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EFFECTIVENESS OF A DEDUCTIVE APPROACH AGAINST AN INDUCTIVE  
APPROACH IN TEACHING PASSIVE VOICE IN ENGLISH GRAMMAR

Tesis para optar al grado de Magíster en Lingüística con mención en Lengua Inglesa

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## **Abstract**

The present study aims at comparing the efficacy of a deductive approach against an inductive approach in the teaching of passive voice in English in a college context. The participants of this study were 36 second year psychology students from Universidad Austral de Chile in Puerto Montt, Chile. The students were divided into two groups that were taught the passive voice of simple past, simple present and simple future. One of the groups was taught using a deductive approach while the other was taught using an inductive approach. After the passive voice was taught a posttest was given in order to determine which approach proved more effective. The results seem to indicate a relevance of the deductive approach in the context studied but also of bias toward the deductive approach in the methodological design of the posttest. A re-evaluation of previous research indicated how the methodology used in certain inductive approaches can be affected by deduction.

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## **Chapter 1: Introduction**

For a teacher of foreign languages it is inevitable to make various decisions on how to teach a subject and what is considered the most effective way for students to learn. That goes for all the areas of second language teaching, whether it is grammar, teaching vocabulary or orthography. But one field where the choice of which method to use is especially important is the teaching of grammar. The quantity of opinions on which is the best way of teaching grammar is as numerous as the amount of different approaches.

In general, approaches to the teaching of grammar can be divided into direct and indirect ones, with the conflict between inductive and deductive methods being one of the most controversial issues. As a first and more basic definition it can be said that deduction is the learning process of starting with the general and then going to the specific, while induction is the opposite concept that goes from the specific to the general. For a better understanding of the use of the two concepts it may be helpful to have a look at Decoo's (1996) description of the deductive-inductive dichotomy for grammar teaching in the second language classroom. He states that deduction is a concept that consists in giving students a grammatical rule at the beginning of the learning process and have them apply it afterwards by using examples and exercises, while the use of an inductive approach is more complex. Here the degree of instruction is of special importance, for it can range from being a conscious and guided process to being a more natural process almost resembling first language acquisition. There are several studies that come to different results concerning the success of each approach in the teaching of grammar. As it will be pointed out in more detail in this work, there are empirical studies showing that deduction proved to be more effective, including the research of Mohammed & Jaber (2008), Erlam (2003), Robinson (1996) and Seliger (1975), while Herron & Tomasello (1992), Haight, Herron & Cole (2007) and Vogel, Herron, Cole & York (2011) came to the opposite conclusion and found inductive methods more effective than deductive ones when teaching grammar. Additionally, in Abraham (1985), Rosa & O'Neill (1999) and Shaffer (1989) no significant

differences between a deductive and an inductive approach in the teaching of grammar could be observed.

The main aim of the present study is to compare the effectiveness of a deductive and an inductive approach in teaching passive voice to second year psychology students at Universidad Austral de Chile in Puerto Montt. In order to evaluate the effects that each approach may have on students, the study will be conducted with two different groups using deductive and inductive methods respectively. In view of the individual characteristics of the students participating in the study, the deductive approach is expected to be more successful than the inductive one. Since there are no existing comparative studies on the effectiveness of deduction and induction in the area of English teaching at Chilean universities, this study may serve to see whether the effects of deductive and inductive approaches that have been observed in other countries with different populations can be replicated here. The study consists of a pretest, applied to gain understanding of the student's previous knowledge on the topic, three 75 minute treatment sessions on passive voice and a posttest, implemented to know the effects on learning that each teaching approach had on the students.

The present study has been organized in the following way. It first introduces the general and specific objectives. Then, there is a review of previous research on deductive and inductive approaches in the teaching of grammar. In the next chapter the methodology of the research will be outlined, leading to the hypotheses this study presents. Then, the data results received during the conduction of the investigation will be presented. Afterwards, such results will be thoroughly discussed. The last chapter of the thesis will be the conclusion, which considers the results and implications of the study and whether the initial hypotheses could be confirmed. Also, the limitations found throughout the research process and further research on the deduction-induction dichotomy will be included in the conclusion. In the appendices the material used for the study will be supplied.



## **1. 1. Objectives**

The study was guided by the following objectives.

### **1. 1. 1. General objective**

To determine if after having been taught passive voice deductively students get better results in a written test about the taught piece of grammar as compared to students who have been taught the same grammar teaching point inductively.

### **1. 1. 2. Specific objectives**

- To compare the results of a pretest and a posttest focused on passive voices.
- To compare the gains between the pretests and posttests between the deductive and inductive groups.

## Chapter 2: Literature review

Given that the core of the study is related to deduction and induction, it is necessary to first define both terms. Several authors have defined such concepts. Felder & Henriques (1995) state that "induction is a reasoning progression that proceeds from particulars (observations, measurements, data) to generalities (rules, laws, theories)" (p. 26). This vision is further elaborated by claiming that while "in inductive presentation of classroom material, one makes observations and infers governing or correlating principles; in deductive presentation one starts with axioms, principles, or rules, deduces consequences, and formulates applications" (Felder & Henriques, 1995, p. 26). Mohammed & Jaber (2008) declare that in a deductive approach the "teacher works from the general to the more specific, (which is) called informally a top down approach". On the other hand, in an inductive approach the teacher "goes from creating a situation and giving examples to the generalization where students should discover such generalization by themselves or with the teacher's help" (Mohammed & Jaber, 2008). Erlam (2003) states that "deductive instruction involves rule explanation by a teacher at the beginning of a lesson before students engage in language practice" (p. 242 & 243), while in an inductive approach "learners directly attend to particular forms and try to arrive at metalinguistic generalizations on their own" (Erlam, 2003, p. 243). Herron & Tomasello (1992) maintain the definition of deduction presented by the previous authors, but refine the definition of induction in what they call guided induction. According to Herron & Tomasello (1992), the teacher begins the class with an oral drill so that the students can induce the underlying grammatical pattern by themselves. Then the students' attention is focused on the main features of the grammatical pattern. To do this, the teacher asks the students to complete model sentences on the board with a structure analogous to the exercises practiced orally.

Decoo's (1996) understanding of the deduction-induction dichotomy is not completely in agreement with the previous definitions.

According to Decoo (1996), "deduction is understood as the process that goes from the general to the specific, from consciously formulated rules to the application in real language. It evokes the image of the grammar-based methods and of cognitive approaches. In contemporary terminology it is easily identified with learning." (p. 96). On the other hand, he defines induction as "the process that goes from the specific to the general, namely first the real language use, from which will "emerge" patterns and generalizations. It evokes natural language learning and a variety of direct methods. In contemporary terminology it is easily identified with acquisition." (Decoo, 1996, p. 96). In other words, in a deductive approach the grammatical rule is first presented and then it is practiced, while in an inductive approach the students first practice a particular grammatical through exercises and then verbalize the rule governing the exercises. At first sight it seems like these definitions leave no room for ambiguity, and while that seems to be the case for deduction, researchers seem to have difficulties agreeing on the operationalization of induction.

Decoo does not see the distinction between deduction and induction as an actual dichotomy; he sees it as a continuum with five marked brands in it. They are as follow:

Modality A - Actual deduction.

Modality B - Conscious induction as guided discovery.

Modality C - Induction leading to an explicit "summary of behavior".

Modality D - Subconscious induction on structured material.

Modality E - Subconscious induction on unstructured material.

As previously said, modality A is actual deduction. Decoo (1996) says that in this modality "the grammatical rule or pattern is explicitly stated at the beginning of the learning process and the students move into the application of this grammar (examples and exercises)" (p. 96).

Modality B is what one might think of as deduction the other way around. Here the students are first given several examples related to the structure that has to be practiced.

Then, the teacher asks a few key-questions aimed to help students discover and formulate the rule. Unlike modality A, in modality B the students formulate (verbally) the rule, not the teacher. Afterwards, the students are given exercises to practice the rule.

This type of induction is found in most studies comparing inductive and deductive approaches to the teaching grammar (Herron & Tomasello, 1992; Mohammed & Jaber, 2008; Robinson, 1996; Shaffer, 1989). This could be explained by the active role that this modality has. Active role means that students being taught through this modality are constantly forming and testing hypotheses for themselves, which is how Herron & Tomasello (1992) believe language should be taught.

Modality C distances from the active role that students have in modality B when trying to discover the grammatical rule they are being exposed to. Here, the students practice a determined structure intensively. As a result of such practice, the rule is "somehow" induced and internalized. Finally, at the end of the class the teacher summarizes the rule explicitly.

Even though this modality does not share the so-called "passive" role of modality A, it is not as active as modality B. In the latter, students are constantly looking for a grammatical rule and in doing this they interact among themselves and with the teacher. In modality C the students find themselves in a more behavioristic scenario and instead of actively look for a rule it is assumed that the rule is somehow induced and learned.

Modality D moves farther from modalities B and C. In this case, the students are in contact with language that has been structured to facilitate the inductive process. Advocates of this modality believe that the systematic repetition of the same pattern, aided by graded variations and drill and practice, will cause students to master a determined rule without conscious analysis.

It is important to note that in this modality "the learning process will not make use of explicitly formulated grammar" (Decoo, 1996, p. 97). Although this modality is not necessarily less effective than any other, it does require more time than modalities A and B because the abstractions and generalizations are left to the "subconscious capabilities" of the students (Decoo, 1996). Unlike the following modality, in modality D the language material is structured in a way that facilitates learning.

Finally, modality E has practically no kind of instruction at all. This is the closest modality to actual acquisition. In this modality "only intense language practice is given, on the basis of authentic input, without any linguistic structuring or manipulation. "Generalizations" will come naturally, comparable to first language acquisition." (Decoo, 1996, p. 97). This modality requires more time than any other, especially if the students have a basic level of proficiency in the TL, because the input is not structured in a way that facilitates students' learning.

Decoo's modalities are greatly helpful and clarifying because while there is a fair amount of studies regarding the deduction-induction dichotomy, authors do not always view induction in the same way. For example, Erlam (2003) used an inductive approach in which students were not told that there were rules governing the grammatical rule they were practicing, therefore, they were not explicitly told to find any grammatical rules. However, the students were encouraged to tell their classmates why determined exercises were grammatical or ungrammatical. Mohammed & Jaber (2008) applied an inductive method in which the students were given examples and then were encouraged to induce the rules by themselves. Robinson (1996) asked students to induce the rule for themselves as well. In Abraham (1985) the students in the inductive group were given more exercises than the deductive group but the former did not have to verbalize the rule governing the grammar structure. In Rosa & O'Neill (1999) the students were told to ask for the rule during the presentation. Shaffer (1989) asked students to verbalize the rule after the presentation. In Herron & Tomasello (1992) the students were not told to verbalize the grammatical rule. Only Haight, Herron & Cole (2007) and Vogel, Herron, Cole & York

(2011) used the same inductive approach, which was modeled based on the guided induction model seen in Herron & Tomasello (1992) and the PACE model.

According to Haight, Herron & Cole (2007) the PACE model is taught through targeted structures that are presented naturally in a text. They go into detail by stating that:

More specifically, the P in PACE stands for the presentation of the structure through a story or contextualized examples. The A stands for attention; once the material is presented, the instructor calls learners' attention to a particular form through a practice session of examples. The C stands for a coconstruction phase in which both the instructor and the learners engage in a discussion seeking to develop an explanation or generalization about the form in question. Finally, the E stands for extension activity, which provides the learners with an opportunity to use the structure once the rule has been discovered. (Haight, Herron & Cole, 2007, p. 289)

In conclusion, the fact that researchers have applied different inductive approaches does not diminish the validity and/or the importance of such studies, but does affect the way in which these studies may support each other. Although there are studies which have similar results and favor the same approach, the methodologies differ, as will be discussed in the next section.

## **2. 1. Diversity in deductive-inductive studies: difficulties in the generalization of results**

Although it has been stated before that there is a considerable amount of literature regarding inductive and deductive approaches to the teaching of grammar, these studies are quite conflicting.

First of all, the results of these studies are far from showing a clear tendency in favor of the efficacy of either a deductive or inductive approach. Mohammed & Jaber

(2008), Erlam (2003), Robinson (1996) and Seliger (1975) concluded that the deductive approach was more effective when teaching a specific piece of grammar. On the other hand, Herron & Tomasello (1992), Haight, Herron & Cole (2007) and Vogel, Herron, Cole & York (2011) stated that the inductive approach proved more successful than the deductive approach. Finally, Abraham (1985), Rosa & O'Neill (1999) and Shaffer (1989) found no significant differences between an inductive and a deductive approach. Apart from the differences regarding the results of the studies, the participants of the studies have been considerably heterogeneous in several aspects.

While most studies have taken place in college, Erlam (2003) and Shaffer (1989) carried out their research with high school students. These results point to the importance of another contrast among the participants: subjects' ages. Erlam (2003) worked with students who were 14 years old. Mohammed & Jaber (2008) state that the ages of their participants ranged from 18 to 20 years of age. Robinson (1996) worked with people whose ages ranged from 19 to 34 years. Herron & Tomasello (1992), Haight, Herron & Cole (2007) and Vogel, Herron, Cole & York (2011) state that their participants were of a similar age. Although they do not go into detail about this, they report that the participants were college students. Abraham (1985) and Rosa & O'Neill (1999) mention that the participants in their studies are university students, but the participants' ages are not revealed. Shaffer (1989) worked with high school students whose ages ranged from 13 to 18 years. It is crucial to take into account the participants' ages because they might affect directly the efficacy of the approach (deductive or inductive).

According to Rivers (1975) "the use of the deductive approach is most useful for mature students or for adult students in intensive courses, and the inductive approach is more appropriate for young language learners" (as cited in Mohammed & Jaber, 2008). The problem with the aforementioned statement is that Rivers does not specify what ages are considered young or adult. Most of the studies regarding deductive and inductive approaches to the teaching of grammar take place in university, with subjects being in average in their early twenties, which results conflicting because it is troubling to state

whether a person in their early twenties is young or adult. There are two studies, Erlam (2003) and Shaffer (1989), which were carried out in high school, so in those cases one may reasonably claim that the subjects were young learners. Nevertheless, there is a disagreeing situation: Rivers' claims about the appropriateness of a deductive and inductive approach do not relate to the studies carried out with young learners. Both in Shaffer (1989) and in Erlam (2003) the use of an inductive approach should have provided better results, but that was not the case. In Shaffer (1989) no significant differences were found between the approaches and in Erlam (2003) the deductive approach actually provided significantly better results than the inductive approach. Apart from the results of the studies and the participants' ages there is another factor that is worth taking into account: the expected level of accuracy that the participants of the studies had with the TL before the beginning of the treatment.

