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#### Abstract

The inductive approach is a teaching technique that allows students to discover grammatical rules from examples, leading to enhanced grammatical rule retention. This study is a preliminary investigation of the effectiveness of the inductive approach on the usage of Spanish pronouns in an advanced Spanish grammar and composition class. Four different types of pronouns – direct object, indirect object, relative, and reflexive pronouns – were taught to 27 students using the inductive approach. Early in the semester, students completed a pre-treatment creative writing assignment, and in the last week of the semester, immediately after the inductive treatment, students completed a post-treatment writing assignment. The frequency of errors regarding the selection of the pronoun and its placement in the pre-treatment assignment was calculated and compared to the frequency of pronoun errors found in the post-treatment assignment. Results show that (a) the frequency of errors concerning direct object, indirect object, and relative pronouns decreased considerably after the inductive instruction; and (b) the frequency of errors concerning reflexive pronouns did not decrease. Although the rate of errors regarding reflexive pronouns did not decrease noticeably, a minor improvement in the use and placement of this particular pronoun was evident.

# 1 Introduction

A compelling body of evidence has shown that formal instruction on language properties is related to the subsequent acquisition of these properties (Fotos, 1994). Several lines of research are exploring ways to integrate instruction of complex grammatical forms within a communicative framework. However, finding the most effective type of instruction for teaching grammar in a communicative foreign language (FL) classroom has been challenging. A common approach to FL grammar is the deductive approach, in which teachers present the new grammatical structure first and only after the rule is explicitly stated, do students practice the structure. With this approach, many students have shown difficulties applying the rules correctly. This seems to indicate that students have not fully acquired the grammatical structure (Shaffer, 1989). Additionally, the deductive approach tends to emphasize grammar at the expense of meaning and it promotes passive participation among learners. The idea that language is acquired through habit formation has been labeled as inadequate since the late sixties. According to cognitive psychologists, such as Piaget (1953), rote memorization does not result in comprehension. Learning a language is much more than rote memorization, it is a dynamic process that involves the interaction between context and the innate structures of the mind. An example of an approach based on rote memorization is the audio-lingual method, a language teaching method that gained much popularity in the sixties and seventies. This method was based on the behaviorist theory which postulates that certain traits could be trained through a system of reinforcement. This approach to language learning was related to an earlier approach called direct method. Both methods supported the idea that students should be taught the new structures directly with no use of the native language. Drill and pattern practice were the most common types of exercises under this approach. Other researchers, though, recommended teachers to teach grammatical concepts in an explicit manner, given that adult learners have the ability to understand abstract concepts (Boroujeni, 2012; Close, 1992). An alternative to explicit approaches that do not include meaningful contexts in their grammar explanations and to natural approaches that avoid conscious learning of grammar is the inductive approach (Shaffer, 1989). "Learners' attention is focused on the grammatical structure in context so that students can consciously notice the underlying patterns involved." (Shaffer, 1989, p. 395) Throughout the history of FL teaching, most researchers have agreed that pedagogical practices make a difference in language learning (Haight, Herrom, & Cole, 2007).

# 2 Literature review

To situate the debate about inductive grammar instruction and students' grammatical accuracy in writing assignments, an overview of relevant research is presented in the following section.

# 2.1 Teaching approaches to grammar

Over the past few years, we have acquired a great deal of insight into the differences of learning styles among students, particularly FL learners or second language (L2) learners. Different learning styles have encouraged instructors to employ a myriad of different teaching approaches for different language components. Throughout the history of FL instruction, most researchers and instructors have agreed that teaching practices make a significant difference in language learning (Haight, Herrom, & Cole, 2007). However, experts in the field of language pedagogy are still wondering what is the most effective overall approach to teach FL grammar. As Haight, Herrom and Cole (2007) assert:

Whether the learner should be exposed to the grammatical rule before applying the grammatical structure, known as explicit learning, or the learner should apply the grammatical structures in a functional context before exposure to the grammatical rule, known as inductive learning, has been one of the most debated questions. (p. 289)

The debate still continues, because, as Zhang (1998) asserts, adult learners tend to expect grammatical explanations. Therefore, formal explicit instruction has been commonly used in the classroom for adults. Brindley (1987), in an effort to support deductive teaching for adults, states that "teachers who deliberately refuse to give an explanation are violating a very basic principle of adult learning" (pp. 190–191). However, it is important to realize that when instructors present the rule first, students are unintentionally encouraged to participate passively while working on decontextualized activities. The deductive approach emphasizes grammar in an isolated fashion at the expense of meaning. Even though, as Shaffer (1989) states that "teachers have the tendency to use explicit teaching approaches when it came to grammar" (p. 395), there is little evidence that students at any level could fully understand the concepts involved in grammatical structures before applying grammatical rules in an authentic context. Explicit teaching approaches tend to focus on grammar at the expense of meaning and to encourage passive rather than active learning. Despite the lack of engagement of the student in the learning process and the little attention to meaning during the teaching sessions, explicit teaching was commonly used throughout all levels of language instruction. The inductive approach, on the other hand, exposes the learner to the grammatical rules in a functional context. The learner is expected to discover the pattern of the grammatical structure by paying attention to examples provided (Dekeyser, 1994). This approach focuses on a specific function of the language while linking it to a meaningful context. The inductive approach can be divided into two sub-approaches, implicit induction and explicit induction (Lin, 2009). Implicit induction implies that learners induce underlying grammar rules subconsciously, whereas in explicit induction, "learners

