whom over 80% disagreed that any type of typographical enhancement is distracting for reading comprehension, and over 60% disagreed that bold enhancement (boldface) in particular distracts them from the message conveyed in the text.

Although generalizability of previous studies is limited due to many factors, a plausible explanation of the difference in the results of text comprehension might be related to the number of typographical cues used.
Possible effects caused by the number and/or types of typographical cues in language learning are yet to be empirically investigated; nevertheless, it merits some attention. In this study, only **boldface** was used to enhance the count and noncount nouns that appeared in the texts. However, both Lee (2007) and Overstreet (1998) opted for more than one type of typographical cue (boldface, different fonts, underlined, shadowed) which could have overloaded the learners’ capacity to attend to form and thus interfered with comprehension. A shift of attentional resources might in fact be challenging for some learners under specific conditions, and textual enhancement with more than one typographical cue might require learners to allocate their attentional resources in an uneven fashion between form and meaning processing.

The fact that learners read for meaning first does not imply that linguistic form was overlooked, or that it overrode their capacity to extract both meaning and form simultaneously in different proportions. Results of the present study showed that the input enhancement of count and noncount nouns was not detrimental to learners’ reading comprehension; on the contrary, the study attempted to provide an opportunity for learners to acquire form-meaning connections. It is conceivable that perhaps the design of the interventions used in the present study contributed to form processing without compromising meaning processing and vice-versa.

An important component in classroom research that merits attention in the discussion of the results from this study is the type of instruction provided to teacher participants in regard to the amount of information that could be revealed
to learners during the intervention. On the one hand, teachers in Lee’s (2007) study explained that some careful attention should be allocated to the enhanced parts of the texts whenever a learner from the enhancement condition raised a question in this regard. On the other hand, the teacher in the present study provided specific instructions that were both explicit and intentional to prompt learners to comment on their thoughts about the textual enhancement through the note-taking activity. In this study, participants from E and E+T groups were encouraged to take time and analyse the input enhancement, that is, to focus on form after having read the text for meaning. While textual input enhancement is considered an implicit method of L2 learning, results from this study suggest that its use may be more effective when combined with explicit task instructions, on the condition that appropriate time is allocated for learners to shift from a meaning- to a form-oriented focus. In summary, teachers might need to consider counterbalancing implicit and explicit instruction whenever appropriate in order to allow students to shift their attention and to practice deductive reasoning as well as inductive thinking.

The following is a sample of a student’s responses provided during the note-taking task administered to students in the first week of the intervention. Note that the textual enhancement was placed on count nouns in Text A.

| Question 1: Do these words have anything in common? If yes, what do they have in common? |
| (E+T2): Yes, all of them are related with the topic. Moreover, all of them are nouns, and they have singular form and plural form. (Excerpt 14) |
Question 2: Why do you think some words such as chemistry, intelligence, humanity, food, reasoning, protection and fate are not typographically enhanced?

(E+T2): Maybe because they can’t be said in plural. (Excerpt 15)

For question 1, the participant (E+T2) first analyzed the words for their meaning, and then noticed their relation with the content of the text. This is not surprising since most of the count nouns were indeed related to the topic of the text. However, the participant then shifted her attention from meaning to form, and deductively reported that all of the enhanced words were nouns. Next, even though the appropriate grammar term of count nouns was not mentioned, the participant noticed that some words were singular and others were in plural forms. Lastly, for question 2, the participant reported that those words were not enhanced maybe owing to the fact that they cannot be said in plural forms, as opposed to the enhanced count nouns from the previous question. In this case, the participant demonstrated inductive thinking when contrasting the enhanced forms with the unenhanced forms, knowing they were all nouns but some can be pluralized and others cannot. This example from the note-taking activity suggests that learners need teacher guidance and classroom time allocated for meaning and also for form-oriented tasks, so that they can shift their attention whenever necessary without such a shift interfering with reading comprehension.
Chapter 6

Conclusion

Through a pedagogical framework, this study investigated the effects of input enhancement in isolation and in combination with output elaboration tasks on the accuracy of count and noncount nouns in L2 English. It also aimed to investigate whether input enhancement had an impact in the learners’ text comprehension. In this concluding chapter, I will summarize the prominent findings from this study and their pedagogical implications for teaching L2 vocabulary. Limitations and suggestions for future research will also be presented in order to encourage further developments in the field.

6.1 Summary

In regards to the Research Question 1, findings from this study demonstrated no statistically significant effect of textual input enhancement either in isolation or in combination with output elaboration tasks on accuracy of count and noncount nouns for adult Spanish learners of L2 English.

