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The Pedagogical Value Of Simplified Written Input In L2 Acquisition

M. Rafael Salaberry*
Cornell University

Abstract

This study investigates the effect of pedagogical manipulations of L2 written texts on learners’ intake of linguistic items (cf. Leow, 1993). The target grammatical structure was the Spanish subjunctive and the subjects were 85 English speaking students enrolled in first and third semester L2 Spanish courses. The subjects were divided into three groups: simplified, non-simplified and control. The results do not show significant differences among experimental conditions. The findings of the present investigation indicate that no strong conclusions on the pedagogical value of simplified written input can be gathered from this study. More extended studies on the effects of simplified input on L2 intake with other morphosyntactic structures or testing instruments (other than multiple choice test formats) are needed.

0. Introduction

The simplification of the target language for pedagogical purposes is a well established phenomenon in the foreign language classroom (e.g. Carrell et al., 1988; Leow, 1993, 1995; Long, 1985; Spolsky, 1989). The purported benefits of simplified input are of two types: improved comprehension of the target language and enhanced development of the L2 grammar. Whereas improved comprehension of the target language appears to be documented by several studies (e.g. Chaudron, 1983; Kelch, 1985; Leow, 1993), the development of the L2 grammatical system due to the effects of simplified L2 input has not been empirically supported. Some researchers have made the argument for an indirect effect of

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comprehensible input on L2 intake (e.g., Long, 1985a): if learners comprehended more, extra attentional resources will be available for the processing of L2 form. However, it is not clear that learners will necessarily learn the L2 grammatical system when more cognitive resources are available. In fact, the opposite might be the case (e.g., Ellis, 1994; Schmidt, 1990). For example, Schmidt claims that adult learners might not pay attention to formal features of the L2 which do not carry information of sufficient communicative value (1990: 149). Leow (1993) has been one of the few experimental investigators who addressed the effects of simplifications on L2 reading texts for the purpose of increasing the degree of intake in the target language. Leow concludes that pedagogical manipulations (simplification) of L2 texts may not have beneficial effects on the degree of intake of the L2 grammar. Leow also generalizes his analysis to pedagogical conclusions arguing that his findings "appear to provide empirical support for proponents of unedited authentic written materials in the classroom," and that "it can be strongly argued that the use of authentic texts provides a more practical alternative to simplified texts" (1993: 344).

The goal of this study is to investigate the potential pedagogical effect of a reduction of the cognitive processing demands of written texts on L2 learners' intake by means of simplifications of the target language. The proposed effect can be measured according to the operationalization of the concept of intake as suggested by Leow (1993, 1995). The research design of the present study is similar to the one of Leow (1993) with the following differences: a control group has been added to the experimental conditions, the time allotted to complete the task has been reduced, randomization of subjects has been performed according to a complete randomized block design, and the number of cues accompanying the target grammatical item has been doubled in the test-retest procedure.

1. The role of simplifications in L2 development

Manipulations of L2 data constitute a common practice in the L2 classroom environment. For instance, textbooks normally present the target data hierarchically/paradigmatically according to yet-to-be-defined pedagogical syllabi. In spite of the apparent insufficiencies of current SLA theories most L2 teaching appears to follow an implicitly assumed "simple-to-complex progression" for the presentation of the target grammar. However, explicit theories of L2 acquisition have not come to an agreement on the potential benefits of the simplification of the target language for the development of the L2 (e.g., Pica, 1985). Will simplification of L2 texts bring about any change in the development of the L2?

In a review of the current pedagogical practices in the L2 reading class Devine argues that since beginning readers tend to have difficulties understanding texts in the target language: "...these may be pedagogical techniques such as the use of grammatically simplified texts, that would allow second language readers to overcome their syntactic deficiencies" (1988: 270). In fact, Devine explicitly states that "...the common practice of simplifying (L2 reading materials) makes good pedagogical sense" (1987: 271, emphasis added). The analysis of the effects of simplified texts on intake constitutes a research topic that has both theoretical and pedagogical consequences for the field of SLA. Among the most important questions that need to be properly addressed by SLA research is the adequate characterization of simplification: how does simplification work as a pedagogical means to increase gains in L2 intake?, how do we measure intake?, what types of pedagogical manipulations are best fitted for specific learning environments (reading, oral comprehension, etc.), do learner-generated simplifications differ from teachers' manipulations of the L2 data, etc. A number of theoretical positions on these issues are apparent.

A strong argument in favor of the use of simplifications in L2 input has been advanced by Hatch (1985). Hatch argues that simplified input has two important consequences for the L2 learning process: it promotes communication and it makes the learning process easier. Hatch points out that the potential pedagogical benefits of simplified input should not necessarily be associated with any learning prerequisites. In other words, simplification of the L2 data does not guarantee any degree of improvement-development of the target language. Hatch argues that SLA research should be "directed at discovering whether certain kinds of simplification in general promote learning, whether certain kinds of simplification are better than others in promoting learning, and whether all kinds of simplification promote learning in the same way" (1983: 84). Hatch presents a taxonomy of the characteristics of simplified input. Among some of the most important features of simplified texts Hatch lists the role of repetition and restatement. Similarly, Leow emphasizes the role of the "frequency of the linguistic items in the input" as a potential candidate for a pedagogical role in the instructional process (1993: 343).