discover underlying grammar rules consciously and further present the rules to the class" (Shaffer, 1989, p. 396). Lin (2009) states that "explicit induction raises more student awareness than implicit induction" (p. 6). In other words, the discovery processes that take place in an explicit inductive lesson encourage the learner to be aware of the each step of the learning process. These steps include: 1) students are exposed to the grammatical pattern while being aware that the grammatical pattern is the learning objective; 2) Students work on contextualized activities that focus on the target grammatical structure; and 3) Students consciously discover the grammatical pattern and validate with classmates and instructor; and 4) students use the grammatical structure in close-ended and creative open-ended activities. It is important to point out that the decisive distinction between implicit induction and explicit induction is the degree of student awareness in the process of grammar rules discovery (Dekeyser, 1994). Due to the fact that awareness is vital to learning rules, the present study adopts explicit induction. Moreover, explicit induction facilitates research through observation of students' learning behavior and performance.

Following principles from the inductive teaching approach, the flipped classroom pedagogy recently emerged. As explained in the Educause learning initiative guide, the notion of flipped classroom draws on concepts such as active learning, student engagement, and hybrid course design. The value of a flipped classroom is the repurposing of class time into a workshop where students accomplish three main purposes: inquiry about content, test their skills in applying knowledge, and interact with one another in hands-on activities. Similarly, students learning pronouns through the inductive approach in the present study shared the same purposes. During the flipped class sessions, as well as teachers leading inductive lessons, instructors function as coaches or advisors. The flipped classroom and inductive teaching approach constitute a role change for instructors, who give up their front-of-the-class position in favor of a more cooperative contribution to the teaching process. There is a simultaneous change in the role of students, many of whom are used to being the passive participants in the education process, where instruction is served to them. The flipped and the inductive model put more of the responsibility for learning on the shoulders of students while giving them greater motivation to experiment. The flip classroom pedagogy brings a distinctive shift in priorities - from merely covering material to working toward mastery of it. It includes the use of pre-recorded videos about class content for students to watch before attending class. Teachers pre-record lectures and media for the students to watch at home in their own time. These pre-recorded videos put teaching material under the control of students; they can watch, rewind, and fast-forward as needed. This ability may be of particular value to students of a foreign language, especially when captions in the L1 or L2 are provided. The use of pre-recorded videos is the only observable difference between the flipped classroom pedagogy and the inductive approach pedagogy. For this particular project, as it is the case for most inductive teaching practices, no video was pre-recorded for the students to watch a priori or posteriori. The discovery process of the grammatical rules occurred in class, while the instructor coached groups of learners throughout the inductive learning activity.

Among the many approaches used in the FL classroom, the inductive and deductive approaches have been frequently compared and contrasted due to the conflicting results of previous studies. Research contrasting the effectiveness of deductive and inductive approaches has produced conflicting evidence about the effectiveness of these two teaching techniques (Erlam, 2003). Each study conducted so far has taken place within a different range of circumstances, populations, languages, proficiency levels, and study designs. Even though the deductive approach in these studies follows a similar teaching pattern, the inductive model takes wide-ranging formats. Table 1 summarizes the results of such studies.

Author/s and	Language	Participants	Variables	Treatment	Results
Year of the study					
Andrews, 2007	ESL/EFL	70 teenagers in L2 classes divided into 2 groups	Simple grammar rule (subject and verb agreement) complex grammar rule (relative clauses)	2 treatments a. Explicit grammar b. Implicit grammar Both applied to one simple grammatical rule and one complex grammatical rule.	Explicit grammar obtained better results with complex rules. No difference in learners' performance of simple rules. Both approaches obtained same results in simple rules.
Erlam, 2003	French	3 classes of fourth semester students (approximate- ly sixty 14 years old students)	Direct object pronouns	a. Inductive approach b. Deductive approach	Inductive approach assisted students better with morphological features Deductive approach assisted better with syntactical features
Haight, Herron, & Cole, 2007	French	47 second semester college students enrolled in 4 sections	8 grammatical structures 1. adverbial pronoun <i>en</i> 2. adverbial pronoun <i>y</i> 3. indirect object (IO) pronoun 4. imperative pronouns 5. verb with a + IO 6. relative pronouns 7.demonstrative pronouns 8. partitive pronouns	a. Inductive approach b. Deductive approach	Inductive approach achieved significantly higher results than deductive approach on short term and long term learning of the structures.
Radwan, 2005	EFL/ESL	42 English as a foreign language participants in 2 universities	Explicit teaching and degree of explicitness	4 treatments: a. Rule-oriented b. Textual enhancement c. Non treatment of grammar d. Content-oriented Treatments gradually differed in level of explicitness from focused in the rule- oriented group to no focus on form at all in the content group	High explicitness outperformed other groups of implicit instruction or no instruction at all.
Lin, 2009	ESL/EFL	64 elementary students	Future tense Simple present tense Simple past tense	a. Deductive approach b. Inductive approach	No significant differences on verb tense retention. Deductive approach group significantly