In Mohammed & Jaber (2008) the participants consisted of students taking an elementary English course, a pre-intermediate English course and an intermediate English course. It is important to notice that despite these expected differences in proficiency, they were randomly assigned to either the deductive or inductive group. All the participants were native speakers of Arabic. In Robinson (1996) the participants were part of intermediate level ESL courses. It is important to mention that all the participants claimed to have studied English during primary/high school for 6-8 years. 94 subjects were native speakers of Japanese, 5 subjects were native speakers of Korean and 5 subjects were native speakers of Mandarin Chinese. In Erlam (2003) the participants were finishing their second year of instruction in French. Not all the subjects were native speakers of English, but those who had a different L1 had a level of English which was good enough to exempt them from additional English classes. The differences in the expected level of accuracy of the participants in studies in which the deductive approaches proved more effective were also present in the studies in which the inductive approaches provided better results.

In Herron & Tomasello (1992) the participants were taking an elementary French course. The majority of the participants had not studied French before, others had studied



French for a year and 3 participants had studied French for 2 years in high school. All the students were native speakers of English. In Haight, Herron & Cole (2007) the participants were part of a pre-intermediate French course. All the subjects were native speakers of English. In Vogel, Herron, Cole & York (2011) the participants were taking an intermediate French course. All the students were native speakers of English. In Abraham (1985) the subjects of the study were part of a high intermediate course of English. However, the participants had different linguistics backgrounds: 22 students were native speakers of Spanish, 14 were native speakers of Indonesian, 6 were native speakers of Arabic and 6 were native speakers of Chinese. In Rosa & O'Neill (1999) the students were in the fourth semester of a Spanish course. They were all native speakers of English. In Shaffer (1989) the participants' ages ranged from 13 to 18, which is why they were expected to have different proficiency levels. After being assessed, the students were divided into beginning and intermediate classes. All the participants were native speakers of English. Since levels of proficiency are relevant, the fact that the levels of proficiency in these studies are diverse could be an indicator of the efficacy of either a deductive or an inductive approach.

According to Decoo (1996): "there is a tendency to state that simple, obvious structures can best be learned through an inductive approach, while complex structures are best explained from the onset through a deductive approach." (p. 107). So, it might be argued that a student that has just begun learning a language and, therefore, is mostly in contact with relatively simple structures would benefit from an inductive approach. On the other hand, a student with an intermediate or advanced level of proficiency, who is expected to deal with complex structures most of the time, would benefit from a deductive approach. However, categorizing structures as simple or complex might be problematic.

Fischer (1979) refines the simple-complex problem by stating that the learning transfer principle suggests that an inductive approach should be applied when the L2 rule is similar or dissimilar but simpler than the L1 rule. On the other hand, a deductive approach should be used when the L2 rule is dissimilar, equally complex or more difficult than the L1 rule.

Fischer then exemplifies the deductive-inductive distinction based on a native speaker of English from the US learning French. Some of the structures that are similar or dissimilar but simpler in the foreign language than in the native language are: relative clause formation, the immediate future tense, and sentential embeddings (Fischer, 1975). On the other hand, some of the structures that are dissimilar and equally or more difficult in the foreign language are: pronoun replacement, the subjunctive, the distribution of prenominal and postnominal adjectives and the contrast between the imperfect and the normal past tenses (Fischer, 1975). Unfortunately, one structure mentioned by Fischer has yielded unexpected results.

The problematic structure is pronoun replacement. Erlam (2003) taught direct object pronouns in French to native speakers of English. Her results were in agreement with Fischer's claims about the choice of approach: the students that were taught deductively obtained a significantly better score than those who were taught inductively. However, in Herron & Tomasello (1992) this outcome changed completely. They also taught French to native speakers of English and one of the ten structures that they taught was direct object pronouns. However, in this case the inductive group had a significantly better result than the deductive group, which runs opposite to the claims made by Fischer. Therefore, it could be argued that although Fischer's (1975) learning transfer principle may account for the efficacy of a deductive or inductive approach, there must be other factors that explain the efficacy of a particular approach.

Another point that affects directly the generalization of results in the deduction-induction dichotomy is the almost non-existing replication of grammar structures among studies. As figure 1 shows, only one structure has been taught in more than one study, namely direct object pronouns.

Grammar structure	Study in which was covered
Passive voice	Mohammed & Jaber (2008)
Direct object pronouns	Erlam (2003) & Herron & Tomasello (1992)
Subject + verb + location phrase	Robinson (1996)
Location phrase + verb + subject	Robinson (1996)
Location phrase + subject + verb	Robinson (1996)
Subject + verb + time phrase	Robinson (1996)
Time phrase + subject + verb	Robinson (1996)
Sentences containing two conjoined clauses that contrast the locations of two things	Robinson (1996)
Sentences with singular subjects and two forms of the verb be	Robinson (1996)
Sentences with plural subjects, requiring agreement with a plural form of the main verb be	Robinson (1996)
Sentences with singular subjects and lexical main verbs	Robinson (1996)
Sentences with plural subjects and lexical main verbs	Robinson (1996)
Contraction of <i>à</i> + <i>le</i> used as a preposition	Herron & Tomasello (1992)
Plural indefinite article	Herron & Tomasello (1992)
<i>Pouvoir</i> (to be able to, can) + infinitive	Herron & Tomasello (1992)
Replacement of <i>un(e)</i> by <i>de</i> after certain negated verbs	Herron & Tomasello (1992)
Comparative	Herron & Tomasello (1992)
Partitive article	Herron & Tomasello (1992)
Use of the preposition <i>à</i> when referring to playing a game	Herron & Tomasello (1992)
Formation of the imperative with an accompanying pronoun	Herron & Tomasello (1992)
Interrogative pronoun	Herron & Tomasello (1992)
Adverbial pronoun <i>en</i> (some, any)	Haight, Herron & Cole (2007)
Adverbial pronoun <i>y</i> (there)	Haight, Herron & Cole (2007)
Indirect object pronouns	Haight, Herron & Cole (2007)
Imperative + pronouns	Haight, Herron & Cole (2007)
Verb with <i>à</i> + indirect object <i>plaire</i> (to please/be pleasing to)	Haight, Herron & Cole (2007)
Relative pronouns	Haight, Herron & Cole (2007)
Demonstrative pronouns	Haight, Herron & Cole (2007)
Partitive articles	Haight, Herron & Cole (2007)
<i>C'est</i> vs. <i>Il est</i>	Vogel, Herron, Cole & York (2011)

Past tense with auxiliaries <i>être</i> or <i>avoir</i>	Vogel, Herron, Cole & York (2011)
Direct/indirect object placement	Vogel, Herron, Cole & York (2011)
Superlative	Vogel, Herron, Cole & York (2011)
Relative pronoun <i>dont</i>	Vogel, Herron, Cole & York (2011)
Relative pronouns <i>ce qui/ce que</i>	Vogel, Herron, Cole & York (2011)
Relative pronoun <i>lequel</i>	Vogel, Herron, Cole & York (2011)
Causative <i>faire</i>	Vogel, Herron, Cole & York (2011)
Gerundive	Vogel, Herron, Cole & York (2011)
Subjunctive vs. infinitive	Vogel, Herron, Cole & York (2011)
Participial phrases	Abraham (1985)
Contrary-to-fact conditional sentences	Rosa & O'Neill (1999)
<i>Savoir</i> and <i>connaître</i>	Shaffer (1989)
<i>Ser</i> and <i>estar</i> , <i>conocer</i> and <i>saber</i>	Shaffer (1989)
Imperfect tense and the subjunctive mood (both in French and Spanish)	Shaffer (1989)

Figure 1: Grammar structures and the studies in which they were covered.

Given that almost none of the grammatical structures seen in these studies have been replicated, it is difficult to determine how generalizable the results of the studies are.

In conclusion, even though a considerable amount of studies on the efficacy of an inductive or deductive approach when teaching grammar have been carried out, each study differs in so many aspects from each other that generalization seems difficult. However, in Herron & Tomasello (1992), Haight, Herron & Cole (2007) and Vogel, Herron, Cole & York (2011), studies in which the subjects being taught inductively obtained better results than their deductive counterpart, the TL was French, the participants were native speakers of English from the US and all of them were college students. So, it might be reasonable to come to the generalization that when teaching a romance language to college students from the US, an inductive approach is expected to show better results.

## 2. 2. Other factors affecting deduction-induction efficacy

Age, proficiency level in the TL and similarity of the native language with the TL seem to be the most salient aspects that could impact the efficacy of induction or induction. Nevertheless, one factor that has practically not been addressed in the corresponding

literature is what Decoo calls "willingness to practice and play communication" (1996, p. 109). This means that if a student is not willing to practice a determined L2, the learning process will certainly be more difficult. This will happen whether the L2 is being taught inductively or deductively. However, students who are unwilling to practice the L2 will be more affected by an inductive approach than by a deductive approach. The reason is that in an inductive approach, students have a very active role; they have to ask, construct and participate in the learning process instead of being receivers of external stimuli (Vogel, Herron, Cole & York, 2011). Herron and Tomasello (1992) state that "the active engagement of the students during the oral practice exercises and during the completion of the model sentences - in other words, the processing of linguistic data and the testing of hypotheses - is important for the construction of the target language" (as cited in Vogel, Herron, Cole & York, 2011, p. 367). In other words, for an inductive approach to be effective, students must be willing to practice and play communication.

Even though it is difficult to determine how willing to practice a language a student is, it may be possible to predict this in some cases. A student that is voluntarily taking a program to learn a foreign language might not necessarily have the same willingness to communicate as somebody who is learning a foreign language only because that course is part of a different program. For example, a Chilean student who wants to be a teacher of English will probably be very willing to actively play and communicate in English. However, a Chilean student of engineering who has two compulsory semesters of English might not have the same attitude towards English. In other words, it is reasonable to expect higher levels of participation from individuals who voluntarily decided to learn a language than from those who are only learning a language because it is a requisite to acquire something different.

Most of the studies mentioned here were carried out in college as part of language programs and, although it is not always mentioned, most participants participate of such language programs voluntarily. Only two studies were implemented in high school and none of these studies provided a significant difference in favor of the inductive approach.

One could argue that being school a place in which students many times have to learn subjects in which they are not willing to participate, this might (among other factors) have prevented the inductive approach from succeeding.

It seems reasonable to believe that, apart from willingness to communicate, students' preference for a determined approach could have an impact on the efficacy of a determined approach. However, the evidence does not support this claim. Vogel, Herron, Cole & York (2011) asked the participants of their study which approach they preferred, inductive or deductive. Eighty percent of the participants (32 students) claimed that they preferred the deductive method, fifteen percent of the participants (6 students) stated that they preferred the inductive method and five percent of the participants (2 students) reported that they did not have a particular preference. Surprisingly, the participants that preferred the deductive approach performed better with the inductive approach. Therefore, preference for a particular approach does not seem to be a factor affecting the efficacy of deduction or induction.

### **2. 3. Conclusion to the literature review**

The literature reviewed in this section indicates how both deductive and inductive approaches can have successful results in the teaching of grammar and what the characteristics of the studies favoring a determined approach are. However, the high level of differences among studies complicates any attempts on generalizing results.

This thesis reports a study conducted with the aim of finding out if a deductive approach provides better results than an inductive approach in a particular local environment. This will be done by comparing the gains that a deductive and an inductive group had in their posttests.

Given that the grammatical structures being taught are the same, the results of this study will be compared to the ones of Mohammed & Jaber (2008) to state whether the

results of the latter can be replicated. Also, Decoo's (1996) and Fischer's (1975) notions on complexity and Rivers' (1979) notion on learner maturity will be discussed.

The methodology of the study is described in the following chapter.

## **Chapter 3: Methodology**

A quantitative approach was used to fulfill the research objectives previously stated. The methodological design is quasi-experimental as the groups were not assigned randomly. The participants in this study could not be randomly assigned to their groups due to schedule problems. Given that the deductive and inductive groups had classes at different times, the members of the deductive group could not have been in the inductive group, and viceversa, because other classes were taught during those times. A control group could not be created because the author of this study only had access to two groups of students.

### **3. 1. Participants and setting**

The present study took place at Universidad Austral de Chile in Puerto Montt. Second year psychology students were the participants of the study. The ages of the students ranged from 19 years of age to 21 years of age. Even though there were few exceptions, most students had a very basic proficiency level of English. All of them were native speakers of Spanish. At the time of the study, they were taking a compulsory English course (English II). The students had 6 pedagogical hours (4 hours and 30 minutes) of English instruction per week. This course lasted one semester and it was preceded by "English I", which also lasted one semester and was dictated the previous semester. "English II" is an elementary course aimed at developing skills to comprehend oral and written texts in English related to psychology.

### **3. 2. Data collection**

#### **3. 2. 1. Grouping criteria**

The participants of this study were divided into two groups. Before the implementation of the study the students had already been grouped by the university. This was done due to the apparent homogeneity of the groups; all the students had passed



"English I" so according to the director of the English department their proficiency level was relatively similar. In order to make sure the level of English of both groups was similar, a one-to-one correspondence method was used. This method will be explained later.

One of the groups was taught the passive voice of simple past, simple present and simple future inductively and the other deductively. Henceforth, these groups will be called inductive group and deductive group respectively. Given that the groups were created before the implementation of this study, the students were given a pretest to establish their level of proficiency in the command of passive voice. After the students took the pretest, a one-to-one correspondence sampling method was used to ensure that the students in both groups possessed comparable skills. In a one-to-one correspondence method the scores of a particular group are matched individually to the scores of another group. The following scenario exemplifies this method.

There are two groups, A and B. Each group has 5 students. The scores of the students in group A are: 1, 1, 3, 7 and 9. By applying the one-to-one correspondence method one has to be able to match the scores the students in group B obtained with the scores the students in group A had. The scores in group B are: 1, 1, 4, 7 and 9. In this case, almost all the scores in group A have a perfect match in group B. Although in group A there is a student with a score of 3 and in group B a student with a score of 4, the difference is not significant, so in this case the one-to-one correspondence method does not show disparities between groups A and B.