The pedagogical value of simplified input has been highlighted by various researchers (e.g., Krashen, 1985; Long, 1985a, 1985b). Krashen's input hypothesis claims that comprehensible input (as a result of simplifications) is necessary for acquisition to take place. Long (1985a, 1985b) agrees with Krashen on the value of comprehensible input, although he argues that simplified input occurs only as the result of interactional modifications (negotiation of meaning): "if it can be shown that linguistic and/or conversational adjustments promote
comprehensibility, and that comprehensibility promotes acquisition, it can be deduced that the adjustments promote acquisition" (1985b: 85). Recently, Yano et al. (1994) have argued that instead of simplifications, elaborative modulations of L2 discourse (rephrasing, repetition, etc.) may provide learners with the semantic detail needed to process difficult L2 texts: redundancy and explicitness compensate for unknown linguistic items. However, the most important factor brought about by both simplifications and elaborations (pedagogical manipulations in general) is the reduction of cognitive processing demands which gives the learner extra attentional resources to process the more demanding syntactic structures of the target language (see McLaughlin, 1987; McLaughlin, Rossman and Leod, 1983; VanPatten, 1990).

There are also cogent arguments which question the value of simplifications or elaborations of the target language for the purpose of building the L2. For example, Larsen-Freeman (1983) states that the learners themselves can simplify the input by paying selective attention to some features of the target language. However, learners will most likely pay attention to those grammatical items of the L2 which carry the most communicative value (e.g. Ellis, 1994; Robinson, 1995; Schmidt, 1990; Tarone and Parrish, 1988). For instance, Ellis argues that "[l]earners can rely extensively on top-down processing they may pay little attention to the form of the input and may therefore not acquire anything new" (1994: 279). For instance, during face-to-face interaction paralinguistic and nonlinguistic cues are highly significant in the comprehension of verbal language. The over reliance on contextual cues -- pragmatics in general -- is perhaps a crucial feature of the adult learner's system because adults already possess a fully developed language system. Assuming a functional perspective of language use, adults see the target language as an alternative linguistic means to communicate with others. In other words, adult L2 learners are necessarily more concerned with meaning than form. Therefore, Schmidt (1990) claims that the need for conscious attention on linguistic form is essential for developing the target language. More importantly, "incidental learning is certainly possible when task demands focus attention on relevant features of the input ... paying attention to language form is hypothesized to be facilitative in all cases, and may be necessary for adult acquisition of redundant grammatical

1 Learner-generated simplifications appear to be cognition in natural environments (Dekeyser, 1990). Studies on children abroad preprimary 2(1994) and may illustrate the cognitive processing of the L2 data in academic natural environments. More research is certainly needed in this area.

2 In L2 reading, the L2 learner has access to thorough inspection of the text as many times as necessary.

features" (p. 149). In fact, many current pedagogical proposals in the field of SLA appear to follow the hypothesis defended by Schmidt: consciousness raising, input enhancement, the garden-path technique, etc. On the other hand, White (1987) claims that learners develop their L2 when input is, in fact, incomprehensible. However, White acknowledges that in some cases, the manipulation of the data for pedagogical purposes might be necessary to help learners develop their L2 grammar. For instance, the learning of adverb placement in L2 French among English speakers might require the provision of negative feedback (White, 1991). Another potential drawback of using simplified input for pedagogical purposes is that learners may be exposed to data which is artificial or even ungrammatical. White has cautioned against the simplifications of the L2 because they distort the natural syntax that allows learners to build a grammatical system. In that respect, Isaias and Hulstijn (1992) studied the potential advantages of providing simplified ungrammatical input to L2 Dutch learners by means of changing canonical word order in Dutch. The normal grammatical sequence in Dutch is AdvSOV, but the simplified sentences followed the word order rules of the native languages of the experimental subjects: AdvSVQ (English) and AdvSOV (Turkish). As a consequence, the simplified Dutch sentences became ungrammatical. It was hypothesized that these adaptations -- although ungrammatical -- would increase overall comprehension in the L2. The analysis of the collected data does not show any increase in comprehension among the subjects exposed to the simplified, ungrammatical sentences in Dutch. The researchers concluded that "linguistically more complex input will not necessarily impede comprehension." Isaias and Hulstijn argue that it is "the detection of the mismatch between what L2 learners can produce and what they can understand ... (what) provides the impetus for their development. In contrast to the view held by Krosb, 1985, the detection of this mismatch may require the learner to pay conscious attention to formal characteristics of the L2..." (1992: 167). A similar perspective has been advanced by Swain (1985) who makes an argument in favor of comprehensible output (or pushed output according to a more recent label). In other words, simplifications of input alone might not be sufficient for learners to effect a change in their interlanguage system.