Table 1. Summary of main studies on inductive vs. deductive teaching approaches

Mohamed, 2004	ESL	53 college level	Learners' attitude and preference of grammar teaching method	a. Deductive learning b. Inductive learning	outperformed inductive approach group in application and accuracy Students regard both tasks equally effective and useful in language learning. Proficiency does not affect task preference.
Putthasupa & Karavi, 2010	ESL	80 students majoring in English	Students' consistent grammatical errors in written compositions	a. Deductive learning b. Inductive learning	Inductive approach affected positively the teaching of grammar
Shaffer, 1989	Spanish French	319 high school students	Imperfect tense Subjunctive mood Conocer/Saber Connaître/ Savoir Ser/Estar (only in Spanish)	a. Deductive approach b. Inductive approach	No significant differences were found. However, the trend was in favor of inductive approach for students of all ability levels
Tode, 2007	EFL	89 7th graders in a junior high school	Durability of the effect of explicit and implicit grammar teaching	<ul><li>a. Explicit learning</li><li>(deductive)</li><li>b. Implicit learning</li><li>(inductive)</li></ul>	Explicit learning is more effective but its influence is not durable
Vogel et al., 2011	French	40 university students enrolled in 3 sections of intermediate level of French	10 grammatical structures	a. Inductive approach b. Deductive approach	<ul> <li>a. Inductive</li> <li>approach had a</li> <li>positive effect on</li> <li>students' short term</li> <li>learning of the 10</li> <li>structures.</li> <li>b. Both approaches</li> <li>significantly</li> <li>improved long</li> <li>term learning</li> </ul>
Hammerly, 1975 No empirical study. From years as an experienced teacher. Approximately 80% of the basic grammar points of a language like Spanish or French can be learned without overt explanations or discussion. On the other hand, the 20% that needs to be approached deductively can be learned without explanations. The grammatical points that benefit from the deductive approach are points based on concepts lacking in the L1.					

Regardless of the FL level of the students, the results of four out of ten studies clearly support inductive teaching practice, and three studies out of ten found that both approaches were significantly beneficial to students, and students perceived both approaches as being equally effective. As can be observed in Table 1, most studies, with the exception of Erlam's (2003) study, which focused on college students of French at the fourth semester level, investigated the effectiveness of inductive teaching mainly on beginning or intermediate language students. The low number of studies focusing on inductive teaching of advanced grammar knowledge offers a space for a study on inductive teaching for intermediate or advanced learners. For that reason, the present study examines the effects of the inductive approach on the grammatical accuracy of advanced L2 students in the context of writing assignments.

# 2.2 Writing accuracy in advanced FL courses

The development of the three modes of oral communication (presentational, interpretive, and interpresonal) described by the American Council on the Teaching of Foreign Languages (ACTFL)

in 2012 has recently placed a special emphasis on oral communication at the college upper level, while de-emphasing L2 written communication. Morocco and Soven (1990) claimed that "in the hierarchy of pedagogical practices, writing holds a low priority and has remained the stepchild of teaching in FL classes" (p. 845). Ten years later, Homstad and Thorson (2000) reconfirm Morocco and Soven's statement, asserting that the writing component has been generally relegated to a second place in the FL classroom. The authors react to this by stating that "writing should be an important part of the language curriculum and integrated into all levels of instruction. [...] Writing to learn and learning to write are essential ingredients in a successful language program. Not only is writing a skill [...] but is inextricably linked to cognition and learning the language" (pp. 141–142).

European language programs have also experienced a decrease in the number of writing assignments. As Castelló et al. (2012) point out, professors of different disciplines in Spain admit that they value writing to learn in their disciplines, but contrary to their belief, they do not require students to work on writing assignments habitually. These professors often consider that students are not competent enough to adequately use writing as a learning tool in their first language (L1), much less in their L2. It should not be a surprise that students in upper level courses in the United States, as well as in several European countries, struggle with the use of adequate FL grammar and an adequate writing style (Strong, 2009). Based on the above statements, it could be inferred that most students who major or minor in a FL show some level of grammar and writing style inaccuracy. As Aliakbari (2002.) declares, in an attempt to explain the concern with FL writing, that "a very common belief among FL instructors is that writing in a FL is necessarily a language problem and not really a writing problem" (p. 157). The high frequency of grammatical mistakes encountered in writing assignments makes the task of essay grading a challenge for professors. For this reason, professors of upper level language courses have often demanded efficient grammar instruction within the lowerlevel courses. However, as Strong (2009) points out, if writing in L1 is an arduous process, writing in an L2 will often be an even more complex task. The generalized claim about the limited writing accuracy in students majoring or minoring in a FL is clear (Valdés, Haro, & Echevarriarza, 1992). The common belief is that most students in upper-level language classes concentrate on the departmentalized study of grammatical aspects, with little connection to writing accuracy. This disconnection between writing accuracy and grammatical correctness is reflected in the quality of grammatical structures in students' writing assignments. Students in an L2 content upper-level class find themselves writing content essays in the L2, but constantly questioning the use of certain grammatical structures (Strong, 2009). There is a need to investigate what pedagogical approaches could help students in upper level language classes improve grammatical accuracy in written assignments. As Pérez-Sotelo and González-Bueno (2003) state, most studies about FL writing accuracy have focused on analysis of discourse and content-oriented components of writing proficiency, but only a few have looked at which teaching approaches could help to enhance the development of grammatical accuracy in written compositions. In an attempt to investigate an alternative way to improve grammatical accuracy in written assignments, the primary goal of the present study is to investigate the effect of the inductive teaching approach on grammatical knowledge as measured by accuracy of use within written assignments.

# 3 Research design

# 3.1 Research question

This pilot study falls into the category of descriptive studies. The study addresses the following research question: Does the inductive approach assist participants with the use and placement of Spanish pronouns as measured by creative written assignments?

