

A Concept-Based Approach to Teaching Spanish Mood

by

Eric Beus

A Thesis Presented in Partial Fulfillment
of the Requirements for the Degree
Master of Arts

Approved April 2013 by the
Graduate Supervisory Committee:

Barbara Lafford, Chair
Omar Beas
Álvaro Cerrón-Palomino

ARIZONA STATE UNIVERSITY

MAY 2013

ABSTRACT

This study investigates the effectiveness of the use of Concept-Based Instruction (CBI) to facilitate the acquisition of Spanish mood distinctions by second semester second language learners of Spanish. The study focuses on the development of Spanish mood choice and the types of explanations (Rule-of-Thumb vs. Concept-based) used by five students before and after being exposed to Concept-Based Instruction regarding the choice of Spanish mood following various modalities. The students in this study were presented with a pedagogical treatment on Spanish mood choice that included general theoretical concepts based on Gal'perin's (1969, 1992) didactic models and acts of verbalization, which form part of a Concept-Based pedagogical approach. In order to ascertain the effectiveness of the use of concept-based tools to promote the ability to use Spanish mood appropriately over time, a pre and post-test was administered to the group in which students were asked to respond to prompts containing modalities that elicit the indicative and subjunctive moods, indicate their level of confidence in their response, and verbalize in writing a reason for their choice. The development of these abilities in learners exposed to CBI was assessed by comparing pre and post-test scores examining both forms and explanations for the indicative and subjunctive modality prompts given. Results showed that students continued to rely on Rule-of-Thumb explanations of mood choice but they did expand their use of conceptually-based reasoning. Although the quantitative and qualitative analyses of the results indicate that most students did improve their ability to make appropriate mood choices (forms and explanations) after the CBI

treatment, the increased use of conceptually-based explanations for their mood choices led to both correct and incorrect responses.

TABLE OF CONTENTS

	Page
ABSTRACT.....	i
LIST OF FIGURES.....	v
LIST OF TABLES.....	vi
INTRODUCTION.....	1
THEORETICAL FRAMEWORK.....	5
Vygotsky and Conceptual Development.....	5
Didactic Maps.....	6
The Subjunctive Mood.....	8
Verbalization.....	12
REVIEW OF EMPIRICAL STUDIES.....	13
Mood and Modality.....	13
Syntactical Structure.....	14
Concept-Based Instruction.....	15
RESEARCH QUESTIONS.....	19
METHODOLOGY.....	20
Research Design.....	20
DATA ANALYSIS.....	25
Coding.....	25
Concept Based Instruction vs. Rule-of-Thumb.....	30
Presentation of data.....	31
RESULTS.....	32

Responses to Indicative Modalities.....	32
Responses to Subjunctive Modalities.....	39
Case Studies Indicative.....	53
Case Studies Subjunctive.....	72
Results Analyzed by Modality.....	89
DISCUSSION.....	93
CONCLUSION.....	95
REFERENCES.....	97
APPENDIX A.....	100

LIST OF FIGURES

Figure	Page
1. Didactic Map on Mood Choice.....	7
2. Didactic Map on Mood Choice.....	24

LIST OF TABLES

Table	Page
Table 1.....	10
Table 2.....	30
Table 3.....	33
Table 4.....	34
Table 5.....	35
Table 6.....	36
Table 7.....	37
Table 8.....	37
Table 9.....	38
Table 10.....	42
Table 11.....	44
Table 12.....	45
Table 13.....	46
Table 14.....	47
Table 15.....	48
Table 16.....	49
Table 17.....	50
Table 18.....	52
Table 19.....	54
Table 20.....	55

LIST OF TABLES

Table	Page
Table 21.....	59
Table 22.....	63
Table 23.....	67
Table 24.....	70
Table 25.....	71
Table 26.....	72
Table 27.....	76
Table 28.....	80
Table 29.....	84
Table 30.....	88

Introduction

The development of methodologies of instruction used in a foreign language classroom is an ongoing concern. Many scholars have developed theories and constructs that have been used to explain language learning such as Chomsky's Universal Grammar, Vygotsky's Zone of Proximal Development or Krashen's $i+1$, and have served as a basis for language teaching methodologies. Odlin (1994) points out that many of these theories, which range from a cognitive Universal Grammar perspective to a more interactionalist socio-cultural orientation, seek to define what grammar is and how learning it attributes to acquisition. Granted, as our knowledge of the complexity of language acquisition increases, new foreign language pedagogies arise that reflect that understanding. Many studies on Explicit, Implicit, task-based, content-based, Focus on Form and Focus on Forms approaches have suggested both positive and negative implications; however, as stated by Negueruela (2006, p.79), "One problem with these studies is that grammar presentation was not carried out in a consistent manner across the studies." Activities such as mechanical, meaningful and communicative, have been used to instill key grammatical points in learners of a certain language, but have lacked consistency on the presentation and tools used to teach the grammar. Again Negueruela (2006, p.79) offered his insight, "...rules were presented in stages with aspects of a structure explained in small steps accompanied by intervening practice or exposure activities"

As distinctive learning processes characterize each unique individual, the challenge of developing a universal method of instruction becomes manifest. Castro and Peck (2008) confirm that students differ in their preference of pedagogical approaches,

which complicates the use of a generalized teaching style. Castro and Peck stated that many beginning-level college language instructors struggle to convey the material in a way that meets the needs of each individual when based on a single type or method of instruction. Thus, a class that is composed of the exclusive use of communicative activities lacks the full range of activities that is essential to facilitate comprehension and acquisition (e.g., grammar explanations, reading and listening activities),

In an effort to simplify certain concepts of language, such as Spanish aspect and mood, so that the teaching of these concepts can be acquired by all students with their unique learning styles, scholars developed the *Rule-of-Thumb* approach. A *Rule-of-Thumb* approach has been used by many to present grammar to the student controlling for any misinterpretations caused by learning styles. This cut-and-dry approach guides the learner through a formulaic construct that provides them with the "correct" answer and enhances their overall competency when tasks are performed. However, as Negueruela (2008) stated, the goal of L2 teaching is not the attainment of an end-state of communicative competence, that is, the ability to store and use (new) information in the mind, but communicative development. Communicative development is the process of constructing meaning for others and for the self, as it relates to other understood concepts.

Though a Rule-of-Thumb approach is logical and has had many successes; however, it falls short in that it does not represent language as a living and changing entity that works as a tool to convey varying meanings, rather it serves as a strict pattern of unacceptable or acceptable constructions. Negueruela (2006), referring to the different methods of teaching including the Rule-of-Thumb approach, noted that a common

problem of consistency existed in the grammar presentation. This is understood to mean that over-simplified rules have caused incorrect uses of the Spanish mood, and have prohibited its use in places where it is optional. Whitley (1986) concurred with Negueruela and pointed out inadequacies of rule-based methodology, showing that these do not allow the students to decide for themselves what they want to express through their utterance, rather they force them to follow the stipulations presented by the rule.

Consequently, the current study will test the effectiveness of this Rule-of-Thumb approach against Concept-Based Instruction, which adheres to a Vygotskian (1978) perspective of interrelated procedures that allow students to go from the abstract to the concrete. The CBI approach will focus on the meaning of the utterance, rather than on slavish adherence to somewhat arbitrary rules of Thumb. Using a didactic map as a tool to guide students to think critically about what they want to get across, they will be taught to perceive language as a method for communication rather than a mathematical formula with which the correct answer is derived.

As will be seen in the review of literature, CBI is also not a new way of teaching language, nor is it the only way to achieve Vygotsky's conceptual understanding of the language, however the literature suggests that it is encouraging as a better method of presenting the grammatical categories of a language. Whereas other articles have provided research that contributes to the advantages of a CBI approach, this study will uniquely investigate the effects of CBI vs. Rules of Thumb on the development of Spanish mood via a quasi-experimental design. Furthermore, an analysis of the data gathered will allow the researcher to assess the effectiveness that CBI and a Rules of

Thumb approach have on the development of the Spanish mood, and, consequently, will offer discussions on any implications that come from the observations made.

Theoretical Framework

Vygotsky and Conceptual Development

The construction of concepts in the mind is the result of an interaction of an individual with the world. Each moment is analyzed and categorized in the mind to help a person accurately assess proper behavior, speech, and pragmatic protocol (Negueruela, 2006). Development occurs when these concepts are coupled with tools, whether they be concrete (such as a wrench) or abstract (such as thought), that enable the learner to create something that was impossible by themselves. Vygotsky (1978) offered the construct of the Zone of Proximal Development, which describes a potential ability of the learner that can only be achieved by the help of another. This other person guides the learner to reach a higher level of competence, thus allowing the learner to develop and reorganize the key concepts that enable such competence. It is important to note that Vygotsky understood that a coherent presentation by the expert is crucial for the potential growth of the learner.

Negueruela (2006) contended that a Rule-of Thumb approach is limited in developing higher levels of thinking that are essential for the acquisition of a foreign language or components of that foreign language. Negueruela (2006, p.81) added "keeping in mind that in the Vygotskian view, cognition and language activity are interconnected, learning a second language is a matter of not only learning new forms but also internalizing new or reorganizing already existing concepts." Basing their pedagogies on this conceptual thinking, Gal'perin (1969, 1989, 1992), Karpova (1977) and Talyzina (1981) have constructed didactic maps designed to promote this "proximal development."

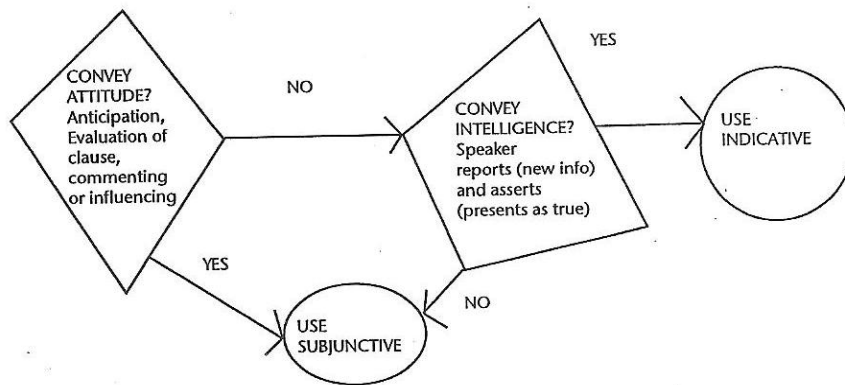
Didactic Maps

Theory on its own does not allow for acquisition, i.e., a theory that is intended to explain the acquisition of the subjunctive as a process cannot alone instill in the minds of the learner the concepts necessary for its use. Application activities and models have been used to present the material in a way that allows learners to make sense of the concept and implement it in their speech. The Rule-of-Thumb approach tries to accomplish this objective, allowing the students to process the complexities of the subjunctive and to that they can use the forms correctly. As mentioned previously, this approach does have benefits, but it lacks the important task of conceptual development, so that students develop the ability to determine appropriate usages for themselves. The concept-based approach as conceived by Vygotsky adds insight into how the mind functions as it interacts with the world around it. Also it can help to explain patterns that emerge from cognitive development, but proper instruction must be the means by which the foundations of the theory must be based.

Others, including van Compernelle (2011), have used CBI methods on a one-on-one basis that have proved useful. However, this pedagogical method has limitations when dealing with multiple learners. This study will use Gal'perin's didactic model to present the subjunctive mood to the learners to promote a conceptual development leading to acquisition. As in Negueruela (2006, p.81) "Gal'perin's program re-conceptualizes the subject matter of instruction, beginning with the development of an appropriate conceptual unit of instruction implemented as a didactic model that materializes in a coherent way the properties of what is to be learned." This study will present the learners with a didactic map that will allow them to answer key questions

about their choice for indicative or subjunctive in certain contexts. Figure 1 below is taken from Negueruela (2008), and constitutes an example of a didactic map.

Figure 1 Didactic Map on Mood choice (Negueruela, 2008, based on Whitley (2002))



In figure 1 the learner will start with the consideration of attitude. Attitude is to be understood as what the speaker wants to convey in his or her utterance, whether it be an evaluation of a previous clause by commenting on it or by reacting emotionally to that clause or idea, or by reporting new information and asserting the previous clause to be true. The mood of the verb in the sentence would be chosen based on these didactic guides and the concepts of mood associated with it. For example in the sentence *Lamento que estás/estés enfermo* ‘I am sorry that you are sick.’ the learner has a choice of either the subjunctive or indicative in the dependent nominal clause. If the student wishes to evaluate the idea that the speaker previously knew that their interlocutor was sick and simply comments on that sickness, then the subjunctive is used. On the other hand, if the speaker sees the sickness as newly received information, the speaker would

report this information as new and assert its use in the indicative rather than commenting on some information with an emotionally charged attitude. These charts, based on the conceptual understanding of attitude and asserting, allow the learner to guide their decision by what attitude they desire to express, not by following an arbitrary rule that the expression of attitude always requires the subjunctive. These didactic maps will in essence serve as a guide for verbalization processes (seen later in this study) and will serve to structure a concept based map of mood choice.