3 Isaias and Hulstijn emphasize, however, that "this contention does not imply that, conversely, linguistically more simple input cannot facilitate comprehension" (1992: 167).
1.1 The notion of intake

Corder (1967) states that the input/intake distinction refers to the relationship between target language forms available to the learner (input) and the learner’s acquisition of the forms available in the input (intake). Faerch and Kasper (1980) distinguish between two different concepts of intake: intake for communication and intake for learning. Similarly, Gass (1981) distinguishes apprehended input (a type of cognitive priming device) from intake proper (which leads to grammar formation). Schmidt defines intake as “that part of the input that the learner notices,” and he affirms that subliminal learning is not possible for adult learners (1990: 139). Leow refers to intake as “the stored linguistic data that may be used for immediate recognition,” but not necessarily for acquisition (1993: 334). In spite of the indeterminacy of the concept of intake, it appears that several authors agree on the possible role of a “storage system” which helps keep certain grammatical items in the focus of attention of the “learning system.” Gass claims that “(in) perception, an object (or in this case a linguistic form) is present in our senses, whereas apprehension, being an internal cognitive act, defines that form as being related to some prior knowledge which has been stored in our experience. We can think of apprehension as a priming device which tells us which parameters to attend to in analyzing second language data” (1988: 20-2). Hence, one can assume that the learner will notice certain specific features of the L2 grammar even if those features are not immediately relevant for the adequate processing of the target language. Several factors might make the input “apprehended” by the learner. Gass mentions that the frequency of a specific item, and the simplification of L2 texts (they create a context familiar to the learner) are two obvious candidates for making the L2 data more salient. Similarly, Schmidt (1990) argues that the following factors influence which formal features of the L2 learners will notice: frequency and perceptual saliency of the target item, expectations and skill level of the students and the overall task demands. Therefore, specific types of pedagogical manipulations of the L2 input data (such as simplifications and repetition) are likely candidates to help learners “intake” more target grammatical items.

1.2 The empirical analysis of simplifications on L2 intake

The study carried out by Leow (1993) is one of the few direct empirical investigations of the effect of pedagogical manipulations of L2 texts on learners’ intake. Leow measured the influence of simplified non-simplified texts on the degree of intake of two grammatical items in L2 Spanish (subjunctive and present perfect forms). The study was conducted with college-level first and fourth semester students. The dependent variable in Leow’s study was the raw score of a multiple-choice recognition assessment task (pre-test/post test). Leow concluded that simplified L2 texts make input more comprehensible for communication, but that simplifications of authentic texts do not have a facilitating effect on learners’ intake of the L2 grammar.

There are, however, theoretical and methodological problems in Leow’s study. On the theoretical side, Leow’s hypothesis number three states that “learners with more language experience will take in significantly more linguistic items in the input that learners with less language experience exposed to the same input” (1993: 336). This follows from the fact that advanced learners will have – relatively speaking – extra cognitive resources to process L2 form. In fact, the more advanced students have already been exposed to the explicit presentation of the target grammatical item, and they have also had extensive practice of the target structure in several instances. Hence, it is quite likely – as shown by Leow – that the pre test scores will be higher for the more experienced learners due to the increased amount of instruction (exposure) to the target language. Recognizing that factor does not necessarily imply that advanced students will be using a different cognitive system as argued by Leow. Leow claims that more experienced learners “may be regulated by different cognitive processes while internalizing input” (1995: 86). More specifically, Leow argues that the initial differences in scores between the two groups of students (first- and fourth-semester), represents adequate evidence to support his hypothesis. Fourth-semester students were clearly better (raw scores of 4.24 for the unsimplified condition, and 3.00 for the simplified condition), compared to first-semester students (raw scores of 3.69 for the unsimplified and 0.75 for the simplified condition (out of a 14-point scale). However, it is the analysis of the rate of change (different rates of intake) from pre to post test what should be considered a true measurement of the particular effects of the experimental treatment condition. In that case, if we gauge the degree of change from pre to post test we find no significant differences between first- and fourth-semester students. Upper level students show gains of 0.99 (unsimplified) and 0.45 (simplified), whereas lower level students show changes of -0.54 (unsimplified) and 0.83 (simplified) or a 14-point scale.5

The most important methodological factor that appears to compromise Leow’s findings is the absence of a control group in the

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4 See Chaudron (1985) for a similar proposal.

5 Given that Leow did not analyze the outcome of hypothesis number three according to the previously outlined perspective, the statistical analysis of these differences is not available.
experimental design. For the interpretation of the progression of the experimental groups, the control group provides the researcher with a bottom-line test-retest effect. Any improvement made by the controls (i.e., access to target items) from test to retest determines the baseline that should be used to determine any real improvement made by the treatment groups. The importance of this feature of the design will be addressed in the discussion section. Second, the multiple-choice test instrument used by Leow presents more than one correct option per item, even though three of the four possible responses are supposed to be ungrammatical choices in Spanish. Leow reports that the requirement of a single final answer in the multiple-choice test should be considered a crucial factor of the assessment task. One of the distractors chosen to reflect English syntax is indeed a valid option in both Spanish and English para (for) + pronoun + infinitive. Leow presents the following example in footnote 5:

1. Es muy importante
A. que el comprador compare el costo total.
B. que el comprador compare el costo total.
C. para el comprador comparar el costo total.
D. el comprador compare el costo total.