Analyses of two different tasks, namely, grammaticality judgement tasks and written tasks, provided interesting results: (a) no statistical differences in participants’ mean scores on the grammaticality judgment tasks with respect to group, time, or the interaction of group with time; (b) participants’ mean scores on the written tasks improved significantly over time, but their increase in performance did not vary significantly according to group.
One of the possible reasons for the lack of statistical significance in regard to the grammaticality judgment tasks is the classroom context of pre-service language teachers who consisted of strong learners of English. In other words, participants did not have the expected level of difficulty in the use of noun countability prior to the intervention, resulting in little room for improvement. Furthermore, it is possible that the grammaticality judgment tasks did not tap into the type of knowledge generated by this type of intervention.

In regard to the written tasks, although the differences were not statistically significant between groups, noteworthy is that the E+T group nonetheless outscored the other two groups. Perhaps a larger sample size in addition to opportunities to fully benefit from all three functions of output would have allowed for significant group differences to emerge.

In addition to the two tasks mentioned above, learners also participated in a decontextualized task of classifying nouns into count and noncount. Participants’ scores were split into two categories (i.e. 100% accuracy and less than 100% accuracy), and results suggest that the L2 learners’ less than full understanding of abstract/concrete nouns could have impacted their understanding of noun countability, thus affecting their performance in classifying nouns into count and noncount. Furthermore, it is worth highlighting that both intervention groups achieved higher scores than the unenhanced group in the overall performance in this task, which supports the questionnaire data that revealed that the participants considered: (a) input enhancement as a helpful method for
remembering examples of nouns; (b) output activities as helpful tools for exposure to the target features and opportunities to practice the use of such.

In regards to the target feature and input enhancement, participants from the intervention groups agreed that textual input enhancement would be more effective with a grammatical feature other than count and noncount nouns. It is possible that the frequency and number of nouns highlighted in the texts could have been visually overwhelming to some participants, thus being less appropriate for this type of intervention. Moreover, different frequencies and types of typographical enhancement cues (e.g. italicization combined with boldface) could have led to different results in performance.

According to the participants’ feedback, it appears that the method of assessment helped their achieving high scores. Questionnaire and interview data revealed that learners believed that a written test allows them more time to “notice the gap” and to trigger cognitive processes needed to convey their intended message more coherently, accurately and precisely. There was a general consensus among all the participants that an oral test would have been more challenging, which could have generated different results. Also, as mentioned by the teacher participant, time limitation for the treatment could have restrained the performance of the E and E+T groups. Results from two participants (E5 and E+T4) with outstanding performance in all tasks suggest that longer treatment duration could have allowed other learners in the intervention groups to benefit to the same extent, thus generating statistical evidence for the effects of textual input enhancement and output tasks on accuracy development.
Finally, I touched upon pedagogical benefits for the participants in regard to a consciousness-raising process generated by this study. As mentioned earlier, educating pre-service teachers by drawing their attention to different teaching methods of L2 vocabulary is the most significant (though incidental) effect from this study that can be expected to carry over through their long-life teaching experience.

In regard to the Research Question 2, findings from this study demonstrated improvement in text comprehension over time, but irrespective of group (and no Group x Time interaction). In other words, there is no empirical support of a facilitating effect of input enhancement with or without output elaboration tasks on learners’ reading comprehension.

In contrast with studies from Lee (2007) and Overstreet (1998), findings from this study provided empirical support suggesting that this type of treatment with input enhancement is relatively unobtrusive to comprehension even when learners’ attention is directed at a target form (i.e., count and noncount nouns). This supports the data yielded by the questionnaire where participants revealed that typographical enhancement does not distract them from the message conveyed in the text.

A possible reason for the non-distracting effect of input enhancement in this study is perhaps the design of the intervention that provided learners with an opportunity to acquire form-meaning connections. Participants from the intervention groups were encouraged to focus on form (through the note-taking activity) after having read the text for meaning, thus allocating appropriate time
for learners to shift their attentional resources from a meaning- to a form-oriented focus. This supports data from the note-taking activity which suggests that learners need teacher guidance and classroom time allocated for both types of tasks. In other words, results from this study suggest that the implicit use of input enhancement may be more effective when combined with explicit task instructions. As mentioned earlier, teachers might need to counterbalance implicit and explicit instruction in appropriate circumstances in order to allow students to shift their attention and to practice deductive reasoning as well as inductive thinking.