The Subjunctive Mood

The subjunctive mood is problematic for learners of Spanish in that there exist morpho-syntactical, lexical as well as semantic features that are difficult to express in English by the same means. Spanish has two constructs that deal with the choice of the subjunctive or indicative forms: *modality* and *mood*. Collentine (2010, p.40) defined modality as “any lexical or morphological expression of one’s commitment to the truth-value (commenting or asserting) of a statement.” This commitment can be conveyed by words that imply doubt such as *tal vez* or *quizas* or by adverbial conjunctions like *antes que*. These items of modality are the frontrunner for the level of assertion of truth by the speaker. Mood then, is expressed by verb inflection. For example, in the sentence *dudo que llegue la profesora a tiempo hoy.* ‘I doubt that the professor will arrive on time today’ the phrase *dudo que* emits a modality (doubt), and *llegue* reiterates the implied irreality of the outcome with a subjunctive mood. The subjunctive mood allows the speaker to make inferences and propose assumptions, doubts, and emotions through the simple morphological change in the verb. Conversely the indicative mood expresses more factual, sequential perspectives than its subjunctive counterpart. Thus, it is necessary that

the concept behind what choice is made be understood clearly, for a misconception can alter the meaning completely.

Collentine (2010, p.42) in a an overview of the subjunctive noted that "... learners do not readily notice the subjunctive when they are faced with it in comprehensible input, which is consistent with VanPatten's contention that learners tend not to attend to formal properties of language when they are focusing on processing meaning..." Fernandez (2008) argues that the learners should be given instruction that enables them to conceptually grasp the meaning of the subjunctive before asking them to use this complicated component via input-oriented activities. Gal'perin's didactic models aim to provide the learner with a conceptual foundation upon which to make a decision by providing the learner with meaningful concepts and possible decision paths to express their exact meaning. In this way the learner is free to make a nuanced choice, being well aware of the result in meaning, instead of be restricted to a strict rule that governs their choice for them.

The Rule-of Thumb approach to teaching the subjunctive is not a new construct. In fact, theorists such as Ramsey (1956) compiled lists to illustrate the rules that govern the subjunctive. He came up with thirty-four separate rules for choosing the subjunctive over the indicative mood. Indeed, a Rule-of-Thumb approach is unique in that it tries to account for all uses of the subjunctive in every situation and define it as distinct and separate. Others such as Gili Gaya (1973) narrowed the list, but only because his focus was on noun clauses in the subjunctive and excluded other uses. Lozano (1972) further reduced the list and proposed only two grammatical features that govern mood (optative, dubitative) . However insightful these theories may be, they have been simplified in order

to create a pedagogical approach that was easy to explain. The Rule-of-Thumb method provides the learner with just the basic reasons for the subjunctive and restricts him or her to that category. This X then Y approach prohibits the learner from fully acquiring the key concepts behind the subjunctive. In the table that follows based on the pedagogical explanation in *Plazas: Lugar de Encuentros* (2008), one sees the over-simplification of the subjunctive mood. Here are a few examples of the subjunctive mood and the contexts that require it.

Table 1

Examples of Different Modalities

Volition/influence	Yo quiero que tú vayas a la reunión
Emotion	Siento que el empleado no reciba un aumento
Doubt	Ella duda que Ramón termine el proyecto hoy
Negation/denial	No es cierto que Pedro sepa usar el fax.

In reaction against a Rule-of-Thumb approach Bolinger (1968) and Goldin (1974) honed in on a "speaker attitude" concept that analyzed presuppositions about a statement made between interlocutors governing the response in either indicative or subjunctive mood depending on the intended meaning of the speaker. As seen from Table 1 above, these explanations and examples are not wrong per se, but they do not promote a complete mood development in the learner. Seliger (1979) showed that indeed the rules presented in textbooks to help students understand when the subjunctive mood should be used, cannot account for contexts where the rules fail, and seem to have little effect on language performance. Furthermore Whitley (2002), with regards to the Rule-of-Thumb

theory, explained that mood selection in Spanish is a reaction reflecting the speaker's attitude toward a previously understood utterance. This reaction depends on the intent of the speaker and less so with automatic triggers that require a mood change.

Consequently, mechanical activities that require the student to conjure up the correct form of the Spanish mood within a sentence alone are ineffective in that they do not offer sufficient information to the learner with regards to a correct reaction to an assumption. These activities lack the ability used by that of a native speaker to exploit the contrast in order to convey different meanings.

This study will explore the relative efficacy of the Rule-of-Thumb and CBI approaches to teaching the Spanish subjunctive. To do so, it will focus on two aspects of the subjunctive that have to deal with its occurrence in noun clauses following the modalities of emotion and doubt in the main clause. These two modalities were chosen because native speakers have been shown to vary in their use of the indicative and subjunctive moods with these two modalities as explained in (Terrell, Baycroft and Perrone, 1987) as well as in García and Terrell (1974) The sentence *quiero que organices tu cuarto*, or *insisto en que vengas a la fiesta* never utilize the indicative mood in the dependent nominal clause. However, *Siento que ha/haya cometido un error*, or *No creen que viene/venga a la fiesta* consent to both modalities readily and therefore require a conscious decision made by the speaker. The flexibility of mood choice after modalities of emotion and doubt offer opportunities to teach the concept behind the choice, rather than be required to use one or the other by the circumstance in which they are found (e.g., volitions triggers subjunctive).

Verbalization

This study will follow an online technique based on concepts developed in Negueruela (2006) with regards to *verbalization*, the voicing (out loud) of strategies being used by the student at the time of the activity. This study will have students respond to context rich questions, choosing the right mood and then verbalize their reasons and thought process for why they chose one mood over another. Only the results from the Pre and Post-tests will be analyzed and all other verbalization data will be analyzed in later studies. The importance of the implantation of verbalization can be reiterated by Vygotsky (1986) who acknowledges that in order to completely form the conceptual mappings necessary for acquisition, functional speech must be a vital component. This speech, in accordance with communicative activities where tasks are achieved by speaking in context of the situation, must be focused to allow the learner to acquire those features that are important for internalizing meaningful connections. This process of internalization via verbalization allows the learner to freely create their own contextualized concepts for the use of the subjunctive, rather than by limiting barriers that define the context.

Gal'perin agreed that language can be used as a tool by which the students re-contextualize concepts as needed. Verbalization therefore is the process by which students express the concepts that guide them to their decision out-loud, which, in turn, helps them to internalize the concepts as it pertains to their point of view or attitude in a given situation. This attention-grabbing device connects the selection analysis of the attitude the speaker wants to express and allows the learner to develop and enhance their acquisition of the subjunctive.

Review of Empirical Studies

Mood and Modality

The subjunctive mood can be problematic for L2 learners of Spanish. This is especially true in cases where the L1 of the learner is a language that seldom uses or does not use at all verb morphology to inflect a change of mood. This is the case in English, where many argue that the verb does not indicate a mood change, and most others would agree that if it does exist it is not used often enough to be distinctive to the native speaker. Collentine (1995) studied the development of mood selection abilities and the problems associated with the acquisition of the Spanish mood, providing insights as to why it seems difficult for L2 learners of Spanish whose L1 is English, to acquire the subjunctive mood. Collentine studied the phases through which the learner goes while acquiring and learning a second language. These stages or phases account for the syntactic mental capacity a learner has in order to produce language. The study considered the pre-syntactic and the syntactic stages of the Spanish L2 learners by measuring the “morphological abilities or the accuracy with which they produce the indicative and the subjunctive in obligatory contexts” (Collentine, 1995, p. 123).

Collentine (1995) studied the accuracy by which the students used the subjunctive in noun clauses after the modalities of doubt, emotion, evaluation, volition, and a report of a command. Collentine argued that in order for the student to produce and acquire the subjunctive, the learner must be approaching the syntactic level of competency. This level was considered reached if the student could produce a high ratio of nouns-to-verbs, complex syntax, such as subordinate structures, and the use of appropriate morphology as evidenced in their ability to use the subjunctive mood in noun phrase.

Syntactic Structures

The study collected data by means of a conversational interaction with the students and by a controlled oral production task. The results of the study showed that 64% of the time the learner used simplistic syntactic structures such as single sentences or paratactic utterances. Also the remaining 36% of the time when the learner used a bi-clausal syntactic structure, in which the students tended to use a coordinate structure over that of a subordinate structure. The results showed that the accuracy of morphological structures in subordinated noun phrases was higher (90%) when the indicative was required and was significantly lower (34%) when the subjunctive was required. Finally the results showed that the ratio of nouns to verbs was high, reflecting that of a syntactic level of competency. Collentine concluded that the results indicated that intermediate-level students fell into an in-between point on the pre-syntactic/syntactic continuum. In conclusion, Collentine concluded his study by discussing the limitations of his research, proposing that although the learners in the majority of the cases did not produce language in syntactic stage, the lack of accuracy in the subjunctive perhaps stemmed from their lack of exposure or directed instruction to the formation of subordinate clauses. Thus he stated, “perhaps syntactic intervention would enhance learners’ abilities to manipulate word order within clauses; learners might also learn to parse complex utterances earlier than they normally do” (Collentine, 1995, p. 131).

Intermediate Learners

Continuing with Collentine’s (1995) line of inquiry, Kaufmann (2011) sought to obtain information regarding the relationship between the state of syntactic competency of intermediate-level L2 learner of Spanish and their control of Spanish mood. Kaufman

also studied the relative order in which these learners most accurately produced the subjunctive in response to modalities that would elicit a subjunctive mood (e.g., volition, doubt, emotion). The study consisted of L2 students (n=56) that had taken the equivalent of two years of Spanish in a university setting. These learners were not given a treatment; rather the purpose of the study was to ascertain their control of Spanish mood at that given point via an ex post facto inquiry. The students were given a test that elicited responses from the learner in the form of a noun phrase that would require an indicative or subjunctive mood following modalities of volition, doubt, and emotion. The results of the study showed that the students produced the indicative mood significantly more than the subjunctive mood when the target response was that of the subjunctive mood. These results concurred with Collentine's (1995) study that also found that English-speaking intermediate Spanish L2 learners were not at a syntactic stage that allowed for accurate production of the subjunctive/indicative moods.

Concept-Based Instruction

A few studies have used a Concept-Based approach to teaching a second language, but only Negueruela (2003) has used this approach with a focus on Spanish. He studied the effectiveness of CBI vs. a Rule-of-Thumb approach as it dealt with certain grammatical structures (aspect, mood, and conditional tense). Negueruela's (2003) study was submitted as an unpublished doctoral dissertation, and as such the dissertation was not made to the author. However, the results and insights found in Negueruela (2003) have been published in later articles Negueruela (2006, 2008); therefore the review of literature is taken from the latter two studies.

Negueruela (2006) examined the effectiveness of CBI specifically on the acquisition of the Spanish grammatical aspect (imperfect/preterit) by L2 learners of Spanish in an intermediate-level university course in Spanish composition and grammar using an analytical-heuristic approach. Twelve students participated in this semester-long study. Negueruela (2006) used communicative activities based on Di Pietro's (1987) strategic interaction approach and a didactic model to reinforce this concept-based approach and understanding of aspectual differences. Students were asked to keep a recorder and record themselves via an online "think-aloud" protocol to monitor their progress while doing their homework. In addition, Negueruela assessed the students' progress at the beginning and end of the semester by administering a written test based on Mayer's (1979) *Frog Goes to Dinner*, and reviewing their answers. Finally, Negueruela triangulated his assessment by having the students go back and comment on their answers in a retrospective task to give more feedback as to why they chose a particular aspect for the verb. The researcher used this qualitative method to provide rich information about the progress of the students.

The study found that most students achieved a better understanding of aspect, meaning that they more correctly interpreted the text and responded to it, and could produce preterit and imperfect forms in appropriate contexts more often. Although the study produced results that are encouraging, due to the small sample size (N=12) the study was somewhat limited, and cannot represent all students' potential for learning with this methodology. This study encouraged further research into the acquisition of different points of grammar in Spanish such as mood, to enhance reliability.

Negueruela (2008) studied the effect of CBI in the development of Spanish mood choices. This study used data from 12 university-level L2 learners of Spanish in their fourth semester of Spanish. The researcher implemented an analytical-heuristic approach to the study in order to explore all the data that could be produced from CBI, but focused his attention on Spanish mood. The study utilized a pre-experimental approach (simple pre-post test design) to gather data, as the researcher provided an assessment of the understanding of Spanish mood choices before and after the treatment. The assessments included written diagnostics of homework given to the students both at the beginning of the course and at the end. The students were asked to use online speak-aloud techniques to explain their mood choices while doing their homework, using the systemic model based on CBI provided by their instructor. The researcher used these homework assignments to assess the progress of the students' development of the understanding of the grammar point in question. During the semester, in-class instruction was provided to the students in the form of CBI using a didactic model as a tool to promote conceptual understanding of Spanish mood.

Negueruela (2008) analyzed the online recorded homework data qualitatively, providing excerpts from the assignments to illustrate the interpretation of the data. The majority of the data seemed to confirm the development of conceptual thinking and understanding of Spanish mood, although the findings were not always supportive of CBI, in that some students did implement Rule-of Thumb strategies, or did not correct their form.