In this particular example both options (B) and (C) are possible responses according to speakers of various dialects of Spanish (both Latin American and European dialects). However, in the scoring procedure only one response (option B) was considered correct. Finally, another factor claimed to be crucial to the assessment task -- limited amount of time to complete the task -- was not properly addressed: the students were given 15 minutes to complete a 16-item multiple choice test. An average of one minute per item seems to be plenty of time considering the nature of the task (see appendix D). In fact, Leow reports that some of the students finished the task in 6 minutes (average) or less. That average 6 was not adequate control of the potential impact of previous and current exposure to differing L2 learning environments among students assigned to each treatment. There is no information about the number of teachers who were involved in the study, nor whether some of the teachers were in charge of more than one section (especially important if the assignment of teachers coincided with the assignment of treatments). Moreover, the participating subjects of this study were not divided into two subgroups (simplified and non-simplified) at random; entire classes were used to assign the students to either one of the experimental conditions. Leow recognizes there is a problem of adequate randomization in his study, and warns about this type of deficiency of the research design "in future studies."

7. It is important to point out that a reduction of the cognitive processing demands of the reading task by means of pedagogical manipulations of the L2 text does not necessarily imply an increased amount of comprehension of the reading text among the L2 learners.

time clearly shows that the time limitation was not an appropriate control for the extensive use of explicit knowledge, particularly beneficial to advanced students who had received explicit grammatical instruction and practice of the target item.

2. The present study
2.1 Assumptions and hypotheses

The present investigation was intended to replicate the previous findings within a modified experimental set up (see below). There are two major assumptions guiding this study:

1. Simplified written input reduces cognitive processing demands. As a consequence, the learner has "more time" to pay attention to the more demanding formal features of the L2 which would otherwise be ignored (e.g. Schmidt, 1990). This difference will show in the differences in scores between treatment and control groups (post test).

2. Similarly, learners with more experience in the target language will be better able to profit from exposure to simplified texts. Advanced learners have a more extended vocabulary and more knowledge of the morphosyntactic features of the target language. Freed cognitive resources will allow advanced learners to have extra time for the processing of the more difficult grammatical structure which is the target item of this study.

According to those two assumptions there is a learning space continuum defined by the availability of cognitive resources at the disposal of the learner. At one end of the continuum we find the conditions of non-simplified text and less experience with the L2; at the other end we find the conditions of simplified input and extensive experience with the target language. However, there is a single underlying process that is expected to explain the combined outcome of assumptions (1) and (2).7 Based on these assumptions the following hypotheses have been operationalized:
H1: Learners who have access to the simplified text will take in more linguistic items contained in the input than the students who have access to the unsimplified or control texts.

H2: Learners with more knowledge of the L2 will have higher gain scores irrespective of treatment condition (differences between pre and post test).

The selected grammatical item was the subjunctive form in Spanish. The fact that the subjunctive is the less salient of the two structures used in the previous investigation makes it a good target for the measurement of possible effects brought about by simplified texts. The Spanish subjunctive presents the biggest challenge to English-speaking students because it has low perceptual saliency, no concrete referent, and it is semantically redundant (but see discussion section for potential drawbacks for the analysis of grammatical features which carry low semantic value). First of all, only a thematic vowel distinguishes indicative from subjunctive mood (with the exception of some few irregular cases). In fact, Sióhin (1985) argues that the perceptual saliency of any grammatical item decreases if the morpheme is bound, contracted, asyllabic, unstressed or varying in form. The fact that the Spanish subjunctive form is certainly bound and unstressed renders its discrimination very difficult. More important, the Spanish subjunctive carries little communicative value since it signals mood and has no concrete referent. According to Leow the "communicative value of linguistic forms is essential to any psycholinguistic study of learners' attention to input" (1993: 345).

There are four major differences that distinguish the research design of this study and the one presented in Leow (1993). First, the simplified text developed for this study incorporates the repetition of the contextual cues that accompany the target grammatical item (use of overt subject pronouns, and use of the subjunctive form per sentence). Second, the present test/retest procedure incorporates 28 items instead of 16. Third, a time limit for the completion of the tests was established. The present study used a 28-item multiple choice test, and the participating subjects were given a maximum of 15 minutes to complete the task. Finally, the number of experimental conditions has been increased from two to three with the incorporation of a control group. These changes in the experimental design have been incorporated in accordance to the following criteria. First, the increased number of contextual cues of the simplified text creates a more categorical distinction between experimental treatments, thereby increasing the power of the test. Second, the increased number of items of the test (approximately 75% more than in Leow, 1993) provides a more detailed description of the theoretical construct under study. Third, the time limitation for the completion of the tests provides a better control of the extensive use of explicit knowledge. Finally, the control group serves to provide a baseline to check for the validity of the assessment instrument.