This method was chosen because it focuses on finding a match between groups regardless of the differences in scores within a particular group. In March 2014, all the students taking "English I" were divided into four groups according to their proficiency level. However, the students that took "English II" were put into new groups which were created randomly, so varying proficiency levels in both groups might have been expected. By using the one-to-one correspondence method problems such as extreme standard

deviations were tackled. If a student had obtained a score in his/her pretest that could not have been matched in the other group, the closest score in the other group would have been used.

The deductive group had 22 students and the inductive group 21. Although all 43 students participated in the study and took the pretest, not all of them were considered part of the study. Those students who did not attend all the sessions of the study were not considered part of the study. Based on the amount of participants seen on Takimoto (2008) and Erlam (2003), each group required a minimum of 18 participants. Both the pre and posttests were taken by all the members of each group. However, there were 3 students in the deductive group and 2 in the inductive group that did not attend all the intervention sessions, so they were not considered part of the study. These five students were left out of the study because, given that they did not attend all the treatment sessions, they did not receive the instruction (deductive or inductive) which is key to the study and which is the basis of what was tested in the posttest. Also, during the course of the study there were 2 students (one in each group) who admitted to have studied English for several years, so they were not considered part of the study either. These 2 students were left out because, given that they had studied English for so long, it was probable that they had already been taught passive voice. The absence of these 7 students resulted in each group having a total of 18 participants.

### **3. 2. 2. Tools**

Data was collected through a pretest and a posttest. A three-session intervention took place between the pretest and the posttest.

The pretest was a written test composed of 2 items. The first item had 12 exercises. 4 exercises were about passive voice in simple past, 4 about passive voice in simple present and 4 about passive voice in simple future. In each exercise the students were given a sentence in active voice which they had to write in passive voice. The second item had 12

exercises as well. The exercises in this item were sentences in passive voice written incorrectly. The students had to identify the mistakes and correct them. 4 exercises were related to passive voice in simple past, 4 to passive voice in simple present and 4 to passive voice in simple future. The pretest had 24 points in total (see appendix A for the actual test). Students were given 1 point per each correct exercise. In case there was an exercise in which students had to correct more than one mistake, they were required to correct all the mistakes to be given 1 point. For example, in the sentence "my homework was ate be my dog", "ate" should be replaced by "eaten" and "be" by "by". If only one of these mistakes had been corrected, the student would not have been given any points. After the students took the pretest, their scores were compared using a one-to-one correspondence method.

The intervention consisted of 3 sessions. Each session lasted 75 minutes. Three contents were taught: the passive voice of simple past, the passive voice of simple present and the passive voice of simple future (in order to see the lesson plans of both groups go to appendices C and D). Each of these contents was taught during an entire session. It has already been stated that each group was taught differently (one was taught deductively and the other inductively). However, the approach used in each group was consistent throughout the 3 sessions. Before explaining the intervention sessions, it is important to explain why the deductive and inductive classes lasted the same.

It seems fair to believe that in order to be effective, an inductive teaching approach will require more time than a deductive teaching approach. However, the literature reviewed in chapter 2 indicates the opposite. In Herron & Tomasello (1992) the inductive group was not given more time than the deductive group and it got a significantly higher score than the deductive group. In Haight, Herron & Cole (2007) and Vogel, Herron, Cole & York (2011) the inductive groups also were given the same time as the deductive groups and obtained scores significantly higher than the deductive groups, but due to the verbalization of the grammatical rule by the inductive groups in these two studies, these inductive approaches cannot be considered as being truly inductive. Besides, if one attempted to give an inductive group more time, there would be a fundamental problem:

how much more time should be given? There is not a conversion chart to know how many more minutes should be given to an inductive group so that the teaching time they have equals the teaching time of a deductive group. Finally, if the content that is being taught is salient enough, the students in the inductive group should not need so much time to induce the concept. It was decided therefore that the inductive approach used in this study did not require more time than the deductive approach.

At the beginning of each intervention session, the deductive group was taught the grammatical rule behind the concept being practiced during that session. This was done explicitly. The teacher told the students what passive voice was, when to use it and how to transform sentences written in active voice to passive voice. Once the rule was explicitly stated by the teacher, it was written on the board and it remained there for the rest of the session. After the teacher explained the rule, he provided examples of active and passive voice. Later, the students were given a handout in which they had two types of exercises: transform sentences from active to passive voice and correct sentences that were incorrectly written in passive voice. Once the students finished transforming sentences into passive voice, the teacher checked the students' answers by asking the students to tell the class what their answers were. Afterwards, students had to correct sentences that were incorrectly written in passive voice. Finally, once the students finished correcting the sentences, the teacher checked the students' answers by asking the students to tell the class what their answers were.

The instruction in the inductive group began very differently. In the deductive group, the teacher began the class by explaining a grammatical rule, but in the inductive group there was no instruction. The teacher started his class by providing examples of active and passive voice. After that, he gave the students the same handout that the students in the deductive group were given. Just like in the deductive group, the teacher checked the students' answers by asking students to tell the class what their answers were. Even though the teacher did not explain the grammatical rule behind passive voice, he helped the students by answering their questions and guiding them towards the discovery of the rule.

This last part is very important: the students were not given the rule, but they were encouraged to discover the rule by themselves. The goal of this approach was that at the end of each session the students could write on the board the grammatical rule present in the exercises (as seen in Haight, Herron & Cole, 2007; Robinson, 1996; Shaffer, 1989; Vogel, Herron, Cole & York, 2011). Finally, while the contents slightly changed during each session (passive voice in simple past, simple present and simple future), the methodology was always the same. The lesson plans used for each intervention session for both the deductive and inductive groups can be found in appendices C and D. It is important to mention that I was the instructor in both the deductive and inductive groups.

After the intervention was carried out, a posttest was given. The posttest had the same format as the pretest, only the exercises changed.

The pretest was given during regular class time. The students had 45 minutes to take the test. Given that neither the deductive group nor the inductive group had classes at the same time, I administered the pretest in both groups.

Once the pretests were applied, they were assigned a score based on the amount of correct answers. In total, there were 24 exercises in the pretest. Each correct exercise was worth one point so 24 points was the maximum score in the pretest. The same procedure was applied with the posttest.

### **3. 3. Data analysis**

In order to determine which approach resulted in better results two analyses were carried out:

- A comparison between the scores of the pretests and the posttests within the deductive and inductive group.

- A comparison of the posttests scores between the deductive and the inductive group.

The guiding hypothesis of the first analysis was the following: after carrying the treatment sessions both groups increase the scores obtained in their posttests in relation to the scores obtained in their pretests.

The guiding hypothesis of the second analysis was the following: after carrying the treatment sessions the deductive group shows higher gains in the posttest than the inductive group.

In the first analysis, the scores obtained in the pretest and posttest were compared. This was done once for each group. The difference between scores was interpreted as an indicator of students' learning of passive voice in simple past, simple present and simple future. In order to determine whether the scores of the posttest were significantly higher than the scores of the pretest, a Wilcoxon Signed-Ranks Test for related samples was applied.

In the second analysis, the gains of the deductive and inductive groups were compared. In order to determine whether the gains of the deductive group were significantly higher than the gains of the inductive group a Mann Whitney U Test for independent samples was applied.

In order to know in which sections of passive voice the students were making the majority of mistakes, both items of the posttest were analyzed and classified in different sections. This was done to make sure that what the posttest was assessing was passive voice and not other grammatical structures. Passive voice is a structure that requires the knowledge of different pieces of grammar. For example, if one were to transform the sentence "the terrorists killed 3 people", 4 things must be known:

1. One has to know that the object of the sentence in active voice (3 people) becomes

- the subject of the sentence in passive voice.
2. One must know that in the sentence in passive voice, after the subject the verb "to be" has to be used. Besides, one must know how to conjugate it correctly. In the case of "the terrorists killed 3 people" the verb "to be" is plural and must be used in simple past (were).
  3. One should also know that in the sentence in passive voice, the past participle of the verb in the sentence in active voice (killed) must be used after the verb "to be".
  4. Finally, one has to know that after the past participle "by" is used followed by the subject of the sentence in active voice (the terrorists).

The example that has just been given is simple and does not give the students too many chances to make mistakes. However, by simply changing some words the complexity of the sentence can be increased. If the sentence in active voice were "she killed him", the following mistakes could happen:

- The students might not know that after moving "him" to the subject it changes to "he".
- Also, the students might not know that when moving "she" to the by phrase it changes to "her".

Therefore, if a student were familiar with the four points regarding the transformation into passive voice of "the terrorists killed 3 people", he or she would not have problems when faced to sentences of a similar structure. However, if that same student were not familiar with object pronouns and with how they must be changed in passive voice, it is clear that he or she would have problems with transforming sentences that have object pronouns. In a case like this, it would not be fair to claim that the student does not know how to use passive voice because the problem would not be related to passive voice as a whole; it would only be related to object pronouns. In order to avoid these kinds of problems, the following measures were taken:

- No object pronouns were used. All the objects of the sentences in active voice were nouns.
- Short subjects were used and the nouns in the subject were words that students were familiar with. This was done in order to avoid agreement problems. For example, if a student were faced with an unfamiliar noun, he or she could not know whether to use "is" or "are" in the passive voice.
- The students were informed of the verbs that were going to be used during the study. This was done in order to prevent students from not knowing the past participle of such verbs. Besides, the students were familiar with the verbs used in the study because earlier in the semester, when they were taught simple past and present perfect, the same verbs were constantly used.
- The use of adverbs was reduced to a minimum to avoid confusion.
- Sentences in general were short and did not have complicated words.

In the first item of the posttest the mistakes were analyzed based on 6 categories: wrong verb to be, wrong placement or omission of by, wrong past participle, wrong subject, omission of sentence and omission of not. To avoid confusion, these categories are now explained.

- Wrong verb to be: this category includes mistakes of agreement (e.g. the use of "is" instead of "are"), wrong tense (e. g. "was" instead of "is"), the omission of the verb to be and mistakes related to the addition of a wrong auxiliary verb (e.g. "do not" instead of "are not").
- Wrong placement or omission of by: if "by" was placed erroneously or if it was omitted, that mistake was included in this category.
- Wrong past participle: this category includes the mistakes in which the form of the past participle was not correct.
- Wrong subject: this category includes the mistakes in which the object of the original sentence in active voice was altered after being moved to the subject of the sentence in passive voice. For example, in the sentence "Mary loves these toys" the



passive voice should be "these toys are loved by Mary". If in the passive voice the subject were different (e. g. this toys, these toy) that mistake would be in this category.

- Omission of sentence: if a student was not able to transform a sentence from active to passive voice, that was considered a mistake of omission of sentence.
- Omission of not: this category includes the mistakes in which "not" was present in the sentence in active voice but was omitted in the sentence in passive voice.

In the second item of the posttest the mistakes were analyzed based on 5 categories: wrong verb to be, wrong placement or omission of by, wrong past participle, incohesive subject and omission of sentence. Given that in the second item the sentences in passive voice were already given, the mistakes related to "wrong verb to be" were not divided in sub-categories. The category "incohesive subject" is very similar to the category "wrong subject" of the first item. The only difference is that in the first item the subject of the sentence in passive voice could have been mistakenly recognized or could have had cohesion problems, while in the second item, given that the subject of the sentence in passive was already stated, the only problem was that some students transformed the previously cohesive subject into an incohesive subject. The definitions for the rest of the categories are the same as the previous item.

In the following chapter, the results of the present study will be stated.

## Chapter 4: Results

As stated in chapter 1, the present work had two specific objectives: to determine whether the participants of this study obtained better results in the posttest than in the pretest and to compare the results of the deductive group's posttests with the inductive group's posttests to determine which group showed more gains. Each objective was addressed separately. Besides, in order to know which parts of passive voice resulted more problematic to the students, the mistakes made by both groups in their posttests were classified and quantified.

### 4. 1. Pretest - posttest gains

In order to determine whether the participants of both the deductive and inductive groups obtained better scores in their posttests compared to their pretests, a Wilcoxon Signed-Ranks Test was applied to the pretests and posttests of each group. In the deductive group, the test indicated that the mean posttest scores, Mean = 16.94, were statistically significantly higher than the mean pretest scores, Mean = 0.89,  $Z = -3.73$ ,  $p < .000$ . In the inductive group, a Wilcoxon Signed Ranks Test indicated that the mean posttest scores, Mean = 14.83, were statistically significantly higher than the mean pretest scores, Mean = 1.17,  $Z = -3.73$ ,  $p < .000$ . This indicates that the students in both groups had significantly better results in their posttests in comparison to their pretests. Therefore, the hypothesis of the first analysis stated in section 3.3 is confirmed. Table 1 presents these results.

	Pretest n = 18		Posttest n = 18		Wilcoxon Signed- Ranks Test	
	Mean	S.D.	Mean	S.D.	Z	p
Deductive group	0.89	2.56	16.94	5.64	-3.73	.000
Inductive group	1.17	3.09	14.83	4.22	-3.73	.000

Table 1: Pretest - posttest gains for deductive and inductive groups.

Figures 2 and 3 show the scores the students, both in the deductive and inductive groups, had in their pre and posttests.