#### 3.2 Participants

Participants included 27 university students, 18 females and 9 males, divided into two sections of advanced Spanish grammar and composition at a public university in the southwestern United

States. All participants were majoring or minoring in Spanish. Instructor-graded writing samples from the participants on the second day of class confirmed that the participants fitted into the intermediate-high category according to ACTFL writing guidelines. They were all native English speakers and did not qualify as heritage speakers. The heritage speakers in the classroom and one trilingual student were not part of the study. The instructor, with extensive experience teaching upper level advanced Spanish grammar and composition, went through intense training on the inductive approach. The professor used the inductive approach to teach students different grammatical structures throughout the semester. These grammatical structures included the use of preterit versus imperfect, prepositions, and the use of the subjunctive mode vs indicative mode. As a result of these topics being taught inductively, the students and professor were confidently familiar with the five steps included in the inductive lesson. The steps are described in Section 3.3.

# 3.3 Teaching procedures

The inductive lesson involved five important pedagogical steps:

- (1) Instructor presents the targeted grammatical forms (pronouns) within a meaningful context, usually a written text (see Appendix A);
- (2) Instructor encourages learners in pairs to recognize grammatical patterns presented in the text. Students focus solely on target structure;
- (3) Students formulate the grammatical rule and make generalizations about the target form and function within the context of the text;
- (4) Students, as well as the instructor, confirm the accuracy of the rule. Once students confirm the correct use and placement of the target structure, instructor offers extra clarification about the structure if necessary; and
- (5) Students engage in meaningful practice. First, students complete cloze and fill-in-theblanks activities using the target structure. Second, they use the target structure in sentences, and third, they complete oral and written activities that involve the target structure.

The units were divided in two different but related sections. The first section centered on grammatical accuracy. The second focused on reading and writing skills. The second section included pre-reading and pre-writing activities, but it also included extra grammar practice activities. Both sections, which constitute a unit, were thematically interwoven. Students worked in pairs to complete the first section (grammar section) in class (see Appendix A). Upon completion, a pair of students shared the answers with the whole class and discussed them with the instructor, complying with Shaffer's (1989) suggestion that "class discussion is especially helpful in an inductive approach where students, during the hypothesis formation process, benefit from input from their teachers and peers" (p. 400). The whole unit was covered in six 50-minute sessions, spread over two weeks.

# 3.4 Target structures

The specific grammatical structures targeted in this study were divided into two groups, personal pronouns and relative pronouns. Within personal pronouns, the study focused on the use and placement of direct object, indirect object, and reflexive pronouns. Table 2 shows the specific pronoun categories and syntactical functions investigated in the study.

Categories	Personal Pronouns			<b>Relative Pronouns</b>
Туре	Unstress	sed	Reflexive	varies
Syntactical function	Direct	Indirect	varies	
	Object Object			

Table 2. Categories and syntactical functions of target structures

Target structures were introduced to the students in the order suggested by the required textbook in class, "Manual de gramática: Grammar reference for students of Spanish" by Iguina and Dozier (2008). Direct object, indirect object, and reflexive pronouns were grouped as personal pronouns, and relative pronouns were grouped in a different pronoun section. Pronouns are structures that lend themselves to be illustrated in a semantically contextualized text. With the text as the basis of the activity, students were able to engage with the pronouns using the inductive approach. Because of the suitability of the pronouns with the inductive approach, pronouns were selected as the target structure of the study. It is important to highlight that participants had been previously exposed to pronouns in previous language courses. However, in previous basic courses, students were only expected to recognize and use pronouns with a low level of grammatical complexity in a controlled context. For example, students were used to transform sentences with explicit direct objects and indirect objects to sentences with the direct object and indirect object pronouns embedded. In this course, students are expected not only to transform sentences, but also to transform contextualized paragraphs with repetitive explicit direct objects and indirect objects. Students are supposed to transform long paragraphs into short ones with the help of relative pronouns.

Pronouns, especially direct object pronouns, are not acquired quickly by L2 learners and, as such, they are ideal for testing learners who have some prior knowledge of a structure, but who still make errors on the structure (Martoccio, 2012). Regarding relative pronouns, it is important to point out that the Spanish language offers twenty options for selecting the correct relative pronoun. English only offers six options. Due to this fact, a high level of difficulty in the usage and placement of these pronouns was expected.

#### 3.5 Assessment procedures

The instruments used to assess the impact of inductive grammar teaching on the learning of pronouns as well as the timeline of the study are presented in Table 3.

As Table 3 points out, pre-treatment and post-treatment assessments consisted of creative written compositions. The strength of using written compositions was that it allowed us to measure language in a more natural – as opposed to a controlled – assessment format, such as fill-in-the-blanks, cloze or multiple-choice exercises. A focus-on-form assessment would have probably offered more precise data about the use and placement of pronouns in controlled sentences, and would have given us the option of managing the times that a particular pronoun needed to be used, but it would also offer us controlled language outside a meaningful context. Given that this particular course centered on the development of writing skills, and students were required to write compositions bi-weekly, using the compositions as the tools to examine learning was more aligned with the course demands than using controlled assessments.

The prearranged topic of both assignments was exactly the same: a horror story. To increase student dedication and involvement in the study, each composition was given a 7% weight for the final grade. The instructor graded the compositions using a rubric based on content, writing style, grammar, and vocabulary (see Appendix B). After students completed the pre-treatment assignment, the researcher added up all instances in which students used the target structures and calculated all instances in which these were used incorrectly, in terms of placement and pronoun selection. Identical repeated errors were only counted once. The same classification procedure was applied for the post-treatment composition at the end of the semester. These two written compositions were the only data source for the project.