2.2 Subjects

A total of 85 students taking courses in Spanish as a second language at SUNY Cortland participated in the study. The native language of all participating students was English, and both beginning and intermediate groups used the textbook "Claro que sí!". The students were enrolled in Spanish courses at two different levels: 3 beginning sections and 4 intermediate sections. Knowledge of Spanish (beginning or intermediate) was determined by the amount of instructional background received in college. The experiment was conducted after the students had completed the first half of the academic semester (Fall 1995). The students in the beginning sections had not seen the subjunctive in Spanish in their course (as stated by the instructor), whereas the intermediate sections were practicing the subjunctive in nominal clauses by the time the study took place. All subjects were informed of the experiment in advance and they were given the option of withdrawing at any time during the study; only one student decided not to participate. Some students were absent from class the day the post test was scheduled.8

2.3 Materials

The passage used in this study was written by the experimenter to obtain a text with a high frequency of the target item and enough variation of the contexts which are usually associated with the subjunctive form in Spanish (see Appendix A). The simplified version of the passage was prepared according to the criteria presented in Hatch (1963). The modifications included simpler vocabulary (high reliance on English-Spanish cognates, fewer pronoun forms, and fewer idioms) and simplified syntax (propositions shorter and simpler, avoidance of pro-drop phenomena and repetition of cues associated with target items). Appendices A and B present samples of both passages, and Appendix C represents a sample of the control text. Table 1 presents a summary of the

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8 The data from the students who did not complete both pre and post tests was not analyzed. 22 students from the beginning sections, and 21 from the intermediate sections did not complete the study because they were absent from the second meeting. From a total number of 131 students who took the pre test, only 85 students completed the second part (22 from the beginning level and 63 from the intermediate level). Three other students did not complete the test even though they were present in both sessions.
grammatical structures. Each target item was assigned a score of 1 making up a maximum possible score of 14 points. Raw scores were calculated for use in the statistical analysis.

3. Data analysis

The mean scores and standard deviations for each experimental cell on the pre and post tests, as well as the sample size for each cell are presented in Table 2. The variation in scores from pre to post test according to level of knowledge of Spanish is presented in graphic format in Figures 1 and 2. An Analysis of Variance (ANOVA) was used to investigate possible differences between experimental groups. No statistically significant differences were found; the randomization of subjects produced three experimental groups of equivalent abilities.

Table 2. Mean scores, standard errors (SE) and sample size (N) for each experimental cell.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Level 1</th>
<th>Level 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test</td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td>Simplified</td>
<td>Mean</td>
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</tr>
<tr>
<td>SE</td>
<td>0.747</td>
<td>0.802</td>
</tr>
<tr>
<td>N</td>
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<td>8</td>
</tr>
<tr>
<td>Non-simplified</td>
<td>Mean</td>
<td>1.571</td>
</tr>
<tr>
<td>SE</td>
<td>0.799</td>
<td>0.857</td>
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<td>N</td>
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<td>7</td>
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<tr>
<td>Control</td>
<td>Mean</td>
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</tr>
<tr>
<td>SE</td>
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<td>0.857</td>
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<tr>
<td>N</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

In order to answer the two main research questions, the raw scores of the dependent variable (pre test/post test) were submitted to an Analysis of Variance (ANOVA). The experiment followed a 3 x 2 factorial design (3 experimental conditions x 2 levels of experience with Spanish). The three experimental conditions were determined by the type of text that the subjects had to read: simplified text, non-simplified text and control group (untreated text with no examples of subjunctive constructions). The two levels of experience with Spanish were determined according to the level of the course that the participants were taking at the moment of the experiment (first semester versus third semester of college Spanish). The dependent variable was represented by the scores obtained in both pre and post tests. All analyses were run using the statistical package SYSTAT.

5.2. The analysis of the data presents two between-subject variables (level and treatment) and one within-subject variable (test) (table 3).

![Figure 1. Pre and post test scores for level 1 by treatment.](image1)

![Figure 2. Pre and post test scores for level 2 by treatment.](image2)

For the between-subject factors, the results of the ANOVA with repeated measures did not reveal any significant main differences for
scores associated with the different degrees of experience with the target language; there are no effects on the cognitive processing of the selected grammatical items due to increased exposure to the L2 in the classroom environment (first versus third semester). The convergence of hypotheses 1 and 2 is not surprising due to the fact that they are both based on a single underlying assumption: freed cognitive resources allow the learner to pay attention to less obvious grammatical forms of the L2. Extra attentional resources were instantiated in two different ways: (i) simplification of the L2 text (hypothesis 1), and (ii) extended knowledge (experience) of the target language (hypothesis 2). In sum, the effect of the pedagogical manipulations exemplified in this study did not have any effect on the cognitive processing of the L2 grammar (as exemplified by individual gains), regardless of knowledge or expertise in the target language.