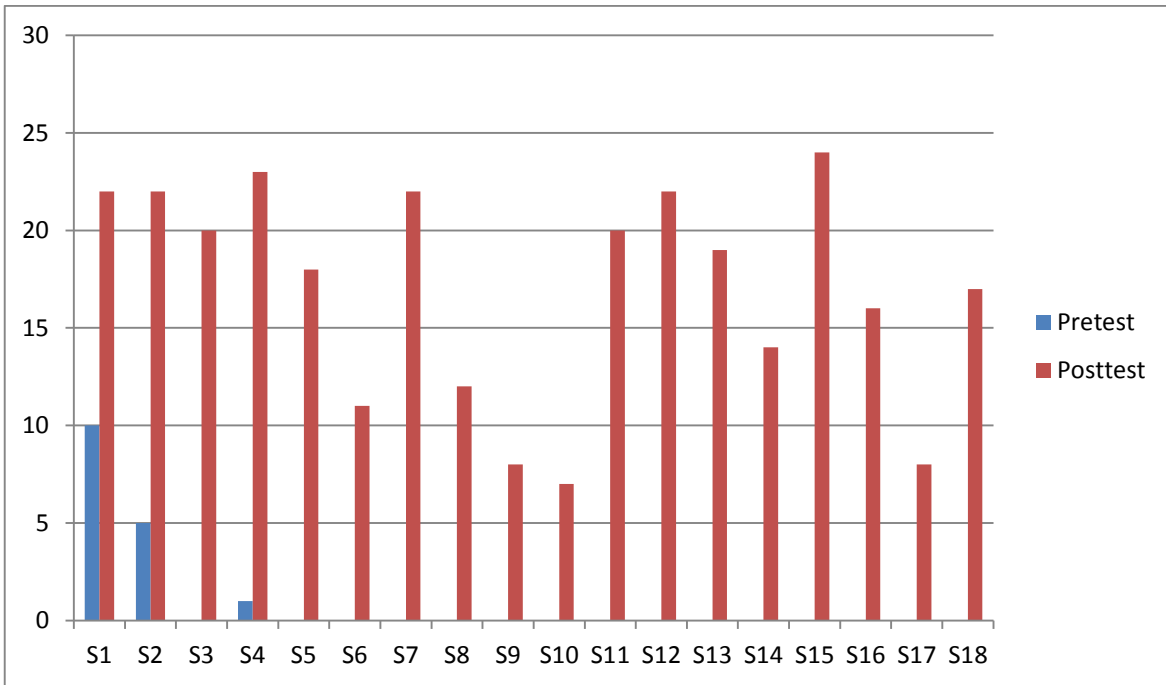


Figure 2: Deductive group's pre and posttests' scores.

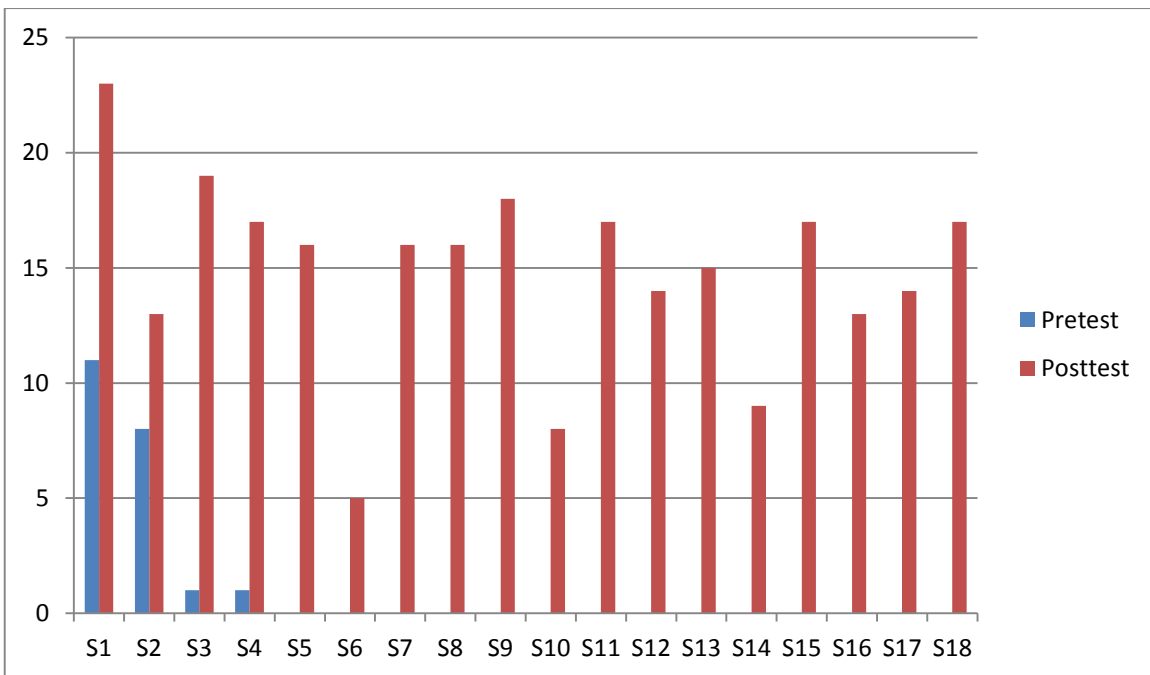


Figure 3: Inductive group's pre and posttests' scores.

The results seen in figures 1 and 2 do not only indicate that both groups obtained statistically significantly higher scores in their posttests compared to their pretests, but they also show how most of the students moved from not knowing anything about passive voice to getting high scores when tested in the use of passive voice.

#### 4. 2. Posttest gains between deductive and inductive groups

In order to determine whether the results of the deductive group's posttests were better than the inductive group's, a Mann Whitney U Test was applied. This test indicated that the gains were significantly greater for the deductive group (Mean = 16.06) than for the inductive group (Mean = 13.67),  $U = 96$ ,  $p = 0.36$ . Therefore, the hypothesis of the second analysis stated in section 3.3 is confirmed. Table 2 presents these results.

	Deductive group n = 18		Inductive group n = 18		Mann Whitney U Test	
	Mean	S.D.	Mean	S.D.	U	p
Gains in posttest	16.06	5.36	13.67	4.21	96	0.36

Table 2: Differences in gains between deductive and inductive groups.

The data then evidences that the group that showed more gains in the posttest was the deductive group.

#### 4. 3. Classification of posttest mistakes by the deductive group

Given that the posttests assessed the students' knowledge of passive voice, the mistakes observed in the posttests were classified under different categories to analyze the students' understanding of passive voice. 3 tables were created: the first showing the mistakes made in the first item of the posttest, the second presenting the sub-categories of the category "wrong verb to be" seen in the first item and the last exhibiting the mistakes made in the second item of the posttest. In order to see the tables in detail, see appendix F.

	<b>Wrong verb to be</b>	<b>Omission or wrong placement of by</b>	<b>Wrong past participle</b>	<b>Wrong subject</b>	<b>Omission of sentence</b>	<b>Omission of not</b>	<b>Total</b>
<b>Number of mistakes</b>	46	4	21	4	0	3	78

Table 3: Classification and number of mistakes made by the deductive group in the first item of the posttest.

	<b>Agreement</b>	<b>Wrong tense</b>	<b>Omission of verb to be</b>	<b>Addition of wrong auxiliary</b>
<b>Number of mistakes</b>	7	37	2	0

Table 4: Classification and number of mistakes made by the deductive group in section "wrong verb to be" in the first item of the posttest.

	<b>Wrong verb to be</b>	<b>Omission or wrong placement of by</b>	<b>Wrong past participle</b>	<b>Incohesive subject</b>	<b>Omission of sentence</b>	<b>Total</b>
<b>Number of mistakes</b>	30	1	30	2	2	65

Table 5: Classification and number of mistakes made by the deductive group in the second item of the posttest.

Tables 3, 4 and 5 indicate that in both items of the posttest wrong tense of the verb to be and past participle were the two parts of passive voice in which the students of the deductive group made the majority of mistakes.

#### 4. 4. Classification of posttest mistakes by the inductive group

The 3 tables shown here follow the same order as the ones in section 4.3. In order to see the tables in detail, see appendix G.

	<b>Wrong verb to be</b>	<b>Omission or wrong placement of by</b>	<b>Wrong past participle</b>	<b>Wrong subject</b>	<b>Omission of sentence</b>	<b>Omission of not</b>	<b>Total</b>
<b>Number of mistakes</b>	44	11	31	4	1	0	91

Table 6: Classification and number of mistakes made by the inductive group in the first item of the posttest.

	<b>Agreement</b>	<b>Wrong tense</b>	<b>Omission of verb to be</b>	<b>Addition of wrong auxiliary</b>
<b>Number of mistakes</b>	4	24	14	2

Table 7: Classification and number of mistakes made by the inductive group in section "wrong verb to be" in the first item of the posttest.

	<b>Wrong verb to be</b>	<b>Omission or wrong placement of by</b>	<b>Wrong past participle</b>	<b>Incohesive subject</b>	<b>Omission of sentence</b>	<b>Total</b>
<b>Number of mistakes</b>	38	5	60	2	3	108

Table 8: Classification and number of mistakes made by the inductive group in the second item of the posttest.

Tables 6, 7 and 8 indicate that in both items of the posttest wrong tense of the verb to be and past participle were the two parts of passive voice in which the students of the inductive group made the majority of mistakes.

In brief, the fact that the majority of mistakes in both groups had to do with past participle and with the tense of the verb to be in passive voice indicates that the students did understand the structure of passive voice. If the students had been taught only one tense and only regular verbs had been used, a decrease of mistakes could have been expected.

In this chapter 3 main findings have been presented:

1. In relation to their pretests, the deductive and inductive groups performed significantly better in their posttests.
2. The deductive group showed significantly higher gains in the posttest than the inductive group.
3. Most of the mistakes observed in the posttest were related to past participle and to the incorrect tense of the verb to be.

In the next chapter, a discussion of these findings is presented. This discussion will aim at interpreting the results found in this section taking into account the objectives of the present study and will also contrast the results with the literature reviewed in chapter 2.

## **Chapter 5: Discussion**

The present study has attempted to compare the results a deductive and an inductive group had after being taught passive voice in English. In order to do this, the results both groups had in their posttests were compared with the results they had in their pretests. After that, the posttests of both groups were compared to determine which group showed more gains. As seen in section 4. 1, both groups showed significant improvements between their pretests and posttests. Regarding the gains in the posttests, the deductive group had a significantly higher score than the inductive group. An analysis of the mistakes made by both groups in the posttests revealed that the two parts of passive voice were most mistakes were concentrated were past participle and wrong tense of the verb to be.

In this chapter the results seen in chapter 4 will be discussed in relation to the objectives of the study and to relevant issues introduced in the literature review. In order to provide a more detailed discussion, this chapter is organized into 4 sections: the first one dealing with the gains within and between groups, the second dealing with students' willingness to practice and play communication in this study and in the studies in chapter 2, the third one dealing with the implication of the active role of the student in a deductive and an inductive approach and the last one dealing with how some approaches tend not to be completely unbiased and the consequences these approaches have.

### **5. 1. Gains within and between groups**

Both the deductive and inductive group had very low scores in their pretests (see section 4. 1). This was expected to happen due to the fact that neither the deductive nor the inductive group had seen passive voice in English before, at least not during their time at university. Based on the literature seen in chapter 2, the notorious improvement seen in the posttest by both groups was also expected.



Upon comparing the results both groups obtained in the posttest, the second hypothesis of this study was confirmed: teaching passive voice deductively provides better results than doing it inductively. This finding supports the results of Mohammed & Jaber (2008), Erlam (2003) and Robinson (1996) and, as expected, goes against the findings of Herron & Tomasello (1992), Haight, Herron & Cole (2007) and Vogel, Herron, Cole & York (2011), who found better results in the teaching of grammar through inductive approaches.

One of the most important achievements of this study is that its results are in agreement with the only other study about passive voice in English (Mohammed & Jaber, 2008). The present study and Mohammed & Jaber's (2008) not only share the structure being taught (passive voice); in both studies the target language was English and although the participants in Mohammed & Jaber's (2008) were slightly younger than the participants of this study, they were all university students. The primary difference between these studies is that Mohammed & Jaber's (2008) participants were native speakers of Arabic, while in this study the participants were native speakers of Spanish. However, this difference might not be relevant. Although Arabic may seem very different from English, the passive voice is quite similar. The only difference is that, given that in the passive voice the performer of the action is usually not relevant, in Arabic the "by" phrase in passive voice does not exist. In Spanish, the passive voice is very similar to English. Also, it might be argued that the degree of complexity of passive voice in English, Spanish and Arabic is the same. According to Dumin (2010), a sentence in passive voice must contain a form of the verb to be in the following order: be + lexical verb + -ed. She adds that the lexical verb has to be used in a sentence so that the object becomes the subject. i.e. "the toy was destroyed by Martin", where the thing that is being acted upon, "the toy", becomes the main focus of the sentence and the agent, "Martin", becomes less important.

Given that passive voice is a structure that uses several grammatical elements, measures were taken to ensure that what the posttest was assessing was passive voice and not something else. The fifth exercise of the first item of the posttest, *Pamela drove my car*,

is an example of this (see appendix B). If students had not been familiar with the relation between subject and object pronouns, they could have had problems transforming the sentence "she drove my car" into passive voice. Probably, they would have known that the correct sentence was "my car was driven by", but they would not have known whether the correct object was "her" or "she". If they had said that the correct sentence was "my car was driven by she" the sentence would have been incorrect and one might have assumed that the students did not understand passive voice. However, given that the original sentence was "Pamela drove my car", the students did probably not have any problems transforming the sentence into passive voice because they only could have had problems with the transformation of subject pronouns to object pronouns. It is important to remember that, unlike other pieces of grammar, passive voice is not a word; it is an arrangement of words that can be used in other grammatical structures, so its use relies on the student's knowledge of all those components. To know what measures were taken to prevent problems like the ones seen before, see section 3.3.

After examining the classification of the mistakes in the posttest seen in sections 4.3 and 4.4, it is clear that the two parts where most of the mistakes were concentrated were past participle and the verb to be. The mistakes related to past participle indicate that students did know that they had to use the past participle of the verb, but what happened was that they did not know or did not remember the past participle of some verbs. In other words, problems with past participle are not indications of knowledge of the grammatical rule of passive voice.

The analysis of the second problematic part, verb to be, also indicates that most students did know that in passive voice between the subject and the past participle the verb to be must be used. The most common mistake made here had to do with tense. The majority of students did not have agreement problems between the subject and the verb to be, but they were confused with the tense in which the verb *to be* had to be expressed. This problem was expected due to the fact that the verb to be is the part of passive voice that undergoes the most changes; first, it has to be added to the sentence in passive voice and

second, depending on the tense, it can be verbalized differently (was, were, am, is, are, etc.). Whether passive voice is being used in simple past, simple present or simple future, the past participle remains the same. Subjects and objects are not affected by tense either and neither is "by". But the verb *to be* does change. The verb *to be* can be conjugated as "are", "were", "is", etc., so it is expected to be a confusing element of passive voice.

Even though the complexity of passive voice is eventually going to affect students regardless of the teaching approach, the complexity of this structure can be dealt with in a better way depending on the type of teaching approach that is used. According to the learning transfer principle stated by Fischer (1979), when the L2 rule is equally complex than the L1 rule a deductive approach should be used. So, in addition to the characteristics previously mentioned (same TL, same L2 rule, similar age), the learning transfer principle could provide an explanation of the similarity of results between this study and Mohammed & Jaber's (2008). However, before drawing conclusions about the results of this study and Mohammed & Jaber's (2008), it is important to understand how the deduction-induction dichotomy deals with generalization.