Some of the limitations to the studies include the following: the sample size (12) did not allow for generalizability of the results; the study had no mention of a control

group to which the results could have been compared and contrasted to ensure internal validity of the study; the sample was not random, which for logistical reasons was not practical. However, due to the lack of randomness of the sample, the lack of a control group, and the small sample size the results are hard to attribute solely to CBI. This study was done in an in class environment, and no study up to date has taken this approach. Further research is needed to support or refute these findings.

Thus, to date no study has investigated the effectiveness of CBI vs. Rule-of-Thumb instruction on the acquisition of Spanish subjunctive, with the exception of Negueruela (2006, 2008). However, as was seen, the sample size, lack of control group, and environment are limitations of his studies that needed to be addressed. Although the proposed study originally aimed to address those issues, not enough data from the control group was able to be captured. As a result, our study (like Negueruela's) will take a quantitative and qualitative look at the development of mood distinctions in a group of intermediate Spanish learners who were exposed to a CBI instructional approach to the subjunctive. As a result, this study will provide data that can be compared with Negueruela's (2008) study regarding the relative use of Rule-of-Thumb vs. Conceptual explanations at the beginning and end of the CBI treatment. This study differs from that of Negueruela's in that it uses a written sentence completion and explanation elicitation test from students for the pre- and post-tests and it looks at the changes in the use of (in)correct forms with (in)correct explanations (Rule-of-Thumb vs. Conceptual) over time. In addition, the present study utilized subjects in an online course that utilized voiced-over PowerPoints to present the treatment.

Research Questions

This study will address the following research questions:

Prior to and subsequent to Concept-Based Instruction on Spanish mood distinctions, what verbal morphological forms are used by intermediate learners of Spanish in contexts following modalities that traditionally require or tend to elicit indicative and subjunctive forms?

How do learners' use of (in)correct forms accompanied by (in)correct explanations change over time when exposed to a CBI approach to Spanish mood selection?

In what ways does the type of reasoning (Rule-of-Thumb vs. Conceptual) that students apply to choosing those verbal forms change over time after students are exposed to a CBI approach to Spanish mood selection?

Methodology

The study looked at the relative effectiveness of CBI on the development of Spanish mood distinctions in intermediate learners of Spanish as a foreign language.

Subjects

The subjects that participated in the study were intermediate level (fourth semester) L2 learners of Spanish in a summer (6 week long) online course. Ideally, to represent a population more accurately, the sample would be randomly selected to help enhance internal and external validity of the study; however, due to logistical limitations the sample will consist of a non-random, in-tact group.

The study used a sample group consisting of approximately 5 male and 5 female participants between the ages of 17-30, however due to mortality issues and lack of completion by some of the participants only data from 3 female participants and 2 male participants' will be analyzed.

Research Design, Instruments, and Procedures

To assess the effect that CBI had on the development and production of the Spanish mood, the design for this study consisted of a pre-experimental Intact group design consisting of a pretest (O1) a treatment (X) followed by a post-test (O2) for the one group exposed to CBI. The researcher also used a demographic questionnaire to allow the researcher to control for any moderating variables such as the presence of heritage speakers or those who have studied abroad, which could influence the results of the study.

After the groups were adjusted, the researcher gave a pre-test to the participants to assess their ability and understanding of the Spanish mood distinctions following

modalities of the indicative mood, as well as doubt, volition, and emotion. The pretest was composed of a series of elicited sentence-completion tasks based on Kaufman (2011). These tasks elicited a response in which the participants were given a sentence constructed in a way to elicit a completion of the sentence using a noun phrase in either the indicative or subjunctive moods. In the present study Indicative mood modalities are those that only allow the indicative mood to follow (*creo que, observa que*) while Subjunctive mood modalities are defined as though that either require (volition *quiero que*) or allow (doubt *no creo que* and emotion *me alegra que*) the subjunctive.

QUESTION 1:

People involved: Los pasajeros and el aeromozo

Scenario: In a plane, a steward (el aeromozo) is standing up in front of the plane's passengers (Los pasajeros), who sit in their seats and look very bored.

Un pasajero: ¿Por qué están aburridos todos?

Pregunta: ¿Qué observa el aeromozo?

Respuesta: El aeromozo observa que_____.

The modalities eliciting the indicative mood in the pre- and post-tests focused on matter of fact statements that showed opinions and knowledge of the speakers through both a direct representation of the voice of the speaker (*él cree que...*) or by means of impersonal statements (*es evidente que...*). Both types of presentation of the indicative modalities were given in context allowing the student to accurately determine the corresponding mood to be used.

The modalities eliciting the subjunctive mood composed of three types: volition, doubt, and emotion. Each modality combined 3 or 4 types of main clauses (*no creo*

que..., *pide que...*, *se lamenta de que...*) that elicited a response in a subordinate clause to which the student would produce a verb that went along with the context and the correct verb form depending on the mood they chose. These types of clauses were to elicit a mood choice with a pertinent explanation as to why it would be the subjunctive or why it would not, and were present in both the pre and post-tests

The students then provided a written answer that incorporated the subjunctive or the indicative mood and explained their reasons through written verbalization as to why they chose one over the other.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?)

In addition, the current study also used a Likert scale to measure the learners' certainty about their use of the indicative or subjunctive moods.

How sure are you that the answer you gave is correct?

DEFINITELY SURE REASONABLY SURE SOMEWHAT UNSURE

1

2

3

DEFINITELY UNSURE

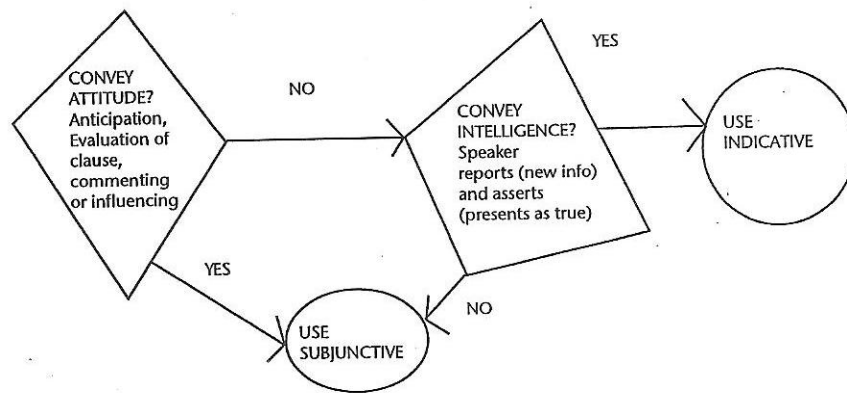
4

These last two questions provided the researcher with any conceptual knowledge that the participants have on mood selection and assessed their level of certainty about their answers prior to the treatment.

After the pre-test, these online students were given instruction via voiced-over PowerPoint presentations on mood selection using a Concept-based instructional approach. The modalities associated with the use of both moods were introduced to the students in the CBI learning modules. This treatment consisted of identifying the concepts behind the modalities presented by the speaker and how these modalities could trigger either the indicative or subjunctive.

The group was taught mood selection in noun clauses following modalities that elicited both the indicative (certainty, observation) and the subjunctive (emotion, volition, and doubt) with instruction designed to promote a fuller understanding of the use and meaning of Spanish mood in those contexts and concept-based activities.. The researcher taught these concepts using a didactic chart created by Negueruela (2008), based on Whitley (2002) (see Figure 2), that was used as a tool for students to guide them on their decision making of the appropriateness of the Indicative or Subjunctive depending on the contexts. The researcher used a podcast (voiced-over Power Point) for the instructional part of the mood explanations to ensure that all online students received the exact same CBI explanations.

Figure 2 Didactic Map on Mood choice (Negueruela, 2008, based on Whitley (2002))



The students engaged in 30 minute sessions with the instructor via podcasts where grammar lessons on mood using a CBI were given. Students were asked to do homework assignments, geared to practice Spanish mood, using the concepts learned via the podcast treatments and didactic map, but they were also required to use a think-aloud approach or verbalization (as used in Negueruela, 2006, 2008), in which they recorded themselves or wrote in the spaces provided, as they decided which Spanish mood choices they made in the contexts provided in the activities. This online protocol allowed the researcher to better evaluate the development of students' concept-based knowledge throughout the course. At the end of the course the students were given a post-test similar to the pre-test that allowed the students to complete sentences containing indicative and subjunctive prompts, fully explain their use and understanding of the Spanish mood, and indicate their level of certainty with their answer. For the present study, only the pre- and post-test data will be analyzed; the data collected from students throughout the course as they did their homework will be analyzed in a future study.

Data Analysis

Coding. The presentation of the data will be divided into four categories taking into account the diverse ways the students presented their responses. These categories are correct forms (C.F.), incorrect forms (I.F.), correct explanations (C.E.), and incorrect explanations (I.E.). When considering the appropriate form to be provided in the prompts given in the pretest and post-test the researcher focused on the mood chosen by the student (e.g., indicative verb forms following indicative prompts were considered to be correct while subjunctive verb forms following indicative prompts were counted as incorrect). Inappropriate verb/subject agreements or tenses on conjugated verbs were not the focus of this study and therefore forms were not marked as correct or incorrect based on those criteria. However, the use of infinitives (non-conjugated verbs) or lone participles (*estudiando*) was considered incorrect.

In cases in the post-test where the student chose to use an indicative mood to a subjunctive prompt, the researcher had to base the correctness of the form on the explanations of the students. Due to a conceptual based instruction, and the didactic maps implanted in the grammar lesson for the treatment, students were shown that some cases could be acceptable as both the indicative or subjunctive mood. For example, *no cree que llega a la fiesta*, or *no cree que llegue a la fiesta*, can and do exist as possible answers, however the perspective of the speaker is different in each case. The former is a case, as is seen in the model of the didactic map above in Figure 2, where the speaker is providing new information to the context and does not react/express uncertainty to a known idea; whilst the latter reports the information as “known” and expresses uncertainty with regard to the “known” idea. Therefore it is necessary that an explanation based on this

conceptual reasoning be considered for form accuracy when determining if a choice is right or wrong, because form alone cannot give sufficient data. The results for these cases were marked as incorrect or correct if the student followed or did not follow the conceptual instructions and didactic maps for their choices. These cases were only permissible with modalities of doubt and emotion, where there is variation among NSs regarding the use of mood with these modalities. With indicative modalities, subjunctive forms were considered incorrect as NSs would not use them in those contexts. Also, indicative forms used with the modality of volition were also considered incorrect as NSs do not employ those forms with that modality.

When considering the appropriateness of an explanation to prompts in both the pretest and post-tests, the researcher deemed answers that were based on concepts as well as Rule-of-Thumb explanations as correct if they appropriately explained the use of a particular mood in the context of the modality in question. Explanations that were illogical or did not explain the appropriate reasoning for the choice of a mood were considered incorrect. Examples of each circumstance (combination of a correct or Incorrect form with a correct or incorrect explanation) found in the pre and post-tests are provided below.

Coding Examples

Correct Form with Correct Explanation

Student 1

Scenario: A young man (el novio) is picking up his girlfriend (María) for dinner.

His reservation is for 7:00 P.M. He looks at his watch; it is now 7:05 P.M.

María: Nos vamos a perder la reservación.

Pregunta: ¿Qué es evidente?

*Respuesta: Es evidente que **Se van a perder la reservación.***

*What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) **I chose indicative because it was a statement of certainty.***

Above the student was able to provide a correct form (indicative) as well as a logical response based on criteria for choosing the indicative mood.

Student 2

Correct Form with Incorrect Explanation

Empleado: No queremos estudiar más.

Pregunta: ¿Qué escucha el profesor?

*Respuesta: El profesor escucha **que tú no quieres estudiar. Él sabe que tú necesitas estudiar mucho ser un estudiante bueno.***

*What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) **Once again, I opted to use the indicative because it is a present-tense conversation not meeting the general guidelines for subjunctive use.***

In this case the student provided the verb conjugated in the indicative mood, but was unable to provide a response regarding an appropriate reasoning for a mood choice. The appropriate choice is indicative because it follows a verb of perception (*escuchar*)

not because it is in the present tense, or (by process of elimination) does not meet the criteria for the use of the subjunctive.

Student 5

Incorrect Form with Correct explanation

Scenario: An instructor is upset while talking to his student.

El instructor: ¡No debes hablar por teléfono en mi clase!

Pregunta: ¿Por qué está enojado el instructor?

Respuesta: El instructor está enojado porque El instructor está enojado porque el estudiantes hablar por teléfono en su clase.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) I thought this was more indicative, because the instructor tells the student he or she should not be talking on the phone in his class.

Here the student was able to explain that the response merited an indicative mood, but was unable to produce a conjugated verb reflecting that understanding. This tendency was very rare in the data.

Student 3

Incorrect Form with Incorrect Explanation

Scenario: A man (Antonio) tries to pay for dinner with his credit card. With a look of fear on his face, he pulls his empty hand out of his pocket.

Antonio: ¡Oh no! ¡No encuentro mi billetera!

Pregunta: ¿Qué cree Antonio?

Respuesta: Antonio cree que Antonio cree que no encuentre su billetera.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) “Cree que” indicates doubt so I used subjunctive.