The comparison of the results of the control and experimental groups shows that the students who had access to exemplars of the subjunctive form (simplified and nonsimplified groups) did not perform better than the students who were not exposed to any instance of the subjunctive (control group). Notice that the control group achieved scores similar to the ones obtained by the treatment groups, even though the control text does not present any example of the Spanish subjunctive. In other words, potential differences between experimental treatments cannot be categorically dismissed because exposure to the subjunctive (simplified and nonsimplified) generates as much change in scores as no exposure at all to the target grammatical item (control). The control group is supposed to show the bottom line effect that is associated with the test-retest effect. Consequently, these results do not allow us to gather any pedagogical conclusion on the use of simplified versus nonsimplified texts for the development of the L2 grammar. Ultimately, this is an empirical question which needs to be addressed in future studies.

5. Further research

Future research studies should expand the previous analysis by considering the following constraints of the present study: (i) the limited exposure to the target grammatical items (one single instance), (ii) the use of a single type of testing procedure (multiple choice pre-test/post test format), (iii) the task requirements (students were requested to process the text for general meaning: test on comprehension), and (iv) the specific features of the selected grammatical item (e.g., low semantic value of subjunctive). For example, in terms of the amount of exposure to the treatment conditions, notice that the operationalization of the construct of intake may be associated with implicit or explicit learning of the L2

| Table 3. Results of repeated measures ANOVA. Dependent variable: pre test/post test (N = 85) |
|--------------------------------|--------|--------|--------|--------|--------|
| Source            | SS     | DF     | MS     | F      | p      |
| Treatment         | 24.778 | 2      | 12.351 | 1.772  | 0.177  |
| Level             | 219.777| 1      | 219.777| 31.319 | 0.000  |
| TreatsLevel       | 6.190  | 2      | 3.095  | 0.441  | 0.645  |
| Error             | 554.369| 79     | 7.017  | 0.000  |

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<th>Withinsubjects</th>
<th>Source</th>
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<th>DF</th>
<th>MS</th>
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<td>TestxTreatsLevel</td>
<td>0.636</td>
<td>2</td>
<td>0.318</td>
<td>0.123</td>
<td>0.885</td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>204.609</td>
<td>79</td>
<td>2.580</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
argue that the "subjunctive verb forms are clearly redundant and do not add significantly to message content in most cases" (1987: 28).

Considering the low perceptual saliency of the subjunctive form, its low semantic content and the specific requirements of the task at hand (comprehension test of passage content), it is possible that students do not "invert" attentional resources in the processing of verbal morphology which does not affect the basic lexical/semantic value of the predicate (e.g., MacLaughlin, 1987; VanPatten, 1990). Finally, the analysis of other syntactic structures such as aspect, pro-drop subjects and subject-verb inversion (typical of normal Spanish discourse) could provide researchers with a more appropriate target grammatical structure for the analysis of the effect of pedagogical manipulations of written input on L2 intake. Implicit in that statement is the assumption that some L2 grammatical features may be better candidates for the processing of simplified written input for L2 development based on their implicit semantic value irrespective of perceptual saliency (e.g., aspect versus subjunctive verbal endings). These are issues to be addressed in future studies.

6. Conclusion

The results of the present study cast some doubts on any categorical conclusion on the pedagogical value of simplified versus non-simplified written input on the intake of L2 grammatical items. More extended research is needed to obtain an appropriate and extended empirical database for the development of strong pedagogical protocols regarding pedagogical manipulations of L2 reading texts. Particularly needed is research that employs multiple measurements of the cognitive process of grammar intake in various environments as mentioned in the previous section (e.g., think aloud protocols).

13 In fact, the participants in this experiment did not have the intention of learning either the morphological or the syntactic aspects of the subjunctive in Spanish, because they were specifically asked to process the general meaning of the reading passage in Spanish.
APPENDIX A: Non-simplified text
Diario de Pablo

4 de octubre: Me miran con condescendencia mis padres. Esperan que cambie mi actitud, y que, con sentido pragmático, abandone la práctica de mis actividades deportivas. Les ha sido muy difícil comprender que desee saltar colido a una soga de goma desde una colina escarpada e ir de un puente. Deseo fervientemente que entiendan mi pasión por las emociones puertorriqueñas de mi vida, y que no me den consejos paternalistas. De hecho, lamento mucho que sean tan dominantes, que no puedan darse cuenta de que solamente soy yo quien dirje mi vida.

5 de octubre: Ya he preparado mi equipo y ahora estoy pronto para probarlo. Es muy importante que la correa de seguridad y la soga que sujeta los tobillos estén fuertemente ajustados. Es también necesario que inspeccione la condición general de la soga y que ajuste las poleas de amarre.

6 de octubre: Telefonomaron mis padres. Hoy hace mucho viento y quieren que deje el salto y que vuelva con ellos a casa. No quiero que salte o que se salte lo que intente. Me contaron que ayer hubo un accidente fúnebre en el liceo donde trabajan. Es necesario que recapacite en lo que hago y que recuerde mi decisión.