The deduction-induction dichotomy is a topic that seems to have a limited scope of generalization. The literature reviewed in this study plus the results of the study itself appear to confirm this notion.

The three studies in favor of the inductive approach (Herron & Tomasello, 1992; Haight, Herron & Cole, 2007; Vogel, Herron, Cole & York, 2011) are especially important to the understanding of the efficacy of deductive and inductive approaches because they share methodological characteristics, type of participants and results. Methodologically speaking, Haight, Herron & Cole (2007) and Vogel, Herron, Cole & York (2011) used the same inductive approach. The only difference between this approach and the one seen in Herron & Tomasello (1992) is that the former incorporated some elements from the PACE model (see chapter 2 above). Regarding participants, all three studies were carried out in college with students of a similar age. Besides, in the three studies the participants were

native speakers of English and the TL was French. Therefore, the generalization of an inductive approach being more effective than a deductive approach seems applicable under conditions similar to those of the studies reviewed (L1 English, L2 a romance language, adult students).

The reason why the literature on deductive and inductive approaches is so conflicting seems to be because it has been proved that depending on the conditions both approaches can be effective. The set of characteristics under which the approaches are being applied is what will determine the efficacy of the approach. This is the reason why Herron & Tomasello (1992), Haight, Herron & Cole (2007) and Vogel, Herron, Cole & York (2011) provided the same results; the characteristics of the studies were almost the same. Also, this is why the results of the present study are in agreement with the results seen in Mohammed & Jaber (2008).

Even though before the realisation of this study there was only one study with similar characteristics (Mohammed & Jaber, 2008), the likeness of the inductive studies and their results propelled the notion that works as the second hypothesis of this study. In other words, if the inductive studies had the same results because the studies themselves had characteristics alike, it would make sense to believe that a study with characteristics akin to the ones present in Mohammed & Jaber (2008) would also provide similar results. It will later be revealed that Haight, Herron & Cole (2007) and Vogel, Herron, Cole & York (2011) shared a bias towards deduction at the end of their treatment sessions. However, Herron & Tomasello (1992) did not have any sort of bias and yet its results are in agreement with the ones of Haight, Herron & Cole (2007) and Vogel, Herron, Cole & York (2011). This agreement supports the notion that the results of these studies are similar because the characteristics of the studies themselves are similar and not because of a bias towards a particular approach. Besides, the posttests of Herron & Tomasello (1992), Haight, Herron & Cole (2007) and Vogel, Herron, Cole & York (2011) show no signs of bias towards any particular approach. Thus, after examining the results of this study and the ones of Mohammed & Jaber (2008), it could be said that a deductive approach proves more

effective when teaching passive voice in English to college students. Even though the L1s in Mohammed & Jaber (2008) and this study are different (Arabic and Spanish, respectively), this is not a problem. Passive voice in Arabic and Spanish is not simpler than in English, so based on the learning transfer principle stated by Fischer (1979), the fact that the L1s are different would not be relevant because they share the same degree of complexity.

The two generalizations that have been made in this section share almost the same aspects. On the one hand, in the generalization about the inductive approach being more effective, three aspects were taken into account: same L1 (all the participants were native speakers of English), same TL (all the participants were learning French) and participants of the same or almost the same age (all the participants were college students). On the other hand, in the generalization about the deductive approach being more effective, not all the aspects were the same as the ones in the inductive studies. The participants shared the same TL (English), relatively the same age (all of them were college students), but they did not share the same L1. It has already been mentioned that due to the learning transfer principle, the difference in L1 in this particular case does not affect the efficacy of the deductive approach. However, the efficacy of the deductive approach could be affected if the L1 of the participants of another study were different. According to the learning transfer principle, if the rule in the TL is dissimilar, more difficult or equally complex than the student's L1 a deductive approach should be used. But, if the rule in the TL is similar or dissimilar but simpler an inductive approach should yield better results. So, the findings reported in this thesis and previous literature suggest that the deductive approach is more effective when teaching passive voice in English to adult learners with an L1 in which the grammatical rule being taught in the L2 is at least as complex as the rule in the L1.

## **5. 2. Willingness to practice and play communication**

Age of the students, similarity of the L1 with the L2 and proficiency level in the TL seem to be the most relevant factors that influence the efficacy of a deductive or inductive

approach. However, results from this study suggest that willingness to practice and play communication could be a factor as important as the ones previously mentioned.

According to Decoo (1996), willingness to practice and play communication means that learning a particular L2 will be more difficult for those students who are unwilling to practice the L2 (as indicated in section 2. 2). Students who are unwilling to practice communication will have problems whether an inductive or deductive approach is being used. However, an inductive approach will affect students more greatly than a deductive approach because it requires students to participate more actively during class.

Before the beginning of the study, several students stated that they did not like English and that because of that they did not participate actively in classes. Such claims were confirmed throughout the semester; it was common to see many students who did not want to take part in the different activities of the classes. In order to understand the students' lack of interest one must pay attention to the setting in which this study took place.

The participants of this study were second year psychology students who were taking a compulsory English course (see section 3. 1 above). This information is important because this could be the reason why some students were not interested in participating in classes. Students that are taking an English course because they are studying an English related major may be expected to be willing to practice communication, but it is different when students who are in a major that is not related to English are forced to take an English course. When asked by the researcher, several students said that this was how they felt; in their words, they said that they were going to the university to study psychology, not English. Therefore, if Decoo's notions on willingness to practice and play communication are accurate, this could explain why some students got better results with a deductive approach rather than with an inductive approach. Although students were not formally asked about their willingness to practice and play communication, at least half of them

stated informally at some point that they were not interested in learning English and/or in participating during class.

Being able to confirm Decoo's belief on willingness to practice communication could be of great help to the national educational scenario. Currently in Chile the majority of majors have at least one compulsory English course, which means that the negative attitude towards learning English expressed by some students in this study could perfectly be found in many other students throughout the country. If Decoo's ideas could be confirmed, the way teachers in non English related majors plan their classes should be adjusted to fit a deductive approach, which could also impact positively on the attitude of the students towards English. Given that in a deductive approach the student has a "less active" role than in an inductive approach (in an inductive approach students are expected to ask questions, formulate and test hypotheses, etc.), the student would not feel forced to participate in class, which would alleviate their stay in the English class.

As indicated in section 2. 2, students' willingness to practice and play communication has not been covered in the literature on deductive and inductive approaches, so Decoo's thoughts on willingness to practice communication have not been corroborated. Probably, one of the reasons behind this lack of literature is related to the nature of the factor itself. Willingness to practice and play communication seems to be strongly related to motivation and although researchers seem to agree that motivation impacts students' learning positively, motivation is a multifaceted factor that needs to be carefully measured because it represents only a segment of a bigger and more complex psychological construct (Dörnyei, 1998).

### **5. 3. The active role of the student**

Another important point regarding the results of this study has to do with the "active role" of the student. According to Vogel, Herron, Cole & York (2011) "many second language acquisition theorists believe that the language learner is the one who should act,

construct, and actively participate in learning tasks rather than being the receiver of external stimuli." (p. 367). Given that in an inductive approach students have to find out the grammatical rules by themselves, they are constantly creating and testing hypotheses, participating actively in the learning process. However, in this study the deductive group got better results than the inductive groups. Apart from what has been previously stated, two more reasons may account for the success of the deductive group.

First, even though researchers seem to agree on the notion of an inductive approach being more active than a deductive approach (Herron & Tomasello, 1992; Haight, Herron & Cole, 2007; Vogel, Herron, Cole & York, 2011; Erlam, 2003; Mohammed & Jaber, 2008), this does not mean that a deductive approach is a learning method completely passive. The only difference between the deductive and inductive approach in this study is that the deductive group was given the grammatical rule at the beginning of the class, but in both approaches the students were encouraged to participate. Believing that by merely being given a grammatical rule students will master that rule is a largely unreasonable expectation.

As it was seen during the interventions, after each grammatical rule was presented the students had several doubts regarding the rules themselves. Previously (in section 2. 1) it was stated that passive voice in English is a complex topic so doubts were expected. For example, when the examples in which sentences in active voice were converted to passive voice were written on the board, some students did not understand why the verb "to be" was present in passive voice. A student once asked: "OK, on the left (sentence in active voice) you have 'Francisco told a joke' and on the right (sentence in passive voice) you have 'a joke was told by Francisco'... but what I don't get is why you put 'was' on the sentence on the right, because on the sentence on the left there is no 'was.'" Bear in mind that from the beginning to the end of the class the rule of passive voice was written on the board. So, even though that student could have been told by the teacher why the word "was" was added in passive voice, I let their classmates answer the question.



By helping their classmates, the students were actively participating in the learning process. They were also testing their hypotheses, because although the grammatical rule was on the board, by explaining the addition of "was" in the sentence in passive voice, the students were testing their own understanding of the rule that was written on the board. Situations like the one seen with "Francisco told a joke" were abundant throughout all three interventions. Just like in the inductive approach, when doubts arose, the instructor limited his participation to a minimum; the students themselves were encouraged to take on the role of the teacher so they were the ones solving doubts and explaining concepts. It is important to notice that while this study acknowledged the theoretical differences between deductive and inductive approaches, i.e. the latter having a more active role than the former, during class the students from both groups were encouraged to actively participate in the learning process.

In the guided inductive approach (see chapter 2) the teacher asks previously scripted questions that cannot change regardless of the students' doubts. In the PACE model (see chapter 2) the teacher also asks previously scripted questions, although here the questions can be altered in order to solve the students' doubts. However, none of these approaches encourage students to take on the role of the teacher and answer the questions of others. In this study the students were encouraged to act as teachers and students at all times and the guiding of the teacher was adapted based on the doubts the students had.

Secondly, although the high level of participation seen in inductive approaches is something wanted, it may have some undesired effects. When asked about their perceptions of the inductive approach, students in Vogel, Herron, Cole & York (2011) stated that: "(a guided inductive approach) appears to be a model that makes students think more, yet it creates a greater chance for error, a lack of confidence and confusion" (p. 364).

It was previously stated that in the three sessions of the deductive group the students had doubts even though the grammatical rule being practiced was written on the board. It can then be expected to find a higher degree of doubts and confusion in students who had to

figure out the rule by themselves. During the sessions of the inductive group there was always participation from the students. However, not all of them participated equally during the first part of the class (the one that had to do with understanding the grammatical rule behind the exercises being shown on the board). It may be reasonable to believe that certain students did not participate in this part because what they were seeing on the board looked confusing. Unlike the deductive group, the students in the inductive group were not told anything about the piece of grammar that was being shown to them, so they did not know where to begin to look for patterns. Besides, the same reason that may have confused students may have made them feel not confident enough to participate during class.

If students are told to look for a grammatical pattern but no additional information is given to them, they might hesitate before telling their classmates what they have found because their contributions could be completely unrelated to the topic of the class. Therefore, in order to avoid any unnecessary embarrassment, students may have decided not to participate and simply let another student take a chance. This may explain why the inductive group did not perform as well as the deductive group in the posttest.

These two observations, that the role of the students in the deductive group in this study was not as passive as thought and that some students in the inductive group may have not felt confident enough to participate, suggest that some characteristics of inductive and deductive approaches should be re-evaluated. If students being taught under deductive approaches can have a more active role, it is the teacher's responsibility to make sure that students take that role. And if students being taught under inductive approaches may get to a point where their participation in class does not make them feel comfortable, the teacher should be careful enough as to not cross that threshold.

#### **5. 4. Unbiased approaches**

Apart from the last two reasons that were mentioned, Fischer's learning transfer principle and Decoo's willingness to practice and play communication have been addressed

as factors that may explain the efficacy of the deductive approach in this study. However, upon closer inspection, there are two more reasons that seem to be crucial to explain the results of this study. The first reason has to do with the way induction is understood by Decoo and by the authors of the studies who favor the inductive approach.

It seems that Decoo explains very well the deduction-induction dichotomy; he provides a definition of what deduction is and comes up with four modalities of induction clearly defined. It is according to those modalities that this research was shaped: as previously said, modality B was the type of induction used for this research. This choice was made based on the type of induction seen in the literature regarding the deduction-induction dichotomy (even though the approaches used in the studies seen in chapter 2 are not completely homogeneous, all of them use Decoo's modality B). However, upon closer inspection, modality B may be considered less inductive than what is intended by Decoo.

When teaching grammar using modality B, first, model sentences are given, then the students are given sentences to practice the grammatical rule and finally they verbalize the grammatical rule that was implicitly practiced during class. It is this last part, the verbalization, which cannot be part of an inductive process. By knowing a grammatical rule, the students are using a deductive mechanism to produce language. After the grammatical rule has been verbalized, the cognitive process by which the students employ grammar shifts irreversibly. The main difference between deduction and induction is not only how the class is carried out, but also the paths taken by the students to produce the same piece of language. As Decoo (1996) and others have argued (see chapter 2 above), deduction is based on form; the students are shown a rule and from that moment on they always rely on that rule to produce language that uses that rule. However, as explained in chapter 2, induction should not be focused on form.

At the beginning of Decoo's modality B the teacher provides enough input for the students to create and test their own hypotheses about the piece of grammar that they are being taught, but towards the end of the modality there is a problem. When the students

verbalize the rule, the focus changes; students start paying attention to form and from that moment on they will always do that. That is what happened to the students in the inductive group in this research; even though the contents were taught inductively, the sessions always finished with the students actually seeing the grammatical rule that was trying to be learned during class. Therefore, when they took the posttest they were thinking deductively; instead of looking at an exercise and thinking: "I believe this sentence is wrong. I don't know the rule but it just does not feel right" they were thinking: "OK. I know this sentence is wrong because the rule of passive voice tells me I have to use the past participle of the verb and not the simple past". Even though it might be argued that given that the majority of the inductive classes were truly inductive the process still remained inductive, the fact that at the end of the class the grammatical rule was verbalized (regardless of the students being the ones verbalizing the rule) resulted in the students thinking deductively. Given that Decoo's modality B was not used only in this work, there are other studies in which the inductive process may have been affected by the verbalization of the grammatical rule at the end of the class.