In this example the student was unable to recognize and produce the appropriate mood or form. The explanation is also incorrect, due to an inappropriate mood choice in this context and the transfer of English assumptions to the Spanish output. English-speaking students often assume that the Spanish verb *creer* indicates possible doubt, as the verb ‘believe’ does in English.

Incorrect Form with and due to Incorrect Explanation

Student 5

People involved: La familia de Ana

Scenario: Ana and her family just found out that their dog died.

Ana: Mi perro murió

Question: ¿Qué es triste?

Answer: Es triste que... Es triste que el familia perro murió.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) Although sadness is an emotion, I’m going with indicative, because the answer states the truth of a situation.

This is an example of a situation that, although rare, could allow for both an indicative and subjunctive mood (NSs often use both moods with modalities of emotion). . This example was marked as incorrect for both form and explanation, because the student was unable to account for an accurate reasoning to promote her use of the indicative mood. The student when following the didactic map in Figure 2 chose to allow the speaker to not comment on or show attitude (emotion) to the situation and continued to the next step. However in the reasoning “the answer stated the truth of the situation” the student should have chosen “no” to lead her to use the subjunctive due to the fact that no new information was provided and that the idea of the dog being dead was already known as “truth”

Concept Based vs. Rule-of Thumb. The data will be divided into either a Concept Based or a Rule-of-Thumb explanation for mood choice. A concept-based explanation will be one based on keys concepts that are used to determine the mood choice in the sentence such as attitude of the speaker. A Rule-of-Thumb approach is one based on rules that govern and require a specific mood choice, such as subject change, emotion, volition, and doubt. A more exhaustive explanation of each is presented in the research portion of the document. Examples of each from the data are given below

Concept-Based.

“I chose Indicative, because the answer reflected the fact or belief of the professor and the student.”

Rule-of-Thumb.

“I chose to use the indicative in this context because the conversation is taking place in the present and my response contains neither volition, emotion, doubt, or

negation, the common uses of the subjunctive.” The latter “process of elimination” approach was seen frequently in the data. A fact based approach was also implemented in choosing the indicative mood such as, “Since it is fact that the passengers are bored I used indicative.” These examples are not limited to one student, but were seen throughout all students.

Presentation of Data. The quantitative data will be presented in the form of frequency tables to demonstrate participants’ use of various morphological verbal forms following modalities that elicit the indicative and subjunctive moods in both the pre- and post-tests as well as the distribution of explanation types (Rule-of-Thumb vs. Conceptual) in each of the four category combinations used (correct form & correct explanation, correct form and incorrect explanation, incorrect form and correct explanation, incorrect form and incorrect explanation).

The qualitative data from students’ explanations of their mood choices in both the pre- and post-tests will be presented when discussing the case studies in order to show any changes that may have occurred in individual students’ understanding of the concepts underlying mood choice and in the sophistication of their expression of that reasoning in their native tongue (English). The data will also be analyzed qualitatively to gauge the syntactic development of the students over time and the appropriateness of their mood choices.

Results

The data obtained from the study provided rich quantitative and qualitative information about the acquisition of mood distinctions in five intermediate students and students' ability to verbalize their mood selection reasoning. The following section presents data on student responses to prompts that allow the indicative, those that allow the subjunctive, and case studies of the mood choices of the five informants in this study.

Responses to Indicative Mood Modalities

Table 2 below presents the number of times indicative mood modalities were presented to the participants in the pre and post-test (50 times in the pretest and 45 in the post-test) as well as the number (raw number and percentages) and types of verb forms given for the indicative modalities presented.

Table 2

Responses to the Indicative Modalities Presented in the Pre- and Post-Tests

Types of Responses	Indicative	Subjunctive	Infinitive	Other	Total
Pre-test (N=45)	24 (53%)	14 (31%)	5 (11%)	2 (5%)	45
Post-test (N=41)	30 (73%)	6 (15%)	0 (0%)	5 (12%)	41
Total (N=86)	54 (63%)	20 (23%)	5 (6%)	7 (8%)	86

The Chi Square value of 9.97 indicates that the results are significant at the .05 alpha level with 3 degrees of freedom.

The results from Table 2 show that the changes made overtime when dealing with indicative modalities were significant. This shows that students were able to change their understanding and develop key concepts that helped them answer more accurately and provide more complete explanations. The data from Table 2 indicate changes in the students' use of various verbal forms after modalities requiring the indicative (belief [*creer que*], observation [*observar que*], and knowledge [*saber que*]). The data show that the

students demonstrated an increased use of indicative responses to the indicative modality prompts from the pretest (53%) to the post-test (73%). By the same token, many students chose to overuse the subjunctive form after indicative prompts more in the pre-test (31%) than in the post-test (15%). In addition, the use of the infinitive (11%) with indicative prompts in the pre-test disappeared completely in the post-test. This increase in the use of correct indicative forms demonstrates a development in their ability to accurately assess the context and choose the correct form required after indicative modalities. This increased awareness is also evident in the students' responses and explanations of their responses to the prompts discussed below.

Table 3 presents data regarding students' level of certainty about their responses to indicative modality prompts.

Table 3

Students' Level of Certainty about their Responses to Indicative Modality Prompts in the Pre- and Post-Tests.

Indicative	1 (definitely sure)	2 (Reasonably sure)	3 (somewhat unsure)	4 (unsure)
Pretest (N=45)	6	35	4	0
Post-test (N=41)	12	20	2	7

Table 3 shows that over time the students were able to identify with more certainty that the indicative mood was the correct choice to an indicative modality prompt. The table data indicate that some students developed more confidence that their response was correct, choosing to answer *definitely sure* 12 times in the post-test compared to only 6 times in the pretest. This confidence and assuredness complements their increased ability to provide correct indicative forms in the appropriate contexts as seen in table 2. However, some students became more unsure about their responses from

the pretest (4) to the post-test (9), perhaps indicating a more pensive process when deciding their choice of mood (i.e., their exposure to conceptual reasoning may make them think more about their answers, as they may not feel they can rely on their less complex Rule-of-Thumb approaches as they did before). Nevertheless, this increased critical thought process could explain why, as will be seen in table 4, the students' responses became generally more accurate both in form and explanation over time.

Table 4 shows the student data produced for the four combinations of the accuracy of form choice and explanations for the indicative modalities in both the pre and post-tests.

Table 4

Accuracy of Form Choice and Explanation for Indicative Modality Responses in the Pre- and Post-Tests.

	C.F. and C.E.	C.F. and I.E.	I.F. and C.E.	I.F. and I.E.	Total
Pre-Test	25 (56%)	3 (8%)	1 (2%)	16 (36%)	45
Post-Test	28 (68%)	5 (12%)	1 (2%)	7 (17%)	41
Total	53 (62%)	8 (9%)	2 (2%)	23 (27%)	86

The Chi Square value of 5.14 indicates that the results are not significant at the .05 alpha level with 3 degrees of freedom.

The results overall from Table 4 did not show significant changes from the pretest to the post-test. However, the students did consistently show an increased ability to produce accurate forms and explanations in the indicative mood more often in the post-test than the pretest. For instance when comparing the pretest to the post-test in all categories the percentage rate overall favors more correct forms and correct explanations. In the case where a C.F. was used with an I.E. the results show that the post-test saw more cases, but a qualitative analysis will prove these cases to be considered as an increase. IF and C.E. did not change and just stayed constant at 2%, but can be seen as an

anomaly. I.F and I.E. decreases from 36% to 17% and supports the overall increase seen. However, in order to see if the instructional treatment had an influence on the types of explanations given (Rule-of-Thumb vs. Conceptual, research question 2), the following tables will present a break-down of each individual column (representing various combinations of [in]correct forms and explanations) according to the type of explanation given by the students to indicative prompts.

Table 5 presents data showing the relative use of Rule-of-Thumb vs. Conceptual explanations with Indicative modality prompts in the pre- and post-tests.

Table 5

Rule-of-Thumb vs. Conceptual Explanations Given with Indicative Modality Prompts in the Pre and Post-Tests

Indicative Modality: (Overall)	Rule-of-Thumb	Concept	Total
Pre-Test	39 (87%)	6 (13%)	45
Post-Test	23 (56%)	18 (44%)	41
Total	62 (72%)	24 (28%)	86

The Chi Square value of 9.96 indicates that results are significant at the .05 alpha level with 1 degree(s) of freedom.

When comparing the pretest to the post-test with regards to concept-based and Rule-of-Thumb based explanations the results of Table 5 show significant changes. Answers containing Rule-of-Thumb responses decreased from 87% to 56% over time while answers based on Concept-based reasoning increased from 13% to 44% from the pre-test to the post-test. The following tables will present a breakdown of these results according to the particular combinations of (in)correct forms and explanations in the four categories used in this analysis.

Table 6 contains data regarding the relative use of Rule-of-Thumb vs. Conceptual explanations given for uses of correct forms and correct explanations with indicative modality prompts in the pre- and post-tests.

Table 6

Rule-of-Thumb vs. Conceptual Explanations Given for Uses of Correct Forms and Correct Explanations with Indicative Modality Prompts in the Pre and Post-Tests

Indicative Modality: C. F and C.E.	Rule-of-Thumb	Concept	Total
Pre-Test	23 (92%)	2 (8%)	25 (47%)
Post-Test	16 (57%)	12 (43%)	28 (53%)
Total	39 (74%)	14 (26%)	53

The Chi Square value of 8.25 indicates that the results are significant at the .05 alpha level with 1 degree(s) of freedom.

Table 6 shows significant changes from the pretest to the post-test when comparing C.F.s and C.E.s together in both the pre and post-test. The total number shows that in the pretest, students were only able to produce accurate forms and explanations 47% of the time whereas in the post—test, that number improved to 53% of the time. This increase in correct forms and correct explanations correlates with the results in Table 5 with an increase of concept-based reasoning in the post-test. The results in Table 6 indicate a much higher use of Rule-of-Thumb explanations in the pretest (92%) when compared to conceptual (8%) reasoning for mood choices following indicative modality prompts. Although data from the post-test show that students still rely mostly on Rule-of-Thumb responses (57%) their conceptual responses increased from 8% to 43%. This indicates that students began to incorporate the conceptual approach given to them in the treatment to a fuller extent as the semester progressed.

Table 7 shows the relative distribution of Rule-of-Thumb and Conceptual approaches when students used correct forms with incorrect explanations in the pre- and post-tests.

Table 7

Rule-of-Thumb vs. Conceptual Explanations Given for Uses of Correct Forms and Incorrect Explanations with Indicative Modality Prompts in the Pre- and Post-Tests

Indicative Modality: C.F. and I.E.	Rule-of-Thumb	Concept	Total
Pre-Test	2 (67%)	1 (33%)	3
Post-Test	3 (60%)	2 (40%)	5
Total	5 (62%)	3 (38%)	8

The data show that although students favored a Rule-of-Thumb approach with their incorrect explanations in both the pre- and post-test, there was slightly more use of a conceptual approach over time (33-40%) and a slight decrease in the Rule-of-Thumb approach (67-60%) when providing incorrect explanations. It is important to note that the number of correct responses with incorrect explanations increased in the post-test, demonstrating that the students became more aware of their explanations, and perhaps began to think more critically (although incorrectly) about their responses. Their incorrect answers could be due to them over-thinking their choices now that they have a conceptual way of reasoning as well as Rule-of-Thumb approaches.

Table 8 illustrates the students' responses using Rule-of-Thumb vs. Conceptual Explanations in the incorrect forms with correct explanations category.

Table 8

Rule-of-Thumb vs. Conceptual Explanations Given for Uses of Incorrect Forms with Correct Explanations with Indicative Modality Prompts in the Pre- and Post-Tests

Indicative Modality: I.F. and C.E.	Rule-of-Thumb	Concept	Total
Pre-Test	0	1 (100%)	1
Post-Test	0	1 (100%)	1
Total	0	2 (100%)	2

The data show that only one token in this category was seen in the pre- and post-tests. The rarity of this combination may indicate that students' do not provide correct explanations when they are unable to produce the correct form. This may indicate that incorrect explanations may or may not accompany correct forms, but correct explanations are almost always associated with correct forms.

Table 9 presents data on the relative use of Rule-of-Thumb vs. Conceptual explanations given for uses of incorrect forms with incorrect explanations with indicative modality prompts in the pre- and post-tests

Table 9

Rule-of-Thumb vs. Conceptual Explanations Given for Uses of Incorrect Forms with Incorrect Explanations with Indicative Modality Prompts in the Pre- and Post-Tests

Indicative Modality:			
I.F. and I.E.	Rule-of-Thumb	Concept	Total
Pre-Test	14 (88%)	2 (12%)	16
Post-Test	4 (66%)	2 (37%)	6
Total	18 (82%)	4 (18%)	22

The Chi Square value of 1.021 indicates that the results are not significant at the .05 alpha level with 1 degree(s) of freedom.