6.2 Implications for Teaching

The underlying pedagogical purpose of this study was to contribute to the SLA literature through classroom research on vocabulary. In spite of the lack of significant differences between groups in the statistical analyses, other results from this study provide some encouraging support for the teaching and learning of count and noncount nouns in English L2 through individual reading and elaboration tasks in small groups.

Lyster (2007) suggests a counterbalanced instruction which advocates frequent shifts between language (form) and content (meaning). Findings from this study also revealed the importance of counterbalancing implicit teaching methods (e.g. input enhancement) with explicit task instructions (e.g. note-taking activity) on the condition that appropriate time is allocated for learners to shift from meaning to form and vice-versa.
Of equal pedagogical importance is a combination of input- and output-based tasks in order to encourage learners to acquire a feature through reading, for example, and to practice the use of such. Even though results from this study failed to show measurable gains in accuracy in the use of count and noncount nouns through input enhancement and output tasks, interview data, as illustrated below, generated a call for teachers to integrate output activities in their input-based classrooms, as speaking remains an important component of language learning.

(E+T2): In my opinion, teachers should pay more attention to speaking activities rather than only focusing on grammar and reading as we are used to. (Excerpt 16)

(E+T6): I think games such as What am I or Taboo are a funny way of learning and showing what you know. (Excerpt 17)

(E+T7) In my opinion, this project has been beneficial for language learning, because through all specific tasks we have carried out over the past few weeks we have improved comprehension strategies. Apart from this, we have also practiced English language while revising different contents of the subject. (Excerpt 18)

Although not the primary aim of this study, the findings suggest pedagogical benefits for the pre-service participants by drawing their attention to different teaching methods of L2 vocabulary. Interview data below also suggests that this study helped bridge the gap between research and teaching, while ascertaining that the participants were aware of the importance of combining both.
(E2): I am completely aware of the importance studies in second language acquisition may have, not only from a theoretical point of view. We, as teachers, should be aware of how language is learned – which are the main methods and approached used to teach the target language, the importance about how students feel towards the learning process, the main points of language that should be taught, etc. […] Research and theoretical awareness of the learning process should be one of the main draws of second language teachers. (Excerpt 19)

6.3 Limitations

One major limitation in this study lies in the small number of participants, which limited statistical analysis of the results due to the small sample sizes. Also a limitation was the frequent number of bank holidays and the “puentes” (i.e., when a holiday falls close to a weekend and another day is taken off school to extend the holiday weekend) that occurred during the data collection period, thus causing a high absenteeism rate that led to the elimination of two participants from an already small group. The delayed post-test was also affected by the lack of samples. Time limitation was also the reason for eliminating the third week of intervention that had been planned for the use of nouns that are both count and noncount (e.g. light, time, etc).

6.4 Suggestions for Future Research

Results and discussion from this study generated interesting suggestions for future research in the field of L2 vocabulary. It remains clear that classroom
research is still needed to investigate different teaching methods for noun countability, especially if related with other concepts such as abstract/concrete nouns.

In regard to the effects of input enhancement and output tasks, research is needed with a different target group that does not consist of pre-service teachers, especially in what concerns noun countability. It would also be of valuable interest to design assessment materials that comprise tasks other than grammaticality judgment and form correction, and to use perhaps an oral method of assessment. Furthermore, intervention with classroom tasks that provide learners with sufficient time to fully benefit from all three functions of output would be of great importance in the field of L2 vocabulary research.
References


*Language Learning, 54*, 469-523.


Appendices

Appendix 1: Example of a production task item

A) Please take a look at the below picture and describe it in detail.

B) Then, write a short text using all of the following words: accommodation, pictures, food, trips, cars, hippopotamus, many, much.
Appendix 2: Informed consent forms

2.1: Informed consent form for teacher participant

Title of Research: Targeting count and noncount nouns in English through textual enhancement and elaboration tasks: Effects on L2 development and text comprehension.
Researcher: Samira Tanaka (samira.tanaka@mail.mcgill.ca)
Supervisor: Dr. Roy Lyster (roy.lyster@mail.mcgill.ca)

Brief description of the research: This research represents the core phase of the writing of my Master’s thesis. The goal is to better understand the effects of a specific teaching strategy in language education.

Purpose of the research: To investigate the effects of L2 development and text comprehension through textual enhancement and elaboration tasks. As previously mentioned, this research represents the core phase of the writing of my Master’s thesis, and like all such works, the finished text will be available to the public. The information may also be used in future analyses that I write on textual enhancement.