In section 2. 1 there are three studies with results favoring the inductive approach. These studies are: Herron & Tomasello (1992), Haight, Herron & Cole (2007) and Vogel, Herron, Cole & York (2011). Two of these studies (Haight, Herron & Cole, 2007; Vogel, Herron, Cole & York, 2011) fit Decoo's modality B; the contents were taught inductively but towards the end of the class the students verbalized the grammatical rule that had been practiced inductively. Unlike the results of the current study, in the two aforementioned studies the inductive groups had better scores than the deductive groups, so it might be argued that the inductive approaches did in fact work. However, claiming that the success of those groups was only due to induction would not be an informed statement; it could be actually argued that the success of those groups was a result of the deductive end of each treatment session. Therefore, the only study favoring the inductive approach that carried out a truly inductive methodology was the one by Herron & Tomasello (1992).

One of the implications of this perspective on the inductive literature impacts directly Rivers' view on the deduction-induction dichotomy. In section 2. 1 it was stated that according to Rivers (1975) "the use of the deductive approach is most useful for mature students or for adult students in intensive courses, and the inductive approach is more appropriate for young language learners" (as cited in Mohammed & Jaber, 2008). Even though Rivers does not clarify what she means by young or mature, it could be fair to assume that college students are considered mature. If that were the case, Rivers' claim would result highly problematic because there are three studies (Herron & Tomasello, 1992; Haight, Herron & Cole, 2007; Vogel, Herron, Cole & York, 2011) proving exactly the opposite of what she stated. However, now that the methodologies used in these studies have been re-evaluated, it is clear that two of these studies (Haight, Herron & Cole, 2007; Vogel, Herron, Cole & York, 2011) did not use truly inductive methodologies, so they would not affect Rivers' claim. However, there is still one study (Herron & Tomasello, 1992) which presents results contrary to Rivers' notion on induction. Therefore, Rivers' idea on induction is still empirically problematic.

Three more things have to be added regarding Rivers' statement on deduction and induction. First, Rivers' study was conducted prior to all the studies mentioned in section 2. 1. Second, her notions on deduction and induction are contextualized within the teaching of French as L2. Finally, given that all the participants of this study were of a similar age, maturity differences could not be tested. In other words, given that only adult learners are part of this research, it could not be proved whether young students are benefited from an inductive approach.

The second reason that helps to understand the results of this work has to do with the design of the posttest. As it was explained in section 3. 2. 2 (and as it can be seen in appendix B) the posttest was composed of two items. In the first item the students were given sentences in active voice in simple past, simple present and simple future. Their goal was to transform those sentences into passive voice. In the second item the students had to identify and correct mistakes in sentences that were already in passive voice. It was stated

that this design could help explain the results of the study because the posttest was focused on form rather than meaning. It can be expected that students who know the rule of passive voice are better at transforming sentences from active to passive voice. It can also be expected that those students who know the rule of passive voice are better at identifying and correcting mistakes related to the form of passive voice. Having said this, one could ask oneself why the posttest was designed in this way. The answer to this question lies in the practicality of the study itself.

This study was designed based on the characteristics of an already established group of students in a determined university. So, it is according to those characteristics that the posttest was shaped. The focus on form seen in the posttest is a reflection of the assessment methodologies used in Chile at a university level. Thus, this study reflects the effectiveness of a particular approach in relation to an actual trend within the context of instruction of the study.

In summary, having examined the results of the study in relation to its objectives and the literature reviewed in this study, the main issues of this section are as follow:

- The results of this study are in agreement with the other study regarding passive voice in English (Mohammed & Jaber, 2008). This agreement, plus the analysis of the three studies in favor of the inductive approach (Herron & Tomasello, 1992; Haight, Herron & Cole, 2007; Vogel, Herron, Cole & York, 2011) indicate that the reason why the literature on deductive and inductive approaches to the teaching of grammar is so conflicting is because depending on the conditions both approaches can be effective. It is the set of characteristics under which the approaches are being applied what will determine the efficacy of the approach.
- Although it has not been extensively covered in the literature regarding deductive and inductive approaches, students' willingness to practice and play communication might heavily impact the efficacy of an approach.

- Even though it is something wanted, the highly active role of the student required in the modalities of inductive approaches seen in the literature reviewed in chapter 2 and in this study may bring undesired effects, causing students to participate less in class. Besides, it was seen how students under deductive treatments also have an active role in class.
- Finally, the bias towards a particular approach was discussed. It was seen how some studies in the existing literature and this study as well showed a certain bias towards deduction in their inductive approaches. It was stated that by verbalizing the grammatical rule at the end of the class the students in inductive groups begin thinking deductively. Besides, it was discussed that methodological designs can also be biased, favoring the results of a test towards a certain approach.

In the next chapter, a conclusion to this study will be provided. Also the limitations of the study will be stated and suggestions for further research will be given.

## **Chapter 6: Conclusion**

The present study compared a deductive approach against an inductive approach in the teaching of passive voice in English. In order to achieve this, 36 second-year psychology students at Universidad Austral de Chile were divided into two groups: one of which was taught passive voice deductively and the other inductively. Between the pretest and posttest the students had three 75-minute sessions in which they were taught the passive voice of simple past, simple present and simple future. The current study was designed taking into account several studies regarding what Decoo (1996) calls the induction-deduction opposition. These studies were used as guidelines to define the set of characteristics that allow deductive and inductive approaches to succeed.

In the following sections the main findings and issues of this study will be discussed, the limitations to this study will be pointed out, suggestions for further research will be given and the contribution of the study and its relevance for the area that has been explored will be stated in the final comments.

### **6. 1. Main findings and issues**

The results of the posttests showed that even though all the students performed better in their posttests than in their pretests, those participants who were taught passive voice deductively got significantly higher results than their inductive counterparts.

The findings of this research are in agreement with a similar study carried out by Mohammed & Jaber (2008). The literature in chapter 2 discusses studies favoring both approaches; deductive and inductive, leaving the dichotomy still a matter of controversy. Two generalizations have been made in this study: the first one states that an inductive approach provides better results when the learners are adult students, the L2 is a romance language and the L1 is English. According to the second generalization, a deductive



approach provides better results when the learners are adult students and the grammatical rule in the L2 is dissimilar, more difficult or equally complex than the rule in the L1.

The results of this study also shed some light on the issue of the active role of the student. According to cognitive theorists, the role of the language student has to be active, that means that the student has to be constantly creating and testing hypotheses about the way language works. Some researchers say that deductive approaches lack this active characteristics, while inductive approaches do not. However, the behavior of the participants of the deductive group in this study ran contrary to the notion of passivity; they asked questions, helped their classmates and confirmed their hypotheses just like the participants of the inductive group. This behavior suggests that by nature the role of learners is an active one. In other words, the approach chosen to teach grammar (deductive or inductive) only modulates the role of the learner, making it more active with inductive approaches and less active with a deductive approach.

Another aspect of the inductive approach that was observed during the treatment sessions and that may help explain the performance of the group has to do precisely with the high level of student participation that this approach requires. Vogel, Herron, Cole & York (2011) stated that although an inductive approach makes students think more, it can also create confusion and a higher chance for errors. In other words, given the expected level of participation of students in inductive approaches, some of them might not participate due to fear or to avoid embarrassment. This could explain why there were some students in the treatment sessions of the inductive group that did not participate much. In other words, due to their lack of participation in the treatment sessions, they could not test the hypotheses that they were expected to create during the sessions and because of that they did not perform very well in the posttest.

Another conclusion drawn from the results of this study is related to the design of the tests used to assess students' learning. The success of the deductive group in this study may be partially explained because of the design the posttest had. The two items of the

posttest had more to do with form than with meaning, which could have helped the group that was taught grammatical rules since the onset of each treatment session. This suggests that methodological designs can affect the outcome of studies regardless of how well the deductive or inductive approaches are carried out.

One of the most important observations in this and other studies has to do with the way induction is understood by researchers. The inductive model used in this study and many inductive approaches found in the deductive-inductive literature fit in the category that Decoo (1996) called inductive approach modality B. However, a critical look into this modality revealed that it is not completely inductive due to the fact that the students being taught with this modality have to verbalize the grammatical rule that is being learned, which is a deductive process. Because of this, the methodologies used in some of the studies that favored the inductive approach (and the current study as well) were partially biased towards deduction

Finally, another important factor that seemed to operate during the study has to do with what Decoo (1996) called willingness to practice and play communication. According to Decoo (1996), students who are willing to practice a language are more prone to learn the language. So, taking into consideration the high level of student participation that inductive approaches demand, it is possible that a deductive approach provides better results with students who are unwilling to practice and play communication. Although this factor was not formally addressed in this study, a considerable amount of students referred to this topic expressing a lack of interest in learning English, which suggests a link between the results of this study and Decoo's (1996) notion on willingness to practice and play communication. If the students of the inductive group were not willing to communicate, they could not have participated in class as actively as an inductive approach requires students to do, which could explain why their posttests' scores were lower than the deductive group's. This assumption is important because the association between performance and willingness to practice and play communication has not been covered in the literature regarding the deduction-induction dichotomy.

## 6. 2. Limitations to the study

The results of the present study should be examined taking into account some limitations regarding the contents that were taught in this study and the assessment tools and the methodology used in the study.

First, the teacher in both approaches was the author of this study. Under ideal conditions the author would not have been involved in the classroom with neither the deductive nor the inductive group and each group would have had a different instructor. If the author of the study had not been the instructor in both treatment sessions, a possible source of bias could have been avoided. Before the implementation of the study this idea was considered but could not be carried out. The present study was conducted at Universidad Austral de Chile in Puerto Montt, an institution which has a considerable amount of teachers of English. They were contacted to participate as instructors but they were not able to be a part of the study due to schedule problems. There were some teachers that could have participated in one or in two sessions, but in order to be instructors they would have had to be present in all three sessions.

It could be argued that because the author of this study, which posits an advantage in favor of the deductive group, was the instructor in both groups there might be certain bias. However, although from a statistical point of view the results of the study indicate that the scores of the deductive group were significantly higher than the scores of the inductive group, both groups had considerable gains in their posttests in comparison to their pretests, and the means of the posttests were not that different (the deductive group's mean was 16.94 and the inductive group's mean was 14.83). Moreover, to compensate the potential impact of teacher bias, lesson plans were constructed so as to prevent the teacher from distancing from his corresponding approaches. In these lesson plans the information provided by the teacher is explicitly stated so that the teacher cannot affect the teaching approach. Such lessons plans can be found in appendices C and D.

Another limitation in this study has to do with the absence of a delayed test. Before the realization of the study a delayed test was planned but it could not be executed due to the late implementation of the study. As it was mentioned in section 3. 1, the participants of this study were taking an English course called “English II” and passive voice was a content of such course. Unfortunately, according to the syllabus created by the English department, passive voice had to be taught after all the other contents of the semester. This resulted in the deductive group taking the posttest on November 18<sup>th</sup> and the inductive group on November 20<sup>th</sup>. Ten days after the posttest the students from the deductive group took the final test of "English II". After that, the academic year for those who passed “English II” was finished so it was impossible to give a delayed test. However, although it is not possible to know the long term performance in passive voice of the students, the results of the posttest leave no room for misinterpretation in the short term: taking into account the design of the posttest and the participants of the study, the deductive group greatly benefited from the deductive approach.

Another aspect of this study that should be taken into account has to do with the type of inductive approach that was used. According to Decoo’s (1996) types of induction, the inductive approach used in this study was the modality B: conscious induction as guided discovery. It might have been interesting to use the other inductive modalities as well, but that would have required more students (each modality would have had to be represented by a group of students), so given that there was only access to two groups of students that could not have happened. Nevertheless, it is fair to assume that if other inductive modalities had been used, their results would not have been better than the results of modality B. According to Decoo (1996), the other modalities (C, D and E) require more time than modality B to provide positive results, especially modalities D and E. Therefore, given that in the present study the treatment sessions of the inductive group lasted the same as the treatment sessions of the deductive group, modalities C, D and E would have been biased towards failure.

Another limitation in this work is related to what Decoo (1996) calls willingness to play and practice communication. In section 5. 2, this concept (actually, the lack of willingness to play and practice) is pointed as one of the possible factors of the superiority of the deductive group. It was also mentioned how some students said that they were not interested in practicing or learning English. However, students were not formally asked their opinions on willingness to play and practice English.

The last limitation has to do with the fact that what was taught during the treatment sessions was an isolated grammatical rule. Focusing on a grammatical rule may have biased the cognitive processing of the students towards deduction because it leads students' attention towards a grammatical rule and not towards other factors that are present when language is used in a particular context.

### **6. 3. Suggestions for further research**

The current study has provided results regarding the teaching of passive voice. However, the current study has also made clear that there are some aspects of the deductive-inductive dichotomy that require further research.

First, none of the studies related to the aforementioned dichotomy (including the present study) has addressed the long term effects of either deductive or inductive instruction. It is important to know how the results provided by these approaches behave over time given that the goal of the instruction is always to make learning as lasting as possible. In order to evaluate the long term effectiveness of a deductive and an inductive approach a delayed test should be applied.

Secondly, the limits of the scope of generalization of the present study (and other studies as well) should be tested. In chapter 5, the generalizations stemming from the results of the present study were stated. However, it has not been corroborated yet whether the results of this study can be replicated in different educational institutions. One of the

main reasons why the findings of the current study are important is because they affect directly the way English is taught in a university scenario. If this study were replicated in other Chilean universities and the results were the same, the hypothesis that within the local context a deductive approach is more effective could be supported. Besides, taking into account that this study is focused on the teaching of English in Chilean universities, not only should it be replicated in other universities, but there should be replications with other TLs. The effectiveness of the deductive approach in the teaching of grammar has already been demonstrated with the TL being passive voice, so it should be seen if other TLs also benefit from a deductive approach.

Thirdly, Decoo's (1996) willingness to practice and play communication must be addressed. This point may well be one of the most important factors affecting the success of a deductive or inductive approach. However, none of the studies mentioned in section 2. 1 has taken it into account. In section 5. 2 it was already stated that the difference between a student that studies an English related major and a non English related major may affect greatly the efficacy of a deductive or inductive approach. In order to understand students' willingness to practice and play communication a questionnaire should be applied. According to Decoo (1996), those students who are not willing to practice and play communication should be taught deductively. If Decoo's notions on willingness to practice and play communication could be proved, this could have tremendous implications in the teaching of English in a university level given that it is possible that a vast amount of students may not want to learn English.