The results of a Chi Square test show that the results over time for Table 9 are not significant. However, the data gives support of important progress made by the students in the post-test. Table 9 shows that the use of Rule-of-Thumb explanations decreases over time from 88% to 66% when students provide an incorrect explanation for an incorrect form. Conversely the use of conceptual explanations also increases (12-37%) when comparing the pretest to the post-test. This decrease in Rule-of-Thumb and increase in Conceptual explanations when students use incorrect forms with incorrect explanations

indicate that students are more aware of conceptually-based explanations but may or may not apply them correctly.

In general (as seen in Table 4) the data show that over time students were able to produce accurate forms with regard to indicative modalities more often. By the same token, the number of responses containing conceptually-based explanations increased over time. In essence, the relative use of concept-based methods to assess the context of the sentence for Spanish mood effectively saw positive results in correctly producing the indicative mood, and also in the students' ability to more fully understand the reasons why the indicative is used.

Responses to Subjunctive Mood Modalities

As was seen in the indicative analysis the results here will be broken up into tables based on responses that elicited Correct Forms (C.F.) with Correct Explanations (C.E.), Correct Forms (C.F.) with Incorrect Explanations (I.E.), Incorrect Forms (I.F.) with Correct Explanations (C.E.), and Incorrect Forms (I.C.) with Incorrect Explanations (I.E.). Examples of these responses with modalities that allow the subjunctive mood are given below.

Correct Form with Correct Explanation

Student 1

Scenario: An elderly lady (la viejita), who is apparently confused, looks at a baby boy (el niño) who is wearing glasses. The glasses look like ladies' glasses.

La viejita: ¿Ese niño lleva lentes de mujer?

Pregunta: ¿Qué no es cierto?

Respuesta: No es cierto que El niño lleve lentes de mujer.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) **I chose subjunctive because there was a statement of negation.**

In this example the student was able to produce a correct form from the prompt given with a reason based on a Rule-of Thumb approach.

Correct Form with Incorrect Explanation

Student 4

Scenario: A number of people are at a fair. In the foreground, Carla is talking with her daughter (su hija).

Tía Rita: ¿Por qué no me traes una bebida, hija?

Pregunta: ¿Qué pide Carla?

*Respuesta: Carla pide que **Carla pide que Tía Rita le traiga una bebida.***

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) **I used subjunctive because the subject changed.**

The example above shows that the student produced a correct form, but was unable to give a complete explanation. The explanation although correct, is incomplete in that it could be applied for indicative and subjunctive moods.

Incorrect Form with Correct Explanation

Student 5

Scenario: A boy (Antonio) is running from the front door of his house to his school bus. His mom (Ana) notices that the book bag he is carrying is open and various papers are falling out as he runs.

Ana: No va a ser un buen día para Antonio

Pregunta: ¿Qué no cree Ana?

Respuesta: Ana no cree que Ana no cree que Antonio tuviere un buen día.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) Ana saw Antonio struggling to make the bus, and assumed that running late would ruin his entire day. I thought this was subjunctive.

The example above shows an irregular form that technically is a subjunctive form (future subjunctive), but was not known to the students and therefore was marked as incorrect. The explanation is correct in that it should be in the subjunctive mood. The student uses a concept-based approach to govern the answer, focusing on the perspective of the speaker.

Incorrect Form with Incorrect Explanation

Student 3

Scenario: Ana and her family just found out that their dog died.

Ana: Mi perro murió.

Pregunta: ¿Qué es triste?

*Respuesta: Es triste que **Es triste que su perro murió.**
 What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) **It is fact that her dog died, so I used indicative.***

In the last example the student was unable to produce a subjunctive form with an emotional attitude in the prompt, and subsequently could not construct a pertinent explanation as to their choice. This Rule-of-Thumb based answer based on knowledge of a “fact” was seen often in the modalities for the indicative mood, and in some cases was correctly applicable. However, as can be seen from the example, this type of explanation can lead to incorrect mood choices after subjunctive modalities.

Table 10 shows the percentages and the types of responses to modalities that allow the subjunctive mood.

Table 10

Responses to the Subjunctive Modalities Presented in the Pre- and Post-Tests

Types of Responses	Indicative	Subjunctive	Infinitive	Other	Total
Pre-test	16 (32%)	29 (58%)	4 (8%)	1 (2%)	50
Post-test	16 (20%)	34 (64%)	2 (4%)	1 (2%)	53
Total	32 (31%)	63 (61%)	6 (6%)	2 (2%)	103

The Chi Square value of 1.958 indicates that the results are not significant at the .05 alpha level with 3 degree(s) of freedom.

The results in Table 10 proved to be not significant over time. However, the table does show that when comparing percentages of verbal morphology used subjunctive modalities in the pretest and the post-test, students were able to create responses in the subjunctive mood more often in the post-test. Their responses using the indicative mood

also decreased over time from the pretest (32%) to the post-test (20%), and complements their use of the subjunctive over time from the pretest (58%) to the post-test (64%). Students also became more aware of the need to conjugate the verb in the subordinate clause by decreasing their use of the infinitive form from the pretest (8%) to the post-test (4%).

As was seen with the indicative mood data the students did improve over time choosing the appropriate mood more often in the post-test (64%) than in the pretest (58%), albeit a small improvement. A qualitative analysis will provide more insights into the details of this improvement. As can be seen from the table, it is interesting to note that the infinitive form was used six percent of the time with modalities requiring the subjunctive mood and five percent of the time with modalities requiring the indicative. This shows a consistent tendency of some students to introduce an infinitive verb into the subordinate clause rather than conjugate the verb. These tendencies reflect the data found in Collentine's (1995) study, showing that students tended to be unable to repeatedly produce the appropriate subordinated verb conjugation in a dependent clause. This according to Collentine (1995), was not perhaps due to a complete lack of cognitive ability, but rather a lack of exposure to subordinate clauses and the subjunctive mood found in them.

Evidence of this is found in the data from Table 10 in that the students' percentages of correct forms in the appropriate contexts did improve over time in both the indicative and subjunctive moods. This increase in accurate production of the subjunctive mood can be seen when analyzing each specific modality.

Table 11 shows the breakdown of the answers to the three modalities presented in

the pre and post-tests. The data show shows that with regards to volition there was hardly any change from the pretest to the post-test; the percentages of indicative vs. subjunctive use stayed the same and only small changes in the percentages of infinitive and other forms are seen over time. This may be due to the more predictable association of subjunctive forms with volition modalities in the speech of NSs.

Table 11

Morphological Forms Provided to Subjunctive Mood Modalities of Volition, Doubt, and Emotion in the Pre- and Post-Tests

Subjunctive					
Modality: Volition	Subjunctive	Indicative	Infinitive	Other	Total
Pretest	10 (50%)	7 (35%)	1 (5%)	2 (10%)	20
Post-test	10 (50%)	7 (35%)	2 (10%)	1 (5%)	20
Subjunctive					
Modality: Doubt	Subjunctive	Indicative	Infinitive	Other	Total
Pretest	11 (58%)	5 (26%)	0	3 (16%)	19
Post-test	12 (63%)	5 (26%)	0	2 (11%)	19
Subjunctive					
Modality: Emotion	Subjunctive	Indicative	Infinitive	Other	Total
Pretest	6 (40%)	7 (47%)	2 (13%)	0	15
Post-test	11 (73%)	4 (27%)	0	0	15

While virtually no changes were seen in the relative use of the indicative and subjunctive modes over time with the modality of volition, a change in the use of these two moods over time is seen after the modalities of both doubt and emotion.

Where the modalities containing doubt only show minimal increases in the use of the subjunctive from the pre to the post-test (58% to 63%), modalities involving emotion showed a marked increased use of subjunctive forms (40% to 73%). The modalities involving doubt in the pre and post-test include, among others, prompts with the verb *dudar* and the impersonal phrase *no es cierto que*. In the present study these two prompts engendered responses that pattern more like those of volition (not much difference in the

relative use of indicative and subjunctive forms over time). However, as seen in the review of literature (Whitley 2002), verbs containing emotion such as *siente que*, or *teme que*, or *es triste que* offer more allowance of both mood choices. In addition, the CBI treatment focused a great deal on the possibility of the use of both moods after modalities of emotion and less freedom to use both moods after volition and doubt. This might account for such an increase in subjunctive use with emotion when compared to the other subjunctive modalities used (volition and doubt). Because a Concept-based approach bases its teaching on more of a flexible allowance of mood choice, this flexible CBI approach may seem more useful to the students when dealing with emotion, rather than doubt or volition (two modalities with which NSs tend to favor subjunctive forms).

Table 12 below illustrates the level of confidence the students had in their responses with modalities that allow the subjunctive mood.

Table 12

Students' Level of Certainty about Their Responses to Subjunctive Modality Prompts in the Pre- and Post-Tests

Subjunctive	1 (Def. Sure)	2 (Reasonably Sure)	3 (Somewhat Sure)	4 (Unsure)
Pretest (N=50)	10	28	10	2
Post-test (N=50)	14	24	5	7

When dealing with modalities that allow the subjunctive mood the overall confidence of the student ('Definitely sure' response) rises from the pretest (10) to the post-test (14). This increase in certainty mimics the results found in Table 3 that saw the results in indicative modalities. It can be said that over time the students became increasingly confident in their choices of answers to Subjunctive modality prompts. Likewise, in the post-test the students also showed signs of more uncertainty in some

things, perhaps implying a more critical consideration of the questions at hand on their part. This mirrors the data found in the indicative analysis in tables 3 and 7 where the students began to over-think, or think more critically about their response.

Table 13

Accuracy of Form Choice and Explanation for Subjunctive Modality Responses in the Pre and Post -tests.

	C.F. and C.E.	C.F. and I.E.	I.F. and C.E.	I.F. and I.E.	Total
Pretest	19 (41%)	7 (15%)	1 (2%)	19 (41%)	46 (100%)
Post-test	33 (63%)	1 (2%)	3 (6%)	15 (29%)	52 (100%)
Total	52	8	4	34	98

The Chi Square value of 10.62 indicates that the results are not significant at the .05 alpha level with 3 degree(s) of freedom.

Table 13 shows that the results as a whole were not significant. However the individual columns of data do give insight to the progress made by each the students. For example Table 13 shows that students over time were able to produce the correct form with accurate explanations more often in the post-test (63%) than in the pretest (41%). In those columns that show correct forms with no regard to the explanation, the data shows that the students were able to produce the correct form 65% of the possible times in the post test versus 57% of the possible times in the pretest. When considering the explanations alone, students were able to fabricate a correct explanation 69% of the time in the post-test versus only 43% of the time in the pretest. This confirms that the students' critical thinking and cognitive abilities as a whole did improve over time .

Table 14 below presents data on the relative use of the two types of explanations that govern student responses to subjunctive modality prompts in the pre- and post-tests, namely: Rule-of-Thumb and Concept-Based approaches.

Table 14

Rule-of-Thumb vs. Conceptual Explanations Given with Subjunctive Modality Prompts in the Pre and Post-Tests

Subjunctive Modality: (Overall)	Rule-of-Thumb	Concept	Total
Pretest	41(89%)	5 (11%)	46
Post-test	29 (58%)	21 (42%)	50
Total	70 (73%)	26 (27%)	96

The Chi Square value of 10.73 indicates that the results are significant at the .05 alpha level with 1 degree(s) of freedom.

The data from Table 14 shows that the results were significant over time. As was the case in the indicative modalities, the students were able to produce more concept-based responses in the post-test after being exposed to the CBI treatment. Overall, however Rule-of-Thumb type answers were still used in the majority of explanations given (58%) in the post-test. It is important to note that even though some answers were based on Rule-of-Thumb reasoning in the post-test, many features of a concept based approach were also mentioned in those same explanations. The case-studies will give more insight to mix of approaches found in students' post-test data.

Table 15 below shows the use of specific modalities when responding correctly both in terms of the forms used and the explanations given.

Table 15

Correct Rule-of-Thumb vs. Conceptual Explanations given for uses of Correct Forms with Subjunctive Modalities of Volition, Doubt and Emotion in the Pre-and Post-Tests

Subjunctive Modality: Volition			
C.F. and C.E.	Rule-of-Thumb	Concept	Total
Pre-Test	6 (100%)	0	6
Post-Test	7 (70%)	3 (30%)	10
Total	12 (86%)	2 (14%)	16
Subjunctive Modality: Doubt			
C.F. and C.E.	Rule-of-Thumb	Concept	Total
Pre-Test	9 (100%)	0	9
Post-Test	8 (73%)	3 (27%)	11
Total	16 (89%)	2 (11%)	20
Subjunctive Modality: Emotion			
C.F. and C.E.	Rule-of-Thumb	Concept	Total
Pre-Test	4 (100%)	0	4
Post-Test	7 (58%)	5 (42%)	12
Total	10 (77%)	3 (23%)	16

Table 15 shows that in the pretest no uses of conceptual reasoning were found when the students correctly gave an appropriate form and explanation. However, when this concept-based reasoning is seen in the post-test, the results show an increase of such explanations by the students in all three modalities. Modalities of emotion prompted the highest number of uses of conceptual reasoning and also saw the most drastic increase of subjunctive forms (compared to doubt and volition) from the pre to the post-test, as is seen in Table 11.