Week of the semester	Instructor preparation	Pre-treatment assessment for students	Treatment	Post-treatment assessment for students
3 <sup>rd</sup>	Provide pre-reading and pre-writing activities for students Create instructions for in-class composition #1	Composition #1: "Historia de horror" Words: 300–350 Time: 50 min. No dictionary or translation devices allowed.		
13 <sup>th</sup>	Prepare inductive lesson plan		Inductive grammar lesson: Direct object, indirect object, and reflexive pronouns. Written and oral practice activities (3 sessions of 50 minutes)	
14 <sup>th</sup>	Prepare inductive lesson plan		Inductive grammar lesson: Relative pronouns. Written and oral practice activities (3 sessions of 50 minutes)	
15 <sup>th</sup>				Composition #2: "Historia de horror" Words: 300–350 Time: 50 min. No dictionary or translation devices allowed.

Table 3. Timeline and instruments of the study

# 4 Results

Table 4 summarizes the number of instances when students attempted to use a specific pronoun during both, pre-treatment and post-treatment compositions, the number of instances when students used pronouns incorrectly, and the error rate for each pronoun category.

	Pre-tr	eatment comj	position	Post-treatment composition		Difference between percentage of errors	
Pronouns	Instances	Errors	Percentage of errors	Instances	Errors	Percentage of errors	
Direct object	61	22	36%	59	18	30.5%	5.5%*
Indirect object	48	19	39.5%	44	12	27.2%	12.3%*
Reflexive	154	50	32.4%	130	38	29.2%	3.2%
Relative	113	40	35.3%	130	30	23%	12%*

Table 4. Pronoun usage and error frequency breakdown (n=27)

\* Percentage of errors decreased by 5% or more.

# 5 Discussion

The researcher calculated the frequency of errors related to pronoun use and placement in the pre-treatment composition, and compared it to the frequency of errors found in the post-treatment.

Study results show that frequency of errors concerning direct object, indirect object, and relative pronouns decreased noticeably after inductive instruction. However, the frequency of errors concerning reflexive pronouns did not decrease noticeably. Although the rate of errors related to reflexive pronouns did not decrease as much, participants still showed a minor improvement in the use and placement of this particular pronoun in the post-test writing assignment. These results have several important implications. First, the fact that students were able to substantially decrease the rate of errors for direct object pronouns should be considered a critical finding due to the complexity of such a pronoun for native English speakers. In her study with beginning French students, Erlam (2003) points out that the acquisition of direct object pronouns requires the learner to focus on several morphosemantic aspects, such as gender (e.g. le/la), person (e.g. me/te), and number (e.g. le/les). Given that direct object Spanish pronouns contain the same morphosemantic aspects as French direct object pronouns, the same rationale could be applied to the results in the present study. The correct use of the third person direct object pronoun not only requires students to think about syntax and pronoun placement, but also about the gender of the referent. According to Felix and Hahn (1985), learners master the pronominal system by acquiring these morphosemantic features one at a time and not all at once. As Felix and Hahn (1985) state, "this progression matches naturalistic language acquisition, a succession of individual structural features and the reintegration of those features toward target structures norm" (p. 233). To correctly use direct object pronouns, the learner is involved in one more layer of processing in comparison to other pronominal structures. Specifically, the third person plural and singular direct object pronoun requires the learner to focus on gender in addition to person and number, while indirect object and reflexive pronouns only require learners to focus on person and number. The most distinct finding regarding indirect object pronouns was the important increase of the correct use of indirect object along with the prepositional phrase, in sentences with declarative and/or communicative verbs such as contar, decir, responder, and so forth. Table 5 illustrates the improvement for indirect object pronouns within a prepositional phrase with declarative and/or communicative verbs.

Table 5. Usage and error frequency breakdown of indirect object pronoun within a prepositional
phrase with declarative/communicative verbs (n=27)

	Pre-tre	atment com	position	Post-treatment composition		Difference between percentage of errors	
Pronouns	Instances	Errors	Percentage of errors	Instances	Errors	Percentage of errors	
Indirect object pronouns within a prepositional phrase with declarative/ communicative verbs	7	6	85%	10	3	30%	55% *

\* Percentage of errors decreased by 5% or more.

The rate of errors for this particular use of indirect object pronoun changed from 85% to 30%. The following examples illustrate this particular use of the indirect object. Examples are taken verbatim from compositions.

Student X

a. Pre-treatment: Andy: - ¿Quieres venir? preguntó a mí (Do you want to come?- he asked to me) Bella: 2. - Lo siento mucho - dije a mi madre (-I am really sorry- I told to my mother)

b. Post-treatment:
Andy: ¿Quieres venir a mi casa? <u>Me</u> preguntó a mí (Do you want to come to my place?- he asked me)
Bella: No puedo ir - <u>le</u> dije a mi mamá (-I cannot go- I told my mother)

The sentences in the pre-treatment example did not need an empathetic reader to be understood. However, as Torreblanca (2005) states, "the lack of an indirect pronoun with verbs such as *decir* and *preguntar* is not pragmatically accepted" (p. 636). This means that it is highly improbable that a native speaker would omit the pronouns when using these verbs. The sentences in the pre-treatment are a reflection of memorized systematic rules or direct translation from students' L1, also known as L1 transfer, but not the real use of the L2. Practice activities in the unit aimed to expose students to more real uses of language and emphasized formal uses of the language, as well as more colloquial uses. In support of this finding, Cole's (2007) study confirms that inductive method helped to increase the learning of indirect object pronouns.