Tal vez tengan razón y deba acabar esta actividad de una vez por todas. Quizás no tenga que demostrar mi coraje saltando de un puente colgado de una soga de goma, y pueda, por el contrario, mostrar mi valor tomando una decisión que requiere agallas: escuchar a la voz de la experiencia. Si, es cierto. Es importante que escuche a mis padres y que siga sus consejos. Finalmente he tomado mi decisión: "bungee-jumping" es muy peligroso.

APPENDIX B: Simplified text
Diario de Pablo

4 de octubre: Mis padres me miran con angustia. Ellos esperan que yo cambie mi actitud. Esperan que yo abandone la práctica de mis actividades deportivas.

Para ellos es muy difícil comprender que yo desee saltar unido a una cuerda de goma una montaña o de un puente. Yo deseo mucho que mis padres entiendan mi pasión por las emociones puertorriqueñas. Deseo que mis padres me comprendan. Pero, quizás ellos no tengas el mismo entusiasmo juvenil. Quizás no entiendan el placer por los deportes.

Tal vez mis padres quieran salvarme de un posible peligro. Tal vez ellos quieran ofrecer sugerencias. Pero, yo prefiero que mis padres no se metan en mi vida. Prefiero que ellos no me den sugerencias paternalistas. En realidad, yo lamento mucho que mis padres sean tan dominantes. Lamento mucho que ellos no puedan darse cuenta de que solamente yo soy quien decide mi vida.

5 de octubre: He preparado mi equipo y ahora estoy pronto para examinar todo. Es muy importante que la cuerda de seguridad este fuertemente ajustada. Y es muy importante que el cable de los pies esté firme. Es necesario que inspeccione la condición general del cable. También es necesario que ajuste las cuerdas de unión.

6 de octubre: Mis padres me telefonearon. Hoy hace mucho viento y ellos quieren que yo abandone el salto. Ellos quieren que yo vuelva a casa. No quiero que yo salte. No quiero que intente el salto. Ellos me contaron que ayer ocurrió un accidente mortal en la escuela donde trabajan. Es necesario que yo piense en lo que hago. Es necesario que reconsideré mi decisión.

Tal vez ellos tengan razón. Tal vez yo debo finalmente terminar esta actividad. Quizás yo no tenga que demostrar mi coraje saltando de un puente unido a una cuerda de goma. Por el contrario, quizás pueda demostrar mi valor tomando una decisión que requiere valentía: escuchar las sugerencias de mis padres. Si, es cierto. Es importante que yo escuche a mis padres. Es importante que siga sus sugerencias. Finalmente he tomado mi decisión: "bungee-jumping" es muy peligroso.
Table 1. Comparison of simplified and non-simplified texts

<table>
<thead>
<tr>
<th></th>
<th>Un simplif.</th>
<th>Simplified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of words in passage</td>
<td>314</td>
<td>348</td>
</tr>
<tr>
<td>Total number of sentences</td>
<td>19</td>
<td>26</td>
</tr>
<tr>
<td>Total NP of subjective forms</td>
<td>27</td>
<td>28</td>
</tr>
<tr>
<td>NP of sentences with subjunct.</td>
<td>12</td>
<td>28</td>
</tr>
<tr>
<td>NP of null subject pronouns</td>
<td>37</td>
<td>16</td>
</tr>
</tbody>
</table>

It is important to note that the experimental passage used by Leow (1993) differs from the present text in various ways. First, Leow’s text uses examples of the subjunctive associated with what are called “ impersonal expressions” only (i.e., subjunctive in noun, adjective or adverbial phrases are not used). Second, there are only 8 examples of the target grammatical form in the text. Finally, repetition of the contextual cues that accompany the target item does not constitute part of the manipulations of the text intended as simplifications. In contrast, the present study analyzes 16 instances of various grammatical structures associated with the subjunctive in Spanish ( impersonal expressions, nominal clauses, etc.). Furthermore, repetition of the contextual cues of the target item constitutes the most salient feature of the simplified passage. Each subjunctive form from the original text is assigned to one sentence only to preserve as many cues as possible present in the available input. That is to say, there were 28 tokens of the subjunctive assigned to 28 sentences in the simplified passage (see Appendix B). Also, the number of instances of null subject pronomes was more than doubled in the unsimplified passage (see Appendix D). Finally, the ungrammatical choices included in the testing procedure reflect the use of various other morphological endings familiar to the student. The multiple choice format with diverse verbal endings was necessary to ensure that students were not basing their judgments on the stem of the verb only.