Fourthly, the design of the tests employed by researchers must be as neutral as possible. Taking into account that deduction is related to form and induction to meaning, tests may heavily influence the results of the students depending on their designs. For example, if a researcher were trying to measure the effectiveness of deductive and inductive approaches in a certain piece of grammar, asking students to write the grammatical rule governing the grammar being tested would not be recommendable. The design of the tests

should be in the center of the form-meaning relation, attempting to be as unbiased as possible.

Fifth, in order to make studies as unbiased as possible, the teacher(s) in charge of the treatment sessions should not be the author of the study. Apart from that, the teachers in charge of the treatment sessions should be given lesson plans to make sure that they are carrying out the classes as faithfully as possible. When possible, treatment sessions should be video recorded to ensure that the lesson plans are being followed.

Finally, inductive approaches have to be applied more carefully. It has been stated how some studies have not implemented fully inductive approaches due to the verbalization of grammatical rules by the students of inductive approaches. Even though this verbalization has been considered consistent with induction, that is really not the case; by verbalizing a rule deduction takes place and the inductive approach becomes irreversibly affected. In order to appropriately contrast deduction and induction situations like the verbalization of the grammatical rule must be avoided.

#### **6. 4. Final comments**

The current study dealt with two different methodologies used to tackle the same teaching point in the field of grammar. Its results are promising not only because they validate the hypotheses of the study, but also because they have a practical application. This study is centered on university students because currently there are no studies regarding deductive and inductive approaches in the teaching of grammar at Chilean universities, so it is important to know whether the results observed in the literature regarding the deduction-induction dichotomy can be replicated in the national educational scenario. Even though this study involved the participation of students of one major in only one university, the results may be applicable to other majors in that university and also to other universities in the country.

The results of this study can be seen as a contribution to the methodological paths that teachers should take in the teaching of grammar. Also, they are the foundation for future studies aimed at contributing to a crucial distinction in L2 teaching and to a better understanding of the deductive-inductive dichotomy in the national educational reality.



## Reference list

- Abraham, R. G. (1985). Field independence-dependence and the teaching of grammar. *Tesol Quarterly*, 20(4), 689-702.
- Decoo, W. (1996). The induction-deduction opposition: Ambiguities and complexities of the didactic reality. *International Review of Applied Linguistics*, 34(2), 95-118.
- Dörnyei, Z. (1998). Motivation in second and foreign language learning. *Language Teaching*: 31(3), 117-135.
- Dumin, L. M. (2010). *Changes in the use of the passive voice over time: A historical look at the american journal of botany and the changes in the use of passive voice from 1914-2008*. Oklahoma State University, Stillwater, OK.
- Erlam, R. (2003). The effects of deductive and inductive instruction on the acquisition of direct object pronouns in french as a second language. *The Modern Language Journal*, 87(2), 242-260.
- Felder, R. M., & Henriques, E. R. (1995). Learning and teaching styles in foreign and second language education. *Foreign Language Annals*, 28(1), 21-31.
- Fischer, R. A. (1979). The inductive-deductive controversy revisited. *The Modern Language Journal*, 63(3), 98-105.
- Haight, C. E., Herron, C., & Cole, S. P. (2007). The effects of deductive and guided inductive instructional approaches on the learning of grammar in the elementary foreign language college classroom. *Foreign Language Annals*, 40(2), 288-310.

- Herron, C., & Tomasello, M. (1992). Acquiring grammatical structures by guided instruction. *The French Review*, 65(5), 708-718.
- Mohammed, A. A., & Jaber, H. A. (2008). The effects of deductive and inductive approaches of teaching on Jordanian university students' use of the active and passive voice in English. *College Student Journal*, 42(2).
- Rivers, W. (1975). *A practical guide to the teaching of French*. New York: Oxford University Press.
- Robinson, P. (1996). Learning simple and complex second language rules under implicit, incidental, rule-search, and instructed conditions. *Studies in Second Language Acquisition*, 18, 27-67.
- Rosa, E., & O'Neill, M. D. (1999). Explicitness, intake, and the issue of awareness. *Studies in Second Language Acquisition*, 21, 511-556.
- Seliger, H. W. (1975). Inductive method and deductive method in language teaching: A re-examination. *International Review of Applied Linguistics in Language Teaching*, 13, 1-18.
- Shaffer, C. (1989). A comparison of inductive and deductive approaches to teaching foreign languages. *The Modern Language Journal*, 73(4), 395-403.
- Vogel, S., Herron, C., Cole, S. P., & York, H. (2011). Effectiveness of a guided inductive versus a deductive approach on the learning of grammar in the intermediate-level college French classroom. *Foreign Language Annals*, 44(2), 353-380.

**Appendices**

**Appendix A: Pretest**

**I. Change the sentences into passive voice. (12 points)**

1. My dog didn't eat a banana.

---

2. I won't clean my house today.

---

3. Marcelo doesn't plan parties.

---

4. Fernanda will open the door.

---

5. My father collects guns.

---

6. Francisco didn't buy a car.

---

7. Victor will drink a lot of alcohol.

---

8. Arthur Conan Doyle wrote "Sherlock Holmes".

---

9. Martin won't kill Matias.

---

10. The Wright brothers invented the airplane.

---

11. My girlfriend doesn't teach German.

---

12. Comedians tell jokes.

---

**II. Correct the mistakes. All the mistakes are related to passive voice. (12 points)**

1. Everything will be forget.

---

2. Last semester three tests were didn't gave.

---

3. The chicken will don't be cook tomorrow.

---

4. Every day many cars are sell.

---

5. Twenty songs was played by the band.

---

6. My grandmother is doesn't visit every day.

---

7. My father's house will not destroyed next month.

---

8. Different contents are learn in this course.

---

9. My car was stole.

---

10. The terrorists will be catch.

---

11. Cakes are don't make by waiters.

---

12. My first book was doesn't publish one week ago.

---

**Appendix B: Posttest****I. Change the sentences into passive voice. (12 points)**

1. Daniel broke a pencil.

---

2. Hector will use the big knife.

---

3. Some teachers don't help students.

---

4. The audience will enjoy the show.

---

5. Pamela drove my car.

---

6. My dog doesn't love fruits.

---

7. Charlotte won't forget his name.

---

8. Christopher Columbus didn't discover America.

---

9. Alexis won't know the answer.

---

10. My sister studies psychology.

---

11. My brother didn't describe the picture.

---

12. Marcelo flies small planes.

---

**II. Correct the mistakes. All the mistakes are related to passive voice. (12 points)**

1. Everything will is prepare.

---

2. Thousands of people are kill every day.

---

3. The Camaro will don't be sell.

---

4. The cat was threw very softly.

---

5. This quiz will not is remember.

---

6. Insects are not ate in Chile.

---

7. This letter was wrote a long time ago.

---

8. The final test will be take by everybody.

---

9. That window are not open by Mr. Marshall.

---

10. Future perfect continuous was no teach.

---

11. The room are always clean by Mrs. Smith.

---

12. The cars was not wash.

---



## Appendix C: Deductive group's lesson plans

### First session: Passive voice in simple past.

#### I. Presentation of the rule.

The teacher writes on the board the grammatical rule of passive voice in simple past. The teacher explains the students passive voice in simple past and how to transform sentences from active voice to passive voice. During the rest of the class the grammatical rule written on the board is not erased.

In case there are students with doubts regarding the use of passive voice, the teacher will encourage the rest of the students to solve their classmates' doubts. This methodology will be used throughout the class.

#### II. Examples.

The teacher writes the following sentences on the board to show the transformation from active voice to passive voice in simple past. The teacher explains that the sentences on the left are in active voice and the sentences on the right in passive voice. The following sentences are written.

- a) Arthur Conan Doyle wrote "Sherlock Holmes" ---> "Sherlock Holmes" was written by Arthur Conan Doyle.
- b) Francisco told a joke ---> a joke was told by Francisco.
- c) Somebody cleaned the bedrooms ---> the bedrooms were cleaned by somebody.
- d) Last night my friends drank a lot ---> last night a lot was drunk by my friends.
- e) María José didn't invite Marcela ---> Marcela wasn't invited by María José.
- f) My father didn't find the keys ---> the keys weren't found by my father.
- g) Felipe didn't read the papers ---> the papers weren't read by Felipe.

h) 11 students didn't pass the course ---> the course wasn't passed by 11 students.

### III. Practice n° 1.

The teacher gives the students a handout to practice the transformation from active voice to passive voice in simple past. The exercises are similar to the ones seen in the previous part of the class. The following sentences appear in the handout.

- a) My dog didn't eat the banana.
- b) Víctor bought a car.
- c) My mother phoned my sister.
- d) The Wright Brothers invented the airplane.
- e) All the students answered the question.
- f) The teacher didn't ask many questions.
- g) The police didn't catch the criminals.
- h) Pablo didn't collect guns.
- i) Mozart didn't compose "Für Eloise".
- j) Last week my girlfriend cooked beans.
- k) The children enjoyed the movies.
- l) Carmen didn't bring the gifts.

After the students finish transforming the exercises, the teacher checks the students' answers by orally asking their answers.

### IV. Practice n° 2.

The teacher gives the students a handout to practice the structure of passive voice in simple past. There are 12 exercises incorrectly written in passive voice. The students must identify and correct the mistakes. The following sentences appear in the handout.

- a) Last semester three tests were gave.
- b) 20 songs was played by the band.
- c) My car was didn't stole.
- d) My first book was publish one week ago.
- e) That hat was don't wore by Matias.
- f) The match was watch by millions.
- g) This shirt was didn't washed.
- h) The concepts were understand.
- i) The ball was thrown not by Pedro.
- j) English was no teach last semester.
- k) Four tests was took last week.
- l) My previous invention was don't sell in 2012.

After the students finish correcting the sentences, the teacher checks the students' answers by orally asking their answers.

## Second session: Passive voice in simple present.

### I. Presentation of the rule.

The teacher writes on the board the grammatical rule of passive voice in simple present. The teacher explains the students passive voice in simple present and how to transform sentences from active voice to passive voice. During the rest of the class the grammatical rule written on the board is not erased.

In case there are students with doubts regarding the use of passive voice, the teacher will encourage the rest of the students to solve their classmates' doubts. This methodology will be used throughout the class.

### II. Examples.

The teacher writes the following sentences on the board to show the transformation from active voice to passive voice in simple present. The teacher explains that the sentences on the left are in active voice and the sentences on the right in passive voice. The following sentences are written.

- a) Doormen open doors ---> doors are opened by doormen.
- b) People with Alzheimer's forget things ---> things are forgotten by people with Alzheimer's.
- c) Hitmen kill people ---> people are killed by hitmen
- d) Christopher drives a Nissan ---> a Nissan is driven by Christopher.
- e) My sister doesn't drink alcohol ---> alcohol isn't drunk by my sister.
- f) Felipe doesn't play football ---> football isn't played by Felipe.
- g) My mom doesn't read comics ---> comics aren't read by my mother.
- h) Jorge's parents don't enjoy rock music ---> rock music isn't enjoyed by Jorge's parents.

### III. Practice n° 1.

The teacher gives the students a handout to practice the transformation from active voice to passive voice in simple present. The exercises are similar to the ones seen in the previous part of the class. The following sentences appear in the handout.

- a) Marcelo plans parties.
- b) Miguel doesn't eat meat.
- c) My girlfriend teaches German.
- d) Diego doesn't wash the dishes.
- e) Christopher composes songs.
- f) Once a week my brother cleans the house.
- g) These students don't ask many questions.
- h) Marco doesn't pay the bills.
- i) Comedians tell jokes.
- j) The guys don't water the plants.
- k) My father collects guns.
- l) Gerardo doesn't ride a bicycle.

After the students finish transforming the exercises, the teacher checks the students' answers by orally asking their answers.

### IV. Practice n° 2.

The teacher gives the students a handout to practice the structure of passive voice in simple present. There are 12 exercises incorrectly written in passive voice. The students must identify and correct the mistakes. The following sentences appear in the handout.

- a) Everyday many cars are sell.
- b) Classes are don't finish at 12 pm.

- c) All the food is cook by Paul.
- d) In this company people are doesn't pay at the end of the month.
- e) Hundreds of people are murder every day.
- f) People in prison are visited no very often.
- g) That book be not publish here.
- h) In Fernanda's house the food be not prepare by Fernanda.
- i) Different contents are learn in this course.
- j) Chemistry is don't teached by Mr. Sly.
- k) In Chile Spanish are spoke.
- l) Cakes are make by bakers.

After the students finish correcting the sentences, the teacher checks the students' answers by orally asking their answers.

### **Third session: Passive voice in simple future.**

#### I. Presentation of the rule.

The teacher writes on the board the grammatical rule of passive voice in simple future. The teacher explains the students passive voice in simple future and how to transform sentences from active voice to passive voice. During the rest of the class the grammatical rule written on the board is not erased.

In case there are students with doubts regarding the use of passive voice, the teacher will encourage the rest of the students to solve their classmates' doubts. This methodology will be used throughout the class.

#### II. Examples.

The teacher writes the following sentences on the board to show the transformation from active voice to passive voice in simple future. The teacher explains that the sentences on the left are in active voice and the sentences on the right in passive voice. The following sentences are written.

- a) Tomorrow Victor will visit Daniela ---> tomorrow Daniela will be visited by Victor.
- b) Alejandro will bring the wine ---> the wine will be brought by Alejandro.
- c) My father-in-law will buy a BMW ---> a BMW will be bought by my father-in-law.
- d) Nicole will wash my car ---> my car will be washed by Nicole.
- e) Pablo won't play football ---> football won't be played by Pablo.
- f) Martin's company won't publish my book ---> my book won't be published by Martin's company.
- g) Mauricio won't ride Miguel's motorcycle ---> Miguel's motorcycle won't be ridden by Mauricio.
- h) My dad won't pay my debt ---> my debt won't be paid by my dad.

### III. Practice n° 1.

The teacher gives the students a handout to practice the transformation from active voice to passive voice in simple future. The exercises are similar to the ones seen in the previous part of the class. The following sentences appear in the handout.

- a) I will clean my house tomorrow.
- b) Fernanda won't open that door.
- c) Victor will drink a lot of alcohol.
- d) Martin will kill Matias.
- e) Some students won't pass the final test.
- f) A lot of students will fail the quiz.
- g) Pablo won't drive Daniel's truck.
- h) Paulo won't invite Omar.
- i) The teacher will give 2 quizzes.
- j) Marcela won't know the answer.
- k) Everybody will enjoy the show.
- l) The guys won't climb that hill.