Regarding relative pronouns, a possible explanation for the noticeable decrease of errors could be attributed to the level of difficulty commonly associated with the usage and placement of these pronouns. Since the selection and placement of relative pronouns in Spanish considerably differs from English due to markers for gender and number and also to differences between language registers, it could be hypothesized that students invested more effort to learn this particular target structure. Additionally, the fact that the number of options for Spanish relative pronouns (26 options) is higher than in English could have also affected students' perceptions of the level of complexity.

Regarding reflexive pronouns, although the rate of errors decreased in the post-treatment composition, the difference between both averages is not higher than 5%. Therefore, it cannot be stated that inductive teaching greatly impacted the learning of such pronouns.

Regarding the frequency of the different types of pronouns used in the pre- and post-treatment compositions, it could be stated that reflexive pronouns and relative pronouns were used twice and almost three times as much as direct object or indirect object pronouns. This is due to the prevalence of relative pronouns in common written texts or speeches. Given the fact that the main function of these pronouns is to link main clauses with subordinate clauses, essays and speeches often contain many relative pronouns. Relative clauses modify a word, phrase, or idea in the main clause. This word, phrase, or idea modified is called the antecedent. It is common that advanced L2 writers utilize relative pronouns to describe things or concepts in more detail.

The high frequency of reflexive verbs could be also explained by the high frequency of the reflexive verbs in common discourse. The theme selected for the story assignment might have affected the frequency of verbs such as *acordarse*, *asustarse*, *callarse*, *irse*, *morirse*, *preocuparse*, *sentirse*, and so forth. Due to the sematic relationship of these verbs with the topic of the assignment, a horror story, these types of verbs appeared recurrently. According to Barr (2015), an n-gram data analysis was the foundation for a list of high frequency reflexive verbs. The n-gram model is a type of probabilistic language model for predicting the next item in a particular sequence. Barr (2015) analyzed the occurrence of sequences of two words, bigrams, as opposed to individual words on their own. For example, combinations such as *me*+ *acordé* or *me*+ *asusté* were searched and tallied. The results of the data showed the twenty-five most commonly occurring Spanish verbs. This high frequency list includes verbs such as *irse*, *sentirse* and *preocuparse*, among others.

Overall, the results of this study has found similarities with much past research about the use of the inductive approach to teach certain target structures, such as Haight et al. (2007), Putthasupa and Karavi (2010), Shaffer (1989), and Vogel et al. (2011). The results are consistent with the study conducted by Haight et al. (2007) about learning 8 French grammatical structures at the university elementary level. The placement of two of the grammatical structures studied in Vogel et al.'s study were direct and indirect pronouns. The group instructed by the guided inductive approach performed better than the group that learned the placement of these pronouns within a deductive approach. In Haight et al.'s study (2007), students in the inductive group achieved significantly higher results than students in the deductive group, not only in short-term learning, but also in long-term memory.

The results also coincide with outcomes obtained in Vogel et al.'s (2011) study. Their study compared the effects of a deductive approach versus a guided inductive approach on 10 French grammatical structures in an intermediate college level French classroom. Vogel et al. confirmed that the guided inductive approach impacted students' short-term learning of ten grammatical structures significantly. The results are also consistent with cognitive theories that view language learning as an active process, requiring the active engagement of the learner. When students are taught with an inductive approach, they are required to think about the linguistic structure as they receive oral input before being asked to formulate the rule with guidance from the instructor (Vogel et al., 2011).

Malovrh and Lee (2014), in their chapter about the acquisition of object pronouns in Spanish, state that there are two key events in interlanguage development among advanced students that might explain the evolution of the use and placement of object pronouns. One is the increase in the inventory of forms produced by learners and the other is the decrease in morphological accuracy. "The developing system could grow bigger but could not, at the same time, grow more accurate" (Malovrh & Lee, 2014, p. 216). In other words, students start using different types of pronouns, but the level of morphological accuracy was not increasing at the same rate. Malovrh and Lee's study (2014) also identified that non-homophonous pronominal forms emerged before the homophonous. The pronouns that did not share phonemic similarities with other pronouns. The phonemic distinctiveness of the pronouns helped learners remember them correctly and not confuse them with other pronouns.

#### 6 Conclusion

Findings in the present study confirm the effectiveness of the inductive learning approach in the FL classroom. Results present some evidence of the inductive learning approach as a useful tool to teach Spanish direct object and indirect object pronouns, and relative pronouns to advanced students in FL writing courses. The number of errors associated with direct, indirect, and relative pronouns decreased noticeably as demonstrated by the creative writing assignments. The study does not provide strong enough evidence about the impact of the inductive approach on the use of reflexive pronouns.

Limitations are part of all studies involving classroom research. The findings from this study with 27 students might not be generalizable to populations of students in advanced grammar and composition courses in other academic settings. Furthermore, in terms of assessing grammar skills, this study focused on the effects of the inductive approach on creative written assignments. The purpose for this type of assessment was to measure language in a natural and less controlled setting as opposed to a controlled assessment, such as fill-in-the-blanks, cloze or multiple-choice exercises. As mentioned in the assessment section, a focus-on-form assessment would have probably offered more precise data about the use and placement of pronouns in controlled sentences. However, given the learning objectives of this course, most assessments were based on written compositions of different length and topics. Additionally, the possibility of crossover effects from previous courses might have limited the final results.