What is involved in participating: I will ask you to include a specific teaching strategy in your English course that involves textual enhancement and elaboration tasks. Data will be collected by various means, all designed by the researcher, and the material needed for such strategy will be provided to you in advance. The material comprises of: a) three short texts in English; b) three written tests; c) brief grammar explanation of target feature; d) elaboration tasks. I will then ask you to contribute to an audio-taped interview, the recording of which will be discarded once the research has been completed. The time allocated for the project will be limited to regular classroom hours (e.g. with exceptions to be agreed upon by all participants). The length of participation in this study will not exceed ten (10) weeks.

Potential benefits: This study will help bridge the theory-practice gap, which may allow teachers to become producers and consumers of educational research, and may assist researchers in understanding the practical world of language education. There is no foreseeable discomfort and/or potential risks to the subjects.

Your signature below serves to signify that you agree to participate in this study.
Your participation is entirely voluntary and you can choose to decline to answer any question or even to withdraw at any point from the project. Anything you say will only be attributed to you with your permission; otherwise, the information will be reported in such a way as to make direct association with yourself impossible. My pledge to confidentiality also means that no other person or organization will have access to the interview materials and that they will be coded and stored in such a way as to make it impossible to identify them directly with any individual (e.g. they will be organized by number rather than by name).

Research Ethics Board Contact Information:
If you have questions about your rights as a research participant, or if you would like to verify the ethical approval of this study, please feel free to contact: Ms. Lynda McNeil, Research Ethics Officer, McGill University, at 514-398-6831 or by email lynda.meneil@mcgill.ca

Permission to be audio-taped: I give permission to be audio-taped   ____YES     _____NO
Consent: I wish to be identified in the report    ____YES     _____NO
          I have read the above information and I agree to participate in this study.

Participant’s Name: ______________ Participant’s Signature: ______________ Date: ______________
Researcher’s Signature: ___________________________ Date: __________________
2.2: Informed consent form for student participant

**Title of Research:** Targeting count and noncount nouns in English through textual enhancement and elaboration tasks: Effects on L2 development and text comprehension.

**Researcher:** Samira Tanaka (samira.tanaka@mail.mcgill.ca)

**Supervisor:** Dr. Roy Lyster (roy.lyster@mail.mcgill.ca)

**Brief description of the research:** This research represents the core phase of the writing of my Master’s thesis. The goal is to better understand the effects of a specific teaching strategy in language education.

**Purpose of the research:** To investigate the effects of L2 development and text comprehension through textual enhancement and elaboration tasks. As previously mentioned, this research represents the core phase of the writing of my Master’s thesis, and like all such works, the finished text will be available to the public. The information may also be used in future analyses that I write on textual enhancement.

**What is involved in participating:** I will ask you to read three (3) short texts in English that are relevant to your course on three different days within a 3-week timeframe. Following the reading, I will ask you to take notes and to participate in other language learning tasks in your classroom. Data will be collected by various means, all designed by the researcher. All participants will be asked to complete three (3) written tests and one (1) questionnaire. In addition, a few participants will be asked to contribute to an audio-taped interview, the recording of which will be discarded once the research has been completed. The time allocated for the project will be limited to regular classroom hours (e.g. with exceptions to be agreed upon by all participants). The length of participation in this study will not exceed ten (10) weeks.

**Potential benefits:** This study will help bridge the theory-practice gap, which may allow teachers to become producers and consumers of educational research, and may assist researchers in understanding the practical world of language education. There is no foreseeable discomfort and/or potential risks to the subjects.

Please note that choosing to participate or not in the study will have no effect on your grades or on any services provided by the university. Your signature below serves to signify that you agree to participate in this study. Your participation is entirely voluntary and you can choose to decline to answer any question or even to withdraw at any point from the project. Anything you say will only be attributed to you with your permission; otherwise, the information will be reported in such a way as to make direct association with yourself impossible. My pledge to confidentiality also means that no other person or organization will have access to the interview materials and that they will be coded and stored in such a way as to make it impossible to identify them directly with any individual (e.g. they will be organized by number rather than by name).

**Research Ethics Board Contact Information:**
If you have questions about your rights as a research participant, or if you would like to verify the ethical approval of this study, please feel free to contact: Ms. Lynda McNeil, Research Ethics Officer, McGill University, at 514-398-6831 or by email lynda.mcneil@mcgill.ca

**Permission to be audio-taped:** I give permission to be audio-taped _YES _NO

**Consent:** I wish to be identified in the report ____YES ____NO

I have read the above information and I agree to participate in this study.

Participant’s Name: _______________ Participant’s Signature: _______________ Date: __________

Researcher’s Signature: _______________ Date: __________
Appendix 3: Timeframe

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