After the students finish transforming the exercises, the teacher checks the students' answers by orally asking their answers.

### IV. Practice n° 2.

The teacher gives the students a handout to practice the structure of passive voice in simple future. There are 12 exercises incorrectly written in passive voice. The students must identify and correct the mistakes. The following sentences appear in the handout.

- a) The fight won't be forgot.
- b) The chicken will be cook tomorrow.



- c) My father's house will not destroyed next month.
- d) The terrorists will be catch.
- e) The culprits won't are find.
- f) Lorena will be phone later.
- g) All his money will is spend.
- h) In the summer dozens of swimmers won't be rescue.
- i) Our class will don't be finish at 11:30.
- j) 3 more books will are readed by the end of the week.
- k) Tomorrow the cup will no be touch.
- l) Everybody will is invite to my party.

After the students finish correcting the sentences, the teacher checks the students' answers by orally asking their answers.

## **Appendix D: Inductive group's lesson plans**

### **First session: Passive voice in simple past.**

#### I. Examples.

The teacher writes on the board the same examples that were used in the deductive group to show the transformation from active voice to passive voice in simple past. The teacher explains that the sentences on the left are in active voice and the sentences on the right in passive voice.

Throughout the class the teacher will guide the students towards the discovery of the rule to create sentences in passive voice in simple past. In case there are students with doubts regarding the use of passive voice, the teacher will encourage the rest of the students to solve their classmates' doubts. This methodology will be used throughout the class.

#### II. Practice n° 1.

The teacher gives the students a handout to practice the transformation from active voice to passive voice in simple past. The exercises are similar to the ones seen in the previous part of the class. The handout is the same handout given to the deductive group.

After the students finish transforming the exercises, the teacher checks the students' answers by orally asking their answers.

#### III. Practice n° 2.

The teacher gives the students a handout to practice the structure of passive voice in simple past. There are 12 exercises incorrectly written in passive voice. The students must

identify and correct the mistakes. The handout is the same handout given to the deductive group.

After the students finish correcting the sentences, the teacher checks the students' answers by orally asking their answers.

At the end of the class, the teacher asks the students to verbalize the rule governing sentences in simple past in passive voice.

**Second session: Passive voice in simple present.****I. Examples.**

The teacher writes on the board the same examples that were used in the deductive group to show the transformation from active voice to passive voice in simple present. The teacher explains that the sentences on the left are in active voice and the sentences on the right in passive voice.

Throughout the class the teacher will guide the students towards the discovery of the rule to create sentences in passive voice in simple past. In case there are students with doubts regarding the use of passive voice, the teacher will encourage the rest of the students to solve their classmates' doubts. This methodology will be used throughout the class.

**II. Practice n° 1.**

The teacher gives the students a handout to practice the transformation from active voice to passive voice in simple present. The exercises are similar to the ones seen in the previous part of the class. The handout is the same handout given to the deductive group.

After the students finish transforming the exercises, the teacher checks the students' answers by orally asking their answers.

**III. Practice n° 2.**

The teacher gives the students a handout to practice the structure of passive voice in simple present. There are 12 exercises incorrectly written in passive voice. The students must identify and correct the mistakes. The handout is the same handout given to the deductive group.

After the students finish correcting the sentences, the teacher checks the students' answers by orally asking their answers.

At the end of the class, the teacher asks the students to verbalize the rule governing sentences in simple present in passive voice.

**Third session: Passive voice in simple future.****I. Examples.**

The teacher writes on the board the same examples that were used in the deductive group to show the transformation from active voice to passive voice in simple future. The teacher explains that the sentences on the left are in active voice and the sentences on the right in passive voice.

Throughout the class the teacher will guide the students towards the discovery of the rule to create sentences in passive voice in simple future. In case there are students with doubts regarding the use of passive voice, the teacher will encourage the rest of the students to solve their classmates' doubts. This methodology will be used throughout the class.

**II. Practice n° 1.**

The teacher gives the students a handout to practice the transformation from active voice to passive voice in simple future. The exercises are similar to the ones seen in the previous part of the class. The handout is the same handout given to the deductive group.

After the students finish transforming the exercises, the teacher checks the students' answers by orally asking their answers.

**III. Practice n° 2.**

The teacher gives the students a handout to practice the structure of passive voice in simple future. There are 12 exercises incorrectly written in passive voice. The students must identify and correct the mistakes. The handout is the same handout given to the deductive group.

After the students finish correcting the sentences, the teacher checks the students' answers by orally asking their answers.

At the end of the class, the teacher asks the students to verbalize the rule governing sentences in simple future in passive voice.

**Appendix E: List of verbs given to the students prior to the implementation of the study**

<b>Base form</b>	<b>Simple past</b>	<b>Past participle</b>	<b>Spanish</b>
Answer	Answered	Answered	Responder
Ask	Asked	Asked	Preguntar
Bring	Brought	Brought	Traer
Buy	Bought	Bought	Comprar
Catch	Caught	Caught	Atrapar
Clean	Cleaned	Cleaned	Limpiar
Climb	Climbed	Climbed	Escalar
Collect	Collected	Collected	Coleccionar
Compose	Composed	Composed	Componer
Cook	Cooked	Cooked	Cocinar
Destroy	Destroyed	Destroyed	Destruir
Drink	Drank	Drunk	Beber
Drive	Drove	Driven	Manejar
Eat	Ate	Eaten	Comer
Enjoy	Enjoyed	Enjoyed	Disfrutar
Fail	Failed	Failed	Fallar, reprobar
Find	Found	Found	Encontrar
Finish	Finished	Finished	Terminar
Forget	Forgot	Forgotten	Olvidar
Give	Gave	Given	Dar
Invent	Invented	Invented	Inventar
Invite	Invited	Invited	Invitar
Kill	Killed	Killed	Matar
Know	Knew	Known	Saber, conocer
Learn	Learned/learnt	Learned/learnt	Aprender
Make	Made	Made	Hacer
Murder	Murdered	Murdered	Asesinar
Open	Opened	Opened	Abrir
Pass	Passed	Passed	Pasar, aprobar
Pay	Paid	Paid	Pagar
Phone	Phoned	Phoned	Llamarporteléfono
Plan	Planned	Planned	Planificar
Play	Played	Played	Jugar
Prepare	Prepared	Prepared	Preparar
Publish	Published	Published	Publicar
Put	Put	Put	Poner
Read	Read	Read	Leer
Rescue	Rescued	Rescued	Rescatar



Ride	Rode	Ridden	Andar (enbiciqueta, motocicleta)
Sell	Sold	Sold	Vender
Speak	Spoke	Spoken	Hablar
Spend	Spent	Spent	Gastar (dinero), pasar (tiempo)
Steal	Stole	Stolen	Robar
Take	Took	Taken	Tomar
Teach	Taught	Taught	Enseñar
Tell	Told	Told	Decir
Throw	Threw	Thrown	Tirar
Touch	Touched	Touched	Tocar
Understand	Understood	Understood	Entender
Visit	Visited	Visited	Visitar
Wash	Washed	Washed	Lavar
Watch	Watched	Watched	Mirar (por TV)
Water	Watered	Watered	Regar
Wear	Wore	Worn	Usar (ropa)
Write	Wrote	Written	Escribir

### Appendix F: Classification of posttest mistakes by the deductive group

Classification and number of mistakes made by the deductive group in the first item of the posttest.

Student	Wrong verb to be	Omission or wrong placement of by	Wrong past participle	Wrong subject	Omission of sentence	Omission of not
1	1	-	-	-	-	-
2	-	-	-	-	-	-
3	1	-	1	-	-	-
4	-	-	-	-	-	-
5	4	-	-	-	-	-
6	6	-	2	-	-	-
7	-	1	-	-	-	-
8	5	-	4	1	-	-
9	5	1	2	1	-	-
10	5	-	2	1	-	-
11	-	-	2	-	-	-
12	1	-	-	-	-	-
13	-	-	1	-	-	1
14	7	-	4	-	-	-
15	-	-	-	-	-	-
16	3	-	-	1	-	-
17	6	2	2	-	-	2
18	2	-	1	-	-	-

- Omission or wrong placement of by = 4 mistakes.
- Wrong past participle = 21 mistakes.
- Wrong subject = 4 mistakes.
- Omission of sentence = 0 mistakes.
- Wrong verb to be = 46 mistakes.
- Omission of not = 3 mistakes.

Total number of mistakes = 78

**Classification and number of mistakes made by the deductive group in section "wrong verb to be" in the first item of the posttest.**

<b>Student</b>	<b>Agreement</b>	<b>Wrong tense</b>	<b>Omission of verb to be</b>
<b>1</b>	-	1	-
<b>2</b>	-	-	-
<b>3</b>	-	-	1
<b>4</b>	-	-	-
<b>5</b>	2	2	-
<b>6</b>	-	6	-
<b>7</b>	-	-	-
<b>8</b>	-	5	-
<b>9</b>	-	5	-
<b>10</b>	-	5	-
<b>11</b>	-	-	-
<b>12</b>	-	1	-
<b>13</b>	-	-	-
<b>14</b>	2	5	-
<b>15</b>	-	-	-
<b>16</b>	-	3	-
<b>17</b>	2	3	1
<b>18</b>	1	1	-

- Agreement = 7 mistakes.
- Wrong tense = 37 mistakes.
- Omission of verb to be = 2 mistakes.

**Classification and number of mistakes made by the deductive group in the second item of the posttest.**

<b>Student</b>	<b>Wrong verb to be</b>	<b>Omission or wrong placement of by</b>	<b>Wrong past participle</b>	<b>Incohesive subject</b>	<b>Omission of sentence</b>
<b>1</b>	1	-	-	-	-
<b>2</b>	2	-	-	-	-
<b>3</b>	2	-	1	-	-
<b>4</b>	1	-	-	-	-
<b>5</b>	1	-	1	-	-
<b>6</b>	-	-	6	-	-
<b>7</b>	1	-	-	-	-
<b>8</b>	2	-	2	1	-
<b>9</b>	6	-	3	-	1
<b>10</b>	8	-	4	-	-
<b>11</b>	1	-	1	-	-
<b>12</b>	1	-	-	-	-
<b>13</b>	-	-	1	1	-
<b>14</b>	-	-	2	-	-
<b>15</b>	-	-	-	-	-
<b>16</b>	-	-	3	-	-
<b>17</b>	3	-	4	-	1
<b>18</b>	1	1	2	-	-

- Wrong verb to be = 30 mistakes.
- Omission or wrong placement of by = 1 mistake.
- Wrong past participle = 30 mistakes.
- Incohesive subject = 2 mistakes.
- Omission of sentence = 2 mistakes.

Total number of mistakes = 65

### Appendix G: Classification of posttest mistakes by the inductive group

Classification and number of mistakes made by the inductive group in the first item of the posttest.

Student	Wrong verb to be	Omission or wrong placement of by	Wrong past participle	Wrong subject	Omission of sentence	Omission of not
1	-	-	-	-	-	-
2	3	-	2	-	-	-
3	1	-	1	1	-	-
4	1	-	1	-	-	-
5	4	-	2	-	-	-
6	8	-	6	1	-	-
7	3	1	1	1	-	-
8	4	-	-	-	-	-
9	2	-	-	-	-	-
10	2	7	5	-	-	-
11	1	-	1	-	-	-
12	2	-	1	-	1	-
13	-	-	3	-	-	-
14	5	2	2	-	-	-
15	1	1	1	-	-	-
16	3	-	-	-	-	-
17	4	-	2	-	-	-
18	-	-	3	1	-	-

- Omission or wrong placement of by = 11 mistakes.
- Wrong past participle = 31 mistakes.
- Wrong subject = 4 mistakes.
- Omission of sentence = 1 mistake.
- Wrong verb to be = 44 mistakes.
- Omission of not = 0.

Total number of mistakes = 91

**Classification and number of mistakes made by the inductive group in section "wrong verb to be" in the first item of the posttest.**

<b>Student</b>	<b>Agreement</b>	<b>Wrong tense</b>	<b>Omission of verb to be</b>	<b>Addition of wrong auxiliary</b>
<b>1</b>	-	-	-	-
<b>2</b>	-	-	1	2
<b>3</b>	-	1	-	-
<b>4</b>	-	1	-	-
<b>5</b>	-	4	-	-
<b>6</b>	-	6	2	-
<b>7</b>	1	-	2	-
<b>8</b>	-	2	2	-
<b>9</b>	-	2	-	-
<b>10</b>	1	1	-	-
<b>11</b>	-	1	-	-
<b>12</b>	-	-	2	-
<b>13</b>	-	-	-	-
<b>14</b>	1	2	2	-
<b>15</b>	-	1	-	-
<b>16</b>	1	2	-	-
<b>17</b>	-	1	3	-
<b>18</b>	-	-	-	-

- Agreement =4 mistakes.
- Wrong tense =24 mistakes.
- Omission of verb to be =14 mistakes.
- Addition of wrong auxiliary = 2 mistakes.

**Classification and number of mistakes made by the inductive group in the second item of the posttest.**

<b>Student</b>	<b>Wrong verb to be</b>	<b>Omission or wrong placement of by</b>	<b>Wrong past participle</b>	<b>Incohesive subject</b>	<b>Omission of sentence</b>
<b>1</b>	-	-	1	-	-
<b>2</b>	-	-	6	-	-
<b>3</b>	-	-	2	-	-
<b>4</b>	2	-	3	-	-
<b>5</b>	2	-	2	-	-
<b>6</b>	9	-	6	-	-
<b>7</b>	1	-	2	-	-
<b>8</b>	2	-	2	-	-
<b>9</b>	1	-	3	-	-
<b>10</b>	3	-	9	-	-
<b>11</b>	2	-	1	2	1
<b>12</b>	4	-	3	-	-
<b>13</b>	-	1	6	-	-
<b>14</b>	5	-	2	-	1
<b>15</b>	-	-	3	-	1
<b>16</b>	3	4	3	-	-
<b>17</b>	4	-	2	-	-
<b>18</b>	-	-	4	-	-

- Omission or wrong placement of by = 5 mistakes.
- Wrong past participle = 60 mistakes.
- Incohesive subject = 2 mistakes.
- Omission of sentence = 3 mistakes.
- Wrong verb to be = 38 mistakes.

Total number of mistakes = 108