No data on the deductive approach were provided in this study, and therefore no claims about the superiority of the inductive approach over the deductive approach method can be made. However, the present study showed that the inductive teaching approach did have a sizeable positive effect on the learning of Spanish pronouns. The study highlights the relationship that exists between the effectiveness of the inductive approach and the complexity of the acquisition of certain target structures.

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# Appendices

# Appendix A

First part of inductive activities for direct object pronouns (due to space limitations only the first part of the inductive activities for subject and direct object pronouns are included in Appendix A).

Act 2. Lectura. Vamos a centrarnos en Rigoberta Menchú y en su papel en Guatemala. Lee el siguiente artículo de periódico con tu compañero y pon atención a los pronombres que aparecen en negrita.

# Título\_

Esta mujer indígena ganó el Premio Nobel de la Paz en 1992 por su trabajo con los pueblos indígenas en Guatemala. Ella sobrevivió una época de violencia en Guatemala producida en su mayoría por los conflictos étnicos y culturales del país y la intolerancia de ciertos grupos políticos. Me *llamo Rigoberta Menchú y así me nació la conciencia* es un libro testimonial sobre la opresión y la violencia sufridas por la familia y la comunidad indígena de su país.

Rigoberta Menchú ha informado al mundo entero sobre las atrocidades ocurridas en Guatemala y quiere que



todos *las* cuenten, *las* comenten, y *las* compartan. Ella piensa que pasar la información de vecino a vecino es la forma más tradicional y más sencilla de transmitir*la*. Sea como sea, ella quiere que todos *nosotros* estemos enterados. En 2007 Rigoberta Menchú decidió entrar en el mundo de la política y se postuló para la presidencia de Guatemala, desafortunadamente sólo ganó el 3.09% de los votos. Inesperadamente, las organizaciones mayas no optaron por ella. Los expertos piensan que una gran parte de la población indígena no creía en su poder dado que no tiene experiencia en el mundo de la política. Los indígenas que la apoyaron se sintieron defraudados. ¿por qué no nos unimos como comunidad indígena? ¿Rigoberta, por qué no *te* han votado? ¿por qué? Repetían por las calles

Muchos dan sus opiniones sobre por qué perdió Menchú y no encuentran una respuesta que *los* satisfaga: quizás Guatemala no está preparada para una candidata indígena, tal vez su campaña presidencial no estaba bien estructurada. Unos dicen que Menchú simplemente no es una buena líder y otros la desacreditan por haberse "vendido", por conformarse con ser el icono internacional de los indígenas oprimidos.

Rigoberta tampoco entiende cómo sus "hermanos", quienes *le* ofrecieron la oportunidad de defender*los*, no han sabido apoyar*la* en las urnas.

# Sección de comprensión

Comprensión de las ideas básicas del texto. C/F corrige las falsas.

1 C/F .Se puede afirmar que Rigoberta es una superviviente de la intolerancia, la discriminación y la falta de respeto hacia los derechos humanos.

2. C/F Pasar la información de boca en boca es una forma fácil de transmitir información según Rigoberta Menchú.

3. C/F Según los expertos los indígenas no la votaron porque Rigoberta pertenece a otra clase social distinta a la de ellos.

4. C/F La justificación del fracaso de Rigoberta Menchú como presidenta no está clara.

5. C/F "haberse vendido" en el último párrafo significa que apoya el comercio en la comunidad indígena. ¿Qué título le darías a este artículo?

Resumen. En menos de 3 oraciones y en tus propias palabras resume este artículo sobre Rigoberta Menchú.

# Sección gramatical

Act 1. Durante la lectura habrás encontrado varios pronombres en negrita. ¿conoces las funciones básicas de los pronombres?

-¿Rigoberta, por qué no te han votado?

En tus propias palabras, ¿a qué o quién se refiere el pronombre *te*? Muchos dan sus opiniones sobre por qué perdió Menchú y no encuentran una respuesta que *los* satisfaga En tus propias palabras, ¿a qué o quién se refiere el pronombre *los*?

## Definición de pronombre. Lee, estudia y completa

Los **pronombres** son palabras cuyo referente no es fijo sino que se determina en relación a otras palabras que normalmente ya se han nombrado. Existen diferentes categorías de pronombres como los personales, los posesivos o los demostrativos. Vamos a centrarnos en los pronombres personales y los vamos a clasificar según su función sintáctica [objeto \_\_\_\_\_\_, objeto \_\_\_\_\_\_, y pronombres de objeto de una preposición]

Según la definición de pronombre, di si las siguientes afirmaciones son ciertas (C) o falsas (F)

- Los pronombres normalmente tienen un referente que ha aparecido anteriormente en el texto
- Los pronombres dependen de su referente para tener sentido

Hay varios tipos de pronombres dependiendo de la función sintáctica

Act 2. Refresquemos la memoria. ¿Recuerdas las funciones de objeto directo y objeto indirecto? Indica que función sintáctica cumplen los siguientes sintagmas subrayados.

No quiere entregar todavía su discurso

*No quiere entregar todavía su discurso <u>al presidente del gobierno</u> <i>Rigoberta no quiere entregar <u>nada</u> a <u>ese señor</u> ¿Podrías sustituir los sintagmas subrayados por pronombres?* 

Act 3. Vuelve a la lectura, lee bien el texto y coloca todos los pronombres subrayados en esta tabla según su función sintáctica.

	Pronombre	Objeto	Di-	Pronombre Objeto In-
	recto			directo
1ª persona singular				
2ª persona singular				
3ª persona singular				
1ª persona plural				
2ª persona plural				
3ª persona plural				

Dado que todos los pronombres no aparecen el texto, recuerda el resto de los pronombres de cursos anteriores y completa la tabla.