2.4 Testing Procedure

Instructional variation among sections was controlled in two ways. First, participating sections from each level were taught by only one instructor. In this way it was possible to avoid any extraneous effects generated by different teaching styles. The subjects were tested during regular class time by the experimenter (the instructors remained in the classroom during the testing period). Second, the experimental design used in this study was a randomized block design. That is to say, each class section was defined as a block and all treatments were assigned at random within each block. A randomized block design seems to be a better research design for this type of study to control for a potential degree of homogeneity among members of a given group of students. The complete study was conducted in two stages. During the first session the students took the pretest and a short questionnaire about their previous knowledge of Spanish. A week after the first test meeting the students were given the reading passage, a short comprehension test and the post test (see sample test items in Appendices D and E). The comprehension test was used to ensure that students would pay attention to the content of the passage (they were informed only of this task in the instructions). The pre and post tests contained the same items, although the order of presentation of these items was different in each test (the order was randomized in both pre and post tests). The tests consisted of a total of 26 sentences presented in a multiple choice format: 14 target items (Spanish subjunctive) and 14 distractors with various other

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9 The original simplified version of the test did not have any occurrences of null subject pronouns, and it contained a high frequency of complete noun phrases. The final version of the simplified passage included null subject pronouns and noun phrases were substituted by subject pronouns. These modifications rendered a more natural text in Spanish.

10 Randomization of subjects tends to eliminate the influence of any extraneous factors which are not under the direct control of the experimenter. Furthermore, blocking randomization provides a better balance and more precise results by increasing the likelihood that all experimental conditions will be proportionally represented within each block.

11 For example, the students from any given section might share some special traits that led them to choose the class where they have registered (morning versus afternoon, proximity versus absence of previous classmates, etc.). In order to have a safeguard against this type of bias, it is important to have all experimental conditions assigned to each one of the class sections.

12 A lapse of one week between the administration of pre and post tests appears to be a reasonable safeguard against memorization effects. In fact, the majority of learners did not improve their scores from pre to post test to a great extent (roughly 1.5 points on a scale of 14). Furthermore, it is unlikely that students could have profited from any type of practice between the time when pre and post tests were administered: no correction or feedback was offered by the experimenter or the instructors between the administration of tests.
APPENDIX C: Control Text

La familia y la sociedad

Un gran número de acontecimientos sociales son de tipo familiar. Generalmente en los días de fiesta o los domingos, la familia recibe en su casa o visita a otros miembros de la familia. Estos acontecimientos se caracterizan por la presencia de los niños y los abuelos.

Lo que sorprende a los norteamericanos cuando visitan los países hispánicos es la presencia de los niños en casi todas las fiestas. Ellos están acostumbrados a participar con los adultos en las fiestas y en otros acontecimientos, como bodas y bautizos. Desde muy pequeños, tienden a participar con los adultos en la vida social de la familia. Así aprenden continuamente cómo comportarse en sociedad. Están acostumbrados a ratar con personas de diferentes edades - abuelos, padres y hermanos mayores- desarrollando así una actitud de respeto que mantienen también cuando son adultos. En lugares públicos como el cine o los bailes, se ven grupos de personas de diferentes edades. Hay menos tendencia a agruparse según la edad, como en la sociedad norteamericana. Por eso, también es menos molesto llevar a la mamá al hermano menor cuando dos jóvenes van al cine.

No es raro encontrar a los abuelos, los padres y los hijos juntos con algún tío o tal vez un primo viviendo en la misma casa. Los sociólogos han observado varias ventajas en esta situación. Una de ellas es que los niños tienen más personas que los cuiden, y por eso no necesitan tanto atención individual. También tienen más de un modelo y si, por desgracia, pierden a uno de los padres, hay otros adultos presentes. Con tantas personas en casa no es necesario pagar a alguien de a pie para cuidar a los niños - la palabra baby-sitter no tiene equivalente exacto en español.

Las tareas domésticas se comparten y son menos pesadas. Las ventajas de esta convivencia son, para los adultos, una falta completa de vida privada, y para los niños una falta de independencia que se advierte más tarde en su deseo de mudarse de la casa de la familia para poder obtener la tan ansiada independencia.

APPENDIX D:
Test-retest (sample items)

1. Mis padres esperan ...
   a. que yo cambiar mi actitud.
   b. que yo cambiando mi actitud.
   c. que yo cambie mi actitud.
   d. que yo cambie mi actitud.

2. Deseo ...
   a. que entiendo mi pasión por el deporte.
   b. que entender mi pasión por el deporte.
   c. que entiendo mi pasión por el deporte.
   d. que entiendan mi pasión por el deporte.

5. Mis padres quieren ...
   a. que abandonan el salto.
   b. que abandonar el salto.
   c. que abandono el salto.
   d. que abandoning el salto.

APPENDIX E:
Comprehension test (sample items)

2. Pablo’s parents ...
   a. want him to quit dangerous sports.
   b. want him to join the Air Force.
   c. want him to stop seeing them.
   d. want him to live with them.

5. Pablo ...
   a. seems to enjoy bungee-jumping from a mountain or bridge.
   b. seems to hate any dangerous sport like bungee-jumping.
   c. has a difficult time comprehending that his parents enjoy bungee-jumping.
   d. is difficult to treat when his parents mention bungee-jumping.