The data show that in the pretest the students were able to generate a correct form coupled with a correct explanation only 19 times, and all of those explanations were based on Rules of Thumb. The post- test data show that students were able to produce correct forms with correct explanations 32 times, with only 69% percent being Rule-of-

Thumb explanations. Students in the post-test increased their correct concept-based explanations with correct forms from 0% -21% over time. This increase of concept-based reasoning reflects the increase of correct explanations -as described in Table 13.

Table 16 analyzes the students' responses regarding Rule-of-Thumb vs. Conceptual explanations to the prompts that elicited correct forms with incorrect explanations.

Table 16

Incorrect Rule-of-Thumb vs. Conceptual Explanations Given for uses of Correct Forms with Subjunctive Modalities of Volition, Doubt and Emotion in the Pre-and Post-Tests

Subjunctive Modality: Volition			
C.F. and I.E.	Rule-of-Thumb	Concept	Total
Pre-Test	3 (100%)	0	3
Post-Test	1 (100%)	0	1
Total	4	0	4
Subjunctive Modality: Doubt			
C.F. and I.E.	Rule-of-Thumb	Concept	Total
Pre-Test	3 (100%)	0	3
Post-Test	1 (100%)	0	1
Total	4	0	4
Subjunctive Modality: Emotion			
C.F. and I.E.	Rule-of-Thumb	Concept	Total
Pre-Test	1 (100%)	0	1
Post-Test	0	0	0
Total	1	0	1

Table 16 shows that modalities of volition and doubt evidenced the largest number of correct forms with incorrect explanations (4 each), compared with the emotion modality that only showed one occurrence of C.F and I.E. These data also indicate that the only type of approach used when correct forms were accompanied by incorrect explanations was one based on Rules-of-Thumb. Thus, the data show that in these cases students were able to produce the correct form, but could not produce a

correct or complete explanation as to the mood choice, and resorted to (incorrect) Rule-of-Thumb reasoning.

Table 17 in contrast to Table 16 shows the results of responses that used incorrect forms, but produced correct explanations.

Table 17

Correct Rule-of-Thumb vs. Conceptual Explanations Given for Uses of Incorrect Forms with Subjunctive Modalities of Volition, Doubt and Emotion in the Pre-and Post-Tests

Subjunctive Modality: Volition I.F. and C.E.	Rule-of-Thumb	Concept	Total
Pre-Test	0	0	0
Post-Test	0	1 (100%)	1
Total	0	1	1
Subjunctive Modality: Doubt I.F. and C.E.	Rule-of-Thumb	Concept	Total
Pre-Test	0	1 (100%)	1
Post-Test	0	1 (100%)	1
Total	0	2	2
Subjunctive Modality: Emotion I.F. and C.E.	Rule-of-Thumb	Concept	Total
Pre-Test	0	0	0
Post-Test	1 (100%)	0	1
Total	1	0	1

In cases where the student incorrectly came up with the form, but was able to come up with the right explanation, the data shows that a conceptual reasoning was prevalent. Out of the four cases, three used conceptual reasoning to explain their answer (what mood should be used), but still could not provide the correct form of the verb. This perhaps has more to say about their unfamiliarity with subjunctive form conjugations than with the concepts that allow for the subjunctive mood to be used. More of this will be explained in the case studies. An example of this is seen here.

Scenario: A boy (Antonio) is running from the front door of his house to his school bus. His mom (Ana) notices that the book bag he is carrying is open and various papers are falling out as he runs.

Ana: No va a ser buen día para Antonio.

Question: ¿Qué no cree Ana?

Answer: Ana no cree que... **Ana no cree que Antonio tendrá un buen día.**

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) **The answer is Subjunctive, because it express how Ana thinks Antonio's day will be impacted by his morning.**

Table 18 show cases of incorrect forms and explanations give with subjunctive modality prompts.

Table 18

Incorrect Rule-of-Thumb vs. Conceptual Explanations Given for uses of Incorrect Forms with Subjunctive Modalities of Volition, Doubt and Emotion in the Pre-and Post-Tests

Subjunctive Modality: Volition I.F. and I.E.	Rule-of-Thumb	Concept	Total
Pre-Test	7 (78%)	2 (22%)	9
Post-Test	4 (50%)	4 (50%)	8
Total	11	6	17
Subjunctive Modality: Doubt I.F. and I.E.	Rule-of-Thumb	Concept	Total
Pre-Test	1 (50%)	1 (50%)	2
Post-Test	0	3 (100%)	3
Total	1	4	5
Subjunctive Modality: Emotion I.F. and I.E.	Rule-of-Thumb	Concept	Total
Pre-Test	7 (78%)	2 (22%)	9
Post-Test	1 (25%)	3 (75%)	4
Total	8	5	13

The data show that students used incorrect forms with incorrect explanations mostly following volition prompts, followed by those of emotion and doubt. This may be due to the students' lack of awareness of various forms of volitional prompts. In other words, students can fail to produce an accurate form in the subjunctive mood after a volitional prompt simply because they do not recognize that the structure is one of volition. For example in the sentence *La policía no permite que se patine aquí*, students may have had a hard time identifying the act of volition in the verb *permitir*, and therefore are unable to recognize the need of the subjunctive mood in the subordinate clause. However, the doubt (*dudo que*) and emotion (*me alegra que*) prompts may

have seemed more straightforward to them. Nonetheless, modalities of volition experienced a complete split of uses from conceptual to rule-based, perhaps inferring that students developed an understanding of both approaches and were able to apply either one to this specific modality.

The data in Table 18 also show that the number of incorrect forms accompanied by incorrect Rule-of-Thumb explanations decreased in emotion, doubt, and volition modalities over time. However, the number of incorrect Conceptual explanations increased over time with modalities of volition, doubt, and emotion. As noted earlier, it is possible that after exposure to the CBI treatment, students became more aware of conceptually-based explanations and wanted to put their new knowledge into practice, but did not always do so appropriately. Thus, the data suggest that an increase in critical thinking (supported by CBI approaches) can lead to incorrect explanations if the students over-think their answers with their new found conceptual tools.

Case Studies

A qualitative case study analysis of the association of (in)correct forms with (in)correct explanations for indicative and subjunctive prompts in the pre- and post-tests will serve to illuminate the understanding of mood choice held by the students before and after the treatment, and will provide a means whereby to measure any increase in awareness and development of the Spanish mood over time.

Table 19 below shows each student's responses to the prompts eliciting an indicative mood choice in both the pre and post-tests.

Table 19

Table Showing Number of Individual Responses in Each Category for Indicative Modalities

	Student No.	C.F. and C.E.	C.F. and I.E.	I.F. and C.E.	I.F. and I.E.
Pretest	Student 1	6 (67%)	0	0	3 (33%)
	Student 2	8 (89%)	1 (11%)	0	0
	Student 3	6 (67%)	0	0	3 (33%)
	Student 4	0	1 (11%)	0	8 (89%)
	Student 5	6 (67%)	1 (11%)	1 (11%)	1 (11%)
	Total	26 (57%)	3 (8%)	1 (2%)	15 (33%)
Post-Test	Student 1	8 (89%)	0	0	1 (11%)
	Student 2	8 (89%)	0	0	1 (11%)
	Student 3	7 (78%)	1 (11%)	0	1 (11%)
	Student 4	0	1 (11%)	0	4 (44%)
	Student 5	5 (56%)	3 (33%)	1 (11%)	0
	Total	28 (68%)	5 (13%)	1 (2%)	7 (17%)

Table 19 shows an increase of development in students' responses to indicative prompts eliciting correct forms with correct explanations; however, this increase is not evidenced in the data from every students. Students 1, 2 and 3 show an increase in accuracy of form and explanations, whereas students 4 and 5 show no increase or even a little decrease in accuracy of mood choice and explanation over time. An analysis of individual responses is provided below in order to better understand the development of the understanding of mood choice and explanations for those choices over time.

Table 20 shows the different types of responses by Student 1 for indicative modalities in the pre and post-tests with the relative use of Rule-of-Thumb or Concept-based reasoning.

Table 20

*Student 1 Types of Explanations Used with Indicative Modalities in the Pre-Test
Uses of Correct forms with Correct Explanations with Indicative Modalities*

	Rule-of-Thumb	Concept	Other	Total
Pretest	6 (100%)	0	0	6
Post-test	6 (75%)	2 (25%)	0	8
Total	12	2	0	14

Uses of Incorrect Forms with Incorrect Explanations with Indicative Prompts

	Rule-of-Thumb	Concept	Other	Total
Pretest	2 (67%)	1 (33%)	0	3
Post-test	0	1 (100%)	0	1
Total	2	2	0	4

Student 1

Table 19 shows that in the pretest Student 1 was able to produce correct forms with correct explanations 67% of the time, and produced incorrect forms with an incorrect explanation 33% of the time. Table 20 demonstrates that in the pretest Student 1's explanations consisted of Rule-of-Thumb based reasoning in all but one case as can be seen in the examples below.

Correct Forms and Correct Explanations (pretest)

Scenario: A young man (el novio) is picking up his girlfriend (María) for dinner.

His reservation is for 7:00 P.M. He looks at his watch; it is now 7:05 P.M.

María: Nos vamos a perder la reservación.

Pregunta: ¿Qué es evidente?

Respuesta: Es evidente que Se van a perder la reservación.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in

this context?) **I chose indicative because it was a statement of certainty.**

Incorrect Form with Incorrect Explanation (pretest)

Scenario: A professor (un profesor) stands in front of a group of students. Off to the side of the students, the professor (el profesor) listens with a concerned look on his face.

Empleado: No queremos estudiar más.

Pregunta: ¿Qué escucha el profesor?

*Respuesta: El profesor escucha que **los estudiantes no quieran estudiar más.***

*What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) **I chose subjunctive because the students were stating their desire.***

In the two examples provided from the pretest, Student 1 based his answer on a Rule-of-Thumb approach that produced incorrect forms and explanations. Student 1 implemented a concept based approach in a response that elicited a correct form and explanation, but was unable to consistently apply those explanations to the right form. The post-test shows both correct and incorrect forms incorporating concept based approaches.

Correct Form and Correct Explanation (post-test)

Scenario: A professor (un profesor) stands in front of a group of students. Off to the side of the students (los estudiantes), the professor (el profesor) listens with a concerned look on his face.

A student: No queremos estudiar más.

Question: ¿Qué escucha el profesor?

*Answer: El profesor escucha que... **Los estudiantes no quieren estudiar más.***

*What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) **I chose the indicative because the professor is making an observation.***

In this example the student states the perspective of the professor and relies less on a fact that requires the indicative.

As seen in Table 19, in the post-test Student 1 was able to incorporate a Conceptually-based reasoning into his answers accounting for 33% of the time. This increase in CB reasoning corresponds with the increase in C.F.s and C.E.s from 67% to 89% of the time. This increase can be seen not only in forms but also in a more complete understanding of mood choices with regards to indicative modalities. An example of this development is seen below.

Incorrect Form with Incorrect Explanation (post-test)

*People involved: **El novio y María***

Scenario: A young man (el novio) is picking up his girlfriend (María) for dinner.

His reservation is for 7:00 P.M. He looks at his watch it is now 7:05 P.M.

María: Nos vamos a perder la reservación.

Question: ¿Qué es evidente?

*Answer: Es evidente que... **Los novios no ven a perder la reservación.***

*What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) **I chose subjunctive because the statement was an opinion.***

In these post-test examples, the student chooses the indicative mood based on a conceptual understanding (observation). The choice was not based on a process of elimination or a subset of triggers that required a certain mood (volition, desire), but was predicated on the point of view of the speaker. In this case the answer was no longer dependent and constrained to a Rule-of Thumb approach, but rather was deduced using a conceptual awareness of the speaker's view and attitude. This contrasts with this student's pre-test response to the same prompt (*El profesor escucha que..*) to which this student responded *los estudiantes no quieran estudiar más*, accompanied by an incorrect explanation (.I chose subjunctive because the students were stating their desire.). Thus, in this example, Student 1 was able to improve more consistently his choice of correct mood and correct explanation over time when using a Concept-based (over a Rule-of-Thumb) approach.

Student 3

Like Student 1, Student 3 made positive gains with indicative modalities from the pretest to the post-test.

Table 21 gives a breakdown of the types of responses given for indicative modalities with their relative use of Rule-of-Thumb and Concept-based explanations.

The data show that in the pretest the majority of Student 3's responses to indicative prompts elicited correct forms with correct explanations. However, an incomplete understanding of the reasons to use Spanish the indicative mood was evident. The example below illustrates this point.

Table 21

Student 3 Types of Explanations Used with Indicative Modalities in the Pre-and Post-Tests Uses of Correct forms with Correct Explanations with Indicative Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	6 (100%)	0	0	6
Post-test	8 (100%)	0	0	8
Total	14	0	0	14

Uses of Incorrect Forms with Incorrect Explanations with Indicative Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	3 (100%)	0	0	3
Post-test	0	0	0	0
Total	3	0	0	3

Uses of Correct forms with Incorrect Explanations with Indicative Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	0	0	0	0
Post-test	1 (100%)	0	0	1
Total	1	0	0	1

Incorrect Form and Incorrect Explanation (Pre-Test)

Scenario: A man (Antonio) tries to pay for dinner with his credit card. With a look of fear on his face, he pulls his empty hand out of his pocket.