# Act 4. Exploremos los pronombres objeto directo

¿a que sustantivo está sustituyendo el pronombre las en el segundo párrafo del texto?

¿qué tipo de pronombre es? \_\_\_\_\_

¿qué pregunta le haces al verbo para averiguar el objeto directo?

**Posición de los pronombres objeto directo.** Viendo los ejemplos de pronombres en el texto. El pronombre de objeto directo se coloca ¿delante o detrás del verbo, o en ambas posiciones? Compara estas dos oraciones que aparecen en el texto

-Ela piensa que pasar la información de vecino a vecino es la forma más tradicional de transmitir**la.** -Rigoberta Menchú ha informado al mundo entero sobre las atrocidades ocurridas en Guatemala y quiere que todos **las** cuenten, **las** comenten, y **las** compartan

Explica con tus propias palabras en qué ocasiones el pronombre de objeto directo va colocado delante y en cuáles va colocado detrás.

Fíjate en estas dos oraciones

Rigoberta Menchú me parece una persona admirable, quiero conocerla. Rigoberta Menchú me parece una persona admirable, la quiero conocer. ¿cuándo es posible anteponer y también posponer los pronombres de objeto directo? Fíjate en esta oración

- El libro que escribió Rigoberta Menchú ya está en las librerías, si pasas por el Co-op por favor cómpralo

¿Qué forma verbal encontramos en cómpralo?

¿en qué ocasiones debe el pronombre de objeto directo ir pospuesto al verbo? Pero si yo digo, -Por favor no lo compres ahora, he escuchado que los descuentos empiezan después de las vacaciones

¿cuál es la posición del pronombre en esta oración y por qué?

Mis reglas: Pon un círculo en la opción adecuada.

Los pronombres de objeto directo siempre van *delante/detrás* del verbo excepto en los mandatos afirmativos/ verbos en presente.

C/F En las combinaciones de verbos conjugados con gerundios o infinitivos podemos anteponerlos al verbo conjugado o pegarlo al infinitivo o al gerundio.

Cuando los mandatos son *afirmativos/negativos* los pronombres van pospuestos al verbo, sin embargo, cuando los mandatos *afirmativos/negativos* los pronombres van antepuestos.

# Appendix B

Written assignment grading criteria.

Total points: 10 divided in the following categories

Student:\_\_\_\_\_

1st composition: \_\_\_/10

2nd com	position:	/ 10

Grammar (50%)			
High 5	Mid High 4	Mid Low 3	Low 2-0
High degree of control of a variety of grammat- ical structures, verbal tenses, verbal moods, and idioms; a few errors may occur, but very iso- lated.	Demonstrates a moder- ate degree of control of a variety of structures; some grammatical er- rors occur	Demonstrates a lack of control of a variety of structures; frequent grammatical errors oc- cur	Numerous grammatical errors that impede all or almost all communica- tion

Vocabulary (30%)

High 3	Mid High 2	Mid Low 1	Low 0
Rich, precise, idiomatic	Appropriate vocabulary	Limited vocabulary re-	Insufficient vocabulary
vocabulary adequate for	for the horror story, but	lated to horror stories;	related to a horror story;
the horror story; ease of	may have occasional in-	frequent errors such as	constant interference
expression	terference from another	making up words or	from another language
	language	code-switching	

# Discourse (20%)

High 2	Mid High 1.5	Mid Low 1	Mid Low 0
Excellent command of conventions of the writ- ten language (orthogra- phy, sentence structure, paragraphing, and punc- tuation)	Some errors in conven- tions of the written lan- guage (orthography: spelling, accent marks and punctuation; sen- tence structure) but they	Frequent errors in con- ventions of the written language (orthography: spelling, accent marks and punctuation; sen- tence structure)	Pervasive errors in con- ventions of the written language (orthography, sentence structure, para- graphing, and punctua- tion) may interfere with
Organization of the composition is adequate and it is in clear agree- ment with the short hor- ror story patterns. Register is appropriate	do not impede commu- nication Organization of the composition is fairly adequate and most of the story is in agree- ment with the short hor- ror story patterns.	Organization of the composition does not follow the short horror story organization pat- terns Register is inappropri- ate	written communication Organization of the composition does not follow any type of writ- ten pattern or estab- lished order. Register is inappropri-
	Register is usually ap- propriate		ate

For students: Additional information clarifying grading criteria:

# Gramática (50%):

Para obtener una nota del 5 la composición debe presentar un amplio rango de estructuras gramaticales que representen un alto nivel de sofisticación. Esto incluye una gran utilización de pronombres reflexivos, indirectos, y directos cuando sean necesarios, de preposiciones, pronombres de relativo y un correcto uso de los modos indicativo y subjuntivo.

# Vocabulario (30%):

Para obtener una nota del 3 la composición debe presentar un amplio rango de vocabulario, usando palabras sofisticadas y menos comunes en la lengua coloquial. Debes usar una considerable cantidad de adverbios, adjetivos descriptivos y de estructuras comparativas correctamente utilizadas.

#### Discurso (20%)

Para obtener una nota del 3 la composición debe presentar una organización textual compleja, con párrafos que presenten un idea central y sigan un orden lógico. La historia debe ser lógica y coherente, a la vez que interesante. La composición debe presentar un amplio rango de conectores bien usados y frases de transición. Lo crucial es que la historia fluya con facilidad.