Antonio: ¡Oh no! ¡No encuentro mi billetera!

Pregunta: ¿Qué cree Antonio?

Respuesta: Antonio cree que Antonio cree que no encuentre su billetera.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) **“Cree que” indicates doubt so I used subjunctive.**

In this case, interference from the native language is likely to be the source of an incorrect assumption of *creer que* implying doubt, as the phrase “He believes” in English may imply some doubt on the part of the subject of the verb. The student showed in this response that his or her awareness of Spanish mood selection had not been fully developed and was unable to express an accurate response and or explanation regarding the prompt at hand.

Like Student 1, Student 3 was able to increase accuracy in forms over time. However, unlike student 1, Student 3 based all of his answers on a Rule-of-Thumb based reasoning in both the pre and post-tests. An example of this is seen below

Correct Form and Correct Explanation (Pretest)

Scenario: In a plane, a steward (el aeromojo) is standing up in front of the plane's passengers (Los pasajeros), who sit in their seats and look very bored.

Un pasajero: ¿Por qué están aburridos todos?

Pregunta: ¿Qué observa el aeromojo?

*Respuesta: El aeromojo observa que **El aeromojo observa que los pasajeros son aburridos.***

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) **Since it is fact that the passengers are bored I used indicative.**

Correct Form and Correct Explanation (post-test)

Scenario: *In a plane, a steward (el aeromozo) is standing up in front of the plane's passengers (los pasajeros), who sit in their seats and look very bored.*

Passenger: *Por qué están aburridos todos?*

Question: *¿Qué observa el aeromozo?*

Answer: *El aeromozo observa que... **El aeromozo observa que los pasajeros estaban aburridos.***

*What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) **It is fact that the passengers are bored so I used indicative.***

In the examples above it is interesting to note that the forms used from the pretest to the post-test changed from present indicative to imperfect. However, the explanations given were nearly identical. Both of the correct explanations cited a factual reasoning for mood choice. This actually is a characteristic of a conceptual understanding, which would account for the “certainty” of the situation and therefore assess this state; however, both sentences were coded as examples of Rule-of-Thumb based reasoning due to a limited perspective of the concept. Just because a statement or idea is seen as true does not necessarily make it an indicative mood, such is the case with some verbs of emotion. For instance, in the sentence *me alegro de que haya llegado*, the speaker asserts the proposition of the interlocutor having arrived as true and known, and simply expresses an emotion with regards to it. The examples from the student seem to point to an

automatic Rule-of-Thumb that produces the indicative in every case involving facts, and, therefore, was not seen completely as conceptually-based although some characteristics of this are evident. Perhaps a better example of this over-generalized rule with regards to certainty and fact can be seen by this same student in response to a subjunctive modality.

Scenario: Ana and her family just found out that their dog died.

Ana: Mi perro murió

Question: ¿Qué es triste?

*Answer: Es triste que... **Es triste que el perro de Ana y su familia murió.***

*What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) **This is an expression that states fact, so I used indicative.***

Here the student bases his answer on the same type of rule as was found in the indicative mood cases, and incorrectly applies the rule to the case above using the indicative mood. Overall Student 3 was able to produce accurate forms with indicative prompts, but was unable to accurately or completely explain a reason for the choice.

Student 3 was able to improve his choice of correct mood and correct explanation over time when using a Concept-based (over a Rule-of-Thumb) approach.

Student 2

As can be seen from Table 19 Student 2 was able to maintain a high level of accuracy with indicative modalities over time (89% use of correct forms and correct explanations in both the pre- and post-tests). Table 22 shows the results of form and explanation choices for indicative prompts in both the pre and post-tests.

Table 22

*Student 2 Types of Explanations Used with Indicative Modalities in the Pre-Test
Uses of Correct forms with Correct Explanations with Indicative Modalities*

	Rule-of-Thumb	Concept	Other	Total
Pretest	7 (88%)	1 (12%)	0	8
Post-test	2 (25%)	6 (75%)	0	8
Total	9	7	0	16

Uses of Incorrect Forms with Incorrect Explanations with Indicative Prompts

	Rule-of-Thumb	Concept	Other	Total
Pretest	0	0	0	0
Post-test	1 (100%)	0	0	1
Total	1	0	0	1

Uses of Correct Forms with Incorrect Explanations with Indicative Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	1(100%)	0	0	1
Post-test	0	0	0	0
Total	1	0	0	1

Table 22 shows that Student 2 based her responses on Rule-of-Thumb explanation 88% of the time in the pretest and changed to basing her answers 75% of the time on Concept-based explanations in the post-test. This change of reasoning did not affect the overall (percentage of correct forms with correct explanations (89% in both the pre- and post-tests) but gains were seen in the development of the type of reasoning used. Examples of this development can be seen below.

Correct Form with Incorrect Explanation (Pre-test)

Empleado: No queremos estudiar más.

Pregunta: ¿Qué escucha el profesor?

Respuesta: El profesor escucha que tú no quieres estudiar. Él sabe que tú necesitas estudiar mucho ser un estudiante bueno.

*What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) **Once again, I opted to use the indicative because it is a present-tense conversation not meeting the general guidelines for subjunctive use.***

This type of answer was typical for almost all students at some point in their pretest. Their answer was correct in form and that they knew it was the indicative, but they lacked a complete understanding of why their answer was correct. The example above seems to reflect a Rule-of-Thumb understanding in that the student used a process of elimination of the requiring triggers (general guidelines) of the subjunctive use, and deduced that if none of those triggers were found, the indicative mood must be the only choice. This incomplete development of their understanding of Spanish mood was demonstrated through various responses from this student. For instance, Student 2 shows this Rule-of-Thumb based process of elimination even in cases where the answer and explanation were correct.

Correct Form with Correct Explanation (pretest)

Scenario: In a plane, a steward (el aeromozo) is standing up in front of the plane's passengers (Los pasajeros), who sit in their seats and look very bored.

Un pasajero: ¿Por qué están aburridos todos?

Pregunta: ¿Qué observa el aeromozo?

*Respuesta: El aeromozo observa **que algunas personas usan sus teléfonos.***

Nosotros no podemos despegar hasta todos apagan sus teléfonos.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) **I chose to use the indicative in this context because the conversation is taking place in the present and my response contains neither volition, emotion, doubt, or negation, the common uses of the subjunctive.**

The example above is contrasted with the example below from this student's data in the post-test. The example below shows great development made by the student over time regarding the incorporation of a Concept-based explanation for this same prompt.

Correct Form with Correct Explanation (post-test)

Scenario: *: In a plane, a steward (el aeromozo) is standing up in front of the plane's Passengers (los pasajeros), who sit in their seats and look very bored.*

Passenger: *Por qué están aburridos todos?*

Question: *¿Qué observa el aeromozo?*

Answer: *El aeromozo observa que todos los pasajeros no están en sus asientos.*

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) **I chose to use the indicative mood because the sentence I've formed indicates that the flight attendant has made an observation that not all of the passengers are in their seats, which is a statement which conveys intelligence rather than attitude.**

The examples above show a dramatic change in development overtime with regards to explaining mood choices with indicative modalities. In the pretest the student 2 used a Rule-of-Thumb type answer with process of elimination tactics to answer the question. This type of rule-based approach can cause problems as was seen with Student 3. Student 2 also erroneously attributed this process of elimination to contexts that did not allow for it. In the context of volition with the prompt *Margarita pide*, the student responded “que Sr. López trae un café.” She explained her answer as, “This is an intelligent statement not reflecting influence/volition/doubt/emotion and therefore I used the indicative mood.” Again an over-generalized rule contributed to an incorrect form and explanation. In the post-test the student incorporated a Concept-based approach that focuses on the attitude of the speaker and the perspective he is trying to relay “ a statement that conveys intelligence rather than attitude.

Student 5

Table 23 presents all data for Student 5 for indicative prompts. Like Student 3, Student 5 was unable to produce more C.F.s with C.E.s in the post-test than in the pre-test (Table 19). As can be seen in Table 19 although Student 5 did produce more correct forms as a total in the post-test (89%) than in the pretest (79%), 33% of these correct forms were accompanied by incorrect or incomplete explanations in the post-test.

Table 23

*Student 3 Types of Explanations Used with Indicative Modalities in the Pre-Test
Uses of Correct forms with Correct Explanations with Indicative Modalities*

	Rule-of-Thumb	Concept	Other	Total
Pretest	4 (67%)	2 (33%)	0	6
Post-test	1 (20%)	4 (80%)	0	5
Total	5	6	0	11

Uses of Correct Forms with Incorrect Explanations with Indicative Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	0	1 (100%)	0	1
Post-test	1 (33%)	2 (67%)	0	3
Total	1	3	0	4

Uses of Incorrect forms with Correct Explanations with Indicative Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	1 (100%)	0	0	1
Post-test	0	1 (100%)	0	1
Total	1	1	0	2

Uses of Incorrect forms with Incorrect Explanations with Indicative Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	0	1(100%)	0	1
Post-test	0	0	0	0
Total	0	1	0	1

Correct Form with Incorrect Explanation (post-test)

Scenario: A man (**Antonio**) tries to pay for dinner with his credit card. With a look of fear on his face, he pulls his empty hand out of his pocket.

Carlos: Oh no! No encuentro mi billetera!

Question: ¿Qué cree Antonio?

Answer: Antonio cree que... **Antonio cree que el perdió su billetera.**

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) **I chose Subjunctive, because the answer speculates to the reasoning behind Antonio's action and emotion.**

The example above was not made often by the student, accounting for just a few appearances in the data. This perhaps shows a conflict in the student's development with regards to the Spanish mood choices. The student accurately chose the indicative mood for the form, but was unable to match his explanation with his answer. This could be explained by simply assuming that the student meant to use a subjunctive form, but mistakenly chose the indicative or vice versa. It was again found that students in some cases began to over analyze their decisions and created incorrect forms and explanations mixing in both Concept and Rule-of-Thumb-based explanations. Student 5 generally was able to produce correct forms but often struggled to give a complete explanation for the answer he provided. Another example of Student 5's underdevelopment with regard to indicative prompts is evident in cases of and incorrect form with an incorrect explanation.

Rather than following the prompts presented and providing a conjugated verb in either an indicative or subjunctive mood, student 5 changed the syntactic structure of the sentence to conform to her level of understanding and processing ability. The student in the example below chose to insert an expression requiring the use of the subjunctive (*Ojalá que*). However, the student still uses an indicative form (*hay*) after the conjunction *que*, which was to be expected after the *escucha que* prompt .

Student 5 Incorrect Form with Incorrect Explanation (Post-test)

Scenario: A professor(un profesor) stands in front of a group of students. Off to the side of the students, the professor (el profesor) listens with a concerned look on his face.

Empleado: No queremos estudiar más.

Pregunta: ¿Qué escucha el profesor?

Respuesta: El profesor escucha que Ojalá que hay no estudiar más.

The student explains “I chose subjunctive, because they are expressing the way they feel about studying,” perhaps indicating that the student did not grasp the fact that a perception verb (*escuchar*) requiring the indicative was being used and changed the structure of the sentence so that his response would conform to a rule that would concur with his perception of the situation (the students were expressing a desire for a change).

This supports the assertions of Collentine (1995) and Kaufman (2011), who proposed that students at an intermediate level were unable to acquire accurate mood selections due to an inferior level of syntactic manipulation and ability. Collentine (1995) used Givon’s (1979) categorizations of pre-syntactic and syntactic stages to explain that intermediate students are still at a pre-syntactic stage that is incapable of creating more advanced (subordinate) syntactic structures. He also proposed that subordinate structures are only accurately used once the students have reached the syntactic stage. Furthermore, the ability to choose the correct morphological (indicative or subjunctive) forms while embedding them in subordinate clauses may be out of reach of intermediate level students. Thus, it seems that Student 5 may not yet have reached the syntactic stage, as she was unable to choose the correct mood in the subordinate structure originally given (*escucha que*) or in the one s/he created (*ojalá que*).

Student 4

Table 24 provides the data associated with Student 4 with indicative prompts.

Table 24

Student 4 Types of Explanations Used with Indicative Modalities in the Pre-and Post-Tests Uses of Correct forms with Incorrect Explanations with Indicative Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	1(100%)	0	0	1
Post-test	1 (100%)	0	0	1
Total	2	0	0	2

Uses of Incorrect forms with Incorrect Explanations with Indicative Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	7 (88%)	1 (12%)	0	8
Post-test	4 (100%)	0	0	4
Total	11	1	0	12

Lastly, Student 4 was unlike all other students, in that she failed to produce any correct forms with correct explanations on either the pre- and post-test. Student 4 answered all prompts similarly in the pretest often stating that she chose one mood or another because “the subject changed from...” Her answers in the post-test saw identical results. Student 4 followed the same suit in terms of choosing accurate forms. She consistently used the subjunctive form as the default choice and only once used an indicative form when answering the prompts. This shows a lack of effort on her part and, as a result, little if any development in mood choice or explanations was made. Less data was available for analysis due to the default repetitive use of the same form and explanation (subjunctive) for all answers.

Subjunctive Mood

Table 25 gives a display of all data for forms and explanations with modalities that allow the subjunctive mood.

Table 25

Table Showing Number of Responses in Each Category for Subjunctive Modalities

	Student No.	C.F. and C.E.	C.F. and I.E.	I.F. and C.E.	I.F. and I.E.
Pretest	Student 1	7 (78%)	0	0	2 (22%)
	Student 2	5 (56%)	0	0	4 (44%)
	Student 3	6 (66%)	0	0	4 (44%)
	Student 4	1 (11%)	7 (78%)	0	1 (11%)
	Student 5	0	0	1 (11%)	8 (89%)
Post-Test	Student 1	8 (73%)	0	1 (9%)	2 (18%)
	Student 2	7 (64%)	0	0	4 (36%)
	Student 3	8 (73%)	1(9%)	1 (9%)	1 (9%)
	Student 4	6 (75%)	0	0	2 (25%)
	Student 5	4 (36%)	0	1 (9%)	6 (55%)

The results from Table 25 above indicate that overall students were able to produce accurate forms with appropriate explanations more often over time. Students 1, 2 and 3 increased from the pretest to the post-test and continually produced a high level of accuracy. Students 4 and 5 made the biggest improvement over time producing a much higher level of accuracy of the use of correct subjunctive forms with correct explanations than in the pretest. An individual analysis of each student will help to demonstrate those strides made in both form and explanation.

Case Studies (Subjunctive)

This section presents data from each individual student in order to give a more complete picture of each participants development of the understanding and application of mood choice in Spanish.

Student 1

Table 26 below gives an overview of Student 1's performance with regard to a Rule-of-Thumb and CBI in contexts of modalities that allow the subjunctive. Along with the other five students, Student 1 consistently showed an inclination to use a Rule-of-Thumb approach when explaining responses to subjunctive prompts.

Table 26

Student 1 Types of Explanations Used with Subjunctive Modalities in the Pre-and Post-Tests

Uses of Correct Forms with Correct Explanations with Subjunctive Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	7 (100%)	0	0	7
Post-test	6 (75%)	2 (25%)	0	8
Total	13	2	0	15

Uses of Incorrect Forms with Correct Explanations with Subjunctive Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	0	0	0	0
Post-test	1 (100%)	0	0	1
Total	1	0	0	1

Uses of Incorrect Forms with Incorrect Explanation with Subjunctive Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	2 (100%)	0	0	2
Post-test	1 (50%)	1 (50%)	0	2
Total	3	1	0	4

This approach entails a more direct and absolute view of the Spanish mood. In all three modalities where the subjunctive was used the student routinely explained, "I chose

subjunctive because there was a statement of emotion,” “I chose subjunctive because there was a statement of negation,” and finally “I chose subjunctive because there was a statement of volition.” Although the student correctly produced the appropriate forms in these contexts the reasoning behind his choices is very limited and dependent on the correct identification of one of these three triggers. The problem arose when the student applied this Rule-of Thumb approach to all cases in an categorical manner. Student 1 shows this in “*El instructor está enojado porque: ‘El estudiante hable por teléfono en su clase’*” reasoning that “I chose subjunctive because it was a statement of emotion.” The student was unaware of the syntactic structure of the sentence in that the sentence did not contain a subordinate clause, but rather, a coordinating conjunction (*porque*). As a result, the student focused only on the absolute rule inferring that if there is an emotion mentioned, the prompt requires the subjunctive mood. This attitude is also present in sentences where the student conversely was unable to find a subjunctive trigger in the main clause “*El carnicero le grita que: ‘El perro va a ello.’*” He explains, “I chose indicative because there was no statement of volition.” Perhaps the student was unable to identify the volition in this sentence because of the lack of a verb that is easily recognized as expressing desire or volition such as: *desear*, *querer*, or *esperar*. Although Student 1 was not able to produce more subjunctive mood forms from the pretest (78%) to the post-test (73%) with subjunctive prompts the main change was in the reasoning of the student, which began to include a more complete, conceptual explanation for his choice. This can be seen in the following post-test explanations “I chose the subjunctive because the statement is expressing how Carlos feels,” and with the indicative mood he said, “I chose the indicative because the steward was making an observation.” In both cases the student

was able to produce more than just a rule that governed his response. Examples of this development can be seen below.

Incorrect Form and Explanation (pretest)

Scenario: In a supermarket, a man (Carlos) and a woman (una mujer) are standing in front of a number of storage bins containing fruits and vegetables.

The woman is holding a melon in her hand and the man some grapes.

La mujer: Toda la fruta es horrible.

Pregunta: Para Carlos, ¿qué es sorprendente?

Respuesta: Para Carlos es sorprendente que La fruta es horrible.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) I chose indicative because there was no statement of volition.

Correct Form and Explanation (post-test)

People involved: Carlos, una mujer y su fruta

Scenario: In a supermarket, a man (Carlos) and a woman (una mujer) are standing in front of a number of storage bins containing fruits and vegetables.

The woman is holding a melon in her hand and the man some grapes.

The woman: Toda la fruta está horrible.

Question: Para Carlos ¿Qué es sorprendente?

Answer: Para Carlos es sorprendente que... La fruta este horrible.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) **I chose the subjunctive because the statement is expressing how Carlos feels.**

In the first pretest when dealing with *es sorprendente que* the student was not able to produce the appropriate form, using an indicative mood to answer the question. This was followed by an explanation based on a process of elimination and Rule-of-Thumb approach, that was not accurate in this context. The student seems to say that because a rule, in this case volition, is absent the normal laws that require using the subjunctive are void and therefore must require the indicative mood to be used. In the second example the same student was able to correctly produce an accurate form in the subjunctive mood. In this case the explanation agreed with the accuracy of form and was based on a perspective of the speaker describing how Carlos feels. This explanation was no longer subject to a governing rule categorically requiring one mood or another, but, instead, expressed an assessment of a reaction to an event. The latter example shows an increase in comprehension in mood choice and conceptual reasoning and support the efficacy of a concept based approach. The data shows that student 1 was unable to provide a correct response or form in two cases illustrated above in both the pre and post-tests. In both cases, modalities of volition were the cause of the error for this student. This is consistent with the overall results, which show that volition saw the most cases of incorrect responses (50%) for the group as a whole, as can be seen in Table 15. Although showing development of conceptual thinking, Student 1 did continue to rely on the Rule-of-Thumb approach for some of his explanations.

Student 2

Table 27 shows the responses to the prompts that allow for the subjunctive mood with regards to Rule-of-Thumb and CBI for student 2

Table 27

Student 2 Types of Explanations Used with Subjunctive Modalities in the Pre- and Post-Test

Uses of Correct Forms with Correct Explanations in Subjunctive Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	5 (100%)	0	0	5
Post-Test	4 (57%)	3 (43%)	0	7
Total	9	3	0	12

Uses of Incorrect Forms With Incorrect Explanations With Subjunctive Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	4(100%)	0	0	4
Post-test	1(25%)	3 (75%)	0	4
Total	5	3	0	8

Table 27 above reiterates the relationship of C.F. with C.E. and I.F. with I.E. It is apparent that in both cases the use of concept-based reasoning increased over time, but only in the case where the students answered correctly on form and explanation was there a total change of number of cases from the pretest (5) to the post-test (7). Student 2 was able to produce a higher number of cases of C.F. with C.E.s in the post-test, but remained consistent of four times in both the pre and post-tests when answering incorrectly.

In the pretest Student 2 consistently used a Rule-of-Thumb process of elimination to assess the situation at hand. Student 2 answers, “*pide que la compres una limonada*”, and explains, “I used the subjunctive in this context because the first clause (‘Carla pide’...) indicates volition.” This Rule-of-Thumb approach may be appropriate in cases where volition is used, due to a more consistent subjunctive mood produced in the

dependent clause. However, Student 2 (like Student 1) was unable to account for instances where the subjunctive mood is more of possibility than an absolute certainty. This can be seen in the scenario below.

Scenario: A dog (el perro) is running from a butcher (el carnicero) with a piece of meat in his mouth.

El carnicero: ¡Ven aquí con esa carne!

Pregunta: ¿Qué le grita el carnicero?

El carnicero le grita que él perro no corre con su carne.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) I chose to use the indicative in this context because the conversation is taking place in the present and my response contains neither volition, emotion, doubt, or negation, the common uses of the subjunctive.

Verbs such as *decir* and *gritar* contain a certain amount of flexibility due to the ambiguous nature of the perspective of the speaker. For instance, in the sentences “*Mamá dice que no van a la fiesta*”, and “*Mamá dice que no vayan a la fiesta*” the former conveys a more informative voice, whereas the latter conveys a more exigent perspective. Such is the case above, but due to context clues it is apparent that the verb takes on the form of a command, and, therefore, should elicit a subjunctive mood reflecting that nature. However, Student 2 fails to comprehend the meaning of the example and instead predicates her answer on a Rule-of-Thumb approach that points out the lack of

“volition, emotion, doubt, or negation, the common uses of the subjunctive.” This example becomes very important when comparing Student 2’s progress from the pretest to the post-test as will be seen in the response to the same prompt below.

Scenario: A dog (el perro) is running from a butcher (el carnicero) with a piece of meat in his mouth.

Butcher: Ven aquí con esa carne!

Question: ¿Qué le grita el carnicero al perro?

Answer: El carnicero le grita que el perro toma su carne.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) I used the indicative because as a third-person, I can see that the butcher is shouting that the dog took his meat and am making a statement based on an intelligent observation.

Student 2 chooses to restructure her answer to match her level of understanding as was seen in other examples previously, but in this case it is seen not as a lack of cognitive ability but as a more complete understanding of the dual meaning that can be inferred from the verb *gritar*. The student chooses the indicative form of the verb in the second clause, which as has been stated above is probably not the correct choice, but in this case couples her answer with a more complete explanation referring to why it would be this way. She refers to a third person to which the butcher is informing of the atrocity at hand and therefore defends her response as one of an informative perspective. The student

capably understands this subjectivity of the verb and chooses one side, rather than basing her response on an absolute rule restricting her response.

A Rule-of-Thumb approach using a process of elimination was commonly used throughout the pretest for sentences containing both indicative and subjunctive modalities. The examples suggest that some of the students were instructed previously to look for certain lexical markers in the text that would automatically require the use of subjunctive. Perhaps this tactic allowed the students to correctly assess the modalities of doubt in the pretest so often. The saliency of the words for doubt such as *dudar* might have stuck with the student and allowed them to find the solution of the subordinate clause. This tactic did work for some of the questions in the test but it failed to account for other questions in which they were unable to identify such markers, and, therefore, perceived the prompt as requiring an indicative modality.

Student 3

Table 28 shows the responses to the prompts that allow for the subjunctive mood with regards to Rule-of-Thumb and Concept-based explanations for student 3.

Table 28

Student 3 Types of Explanations Used with Subjunctive Modalities in the Pre- and Post-Test

Uses of Correct Forms with Correct Explanations with Subjunctive Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	6 (100%)	0	0	6
Post-test	7 (88%)	1 (12%)	0	8
Total	13	1	0	14

Uses of Incorrect Forms with Correct Explanations with Subjunctive Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	0	0	0	0
Post-test	1 (100%)	0	0	1
Total	1	0	0	1

Uses of Correct Forms with Incorrect Explanations with Subjunctive Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	0	0	0	0
Post-test	1 (100%)	0	0	1
Total	1	0	0	1

Uses of Incorrect Forms with Incorrect Explanations with Subjunctive Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	3 (75%)	1 (25%)	0	4
Post-test	1 (100%)	0	0	1
Total	4	1	0	5

Correct Form and Explanation

Scenario: An elderly lady (la viejita), who is apparently confused, looks at a baby boy (el niño) who is wearing glasses. The glasses look like ladies' glasses, but she's not sure.

The elderly lady: *¿Ese niño lleva lentes de mujer?*

Question: *¿Qué no es cierto?*

Answer: *No es cierto que... **No es cierto que el niño lleve lentes de mujer.***

*What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) **“No es cierto que” expresses uncertainty, so I used subjunctive.***

The student correctly chooses the subjunctive form of the verb given the context, and uses a Rule-of-Thumb approach based on a component in the text that requires the subjunctive mood. However in cases where this mood can be subject to the interpretation of the attitude portrayed by the speaker such as with some verbs of emotion (*alegrar, sentir*) and doubt, (*no creo que...*), student 3 failed to correctly explain her reasoning or provide a correct form. The example below shows confusion with this regard from the student.

Incorrect Form with Correct Explanation

People involved: ***Manolo y la llanta***

Scenario: *On the side of the road a man (Manolo) sits staring at his tire (la llanta).*

Manolo: *Wow! ¿Qué voy a hacer con mi llanta pinchada?*

Question: *¿De qué se lamenta Manolo?*

Answer: *Manolo se lamenta de que... **Manolo se lamenta de que la llanta estaba pinchada.***

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) “Se lamenta de que” expresses emotion so I used subjunctive.

Here the student chose to use an indicative imperfect form of the verb *estar* in the context of *se lamenta de que*. This contrasts what is mentioned in the explanation stating that because the phrase indicates emotion the subjunctive mood should be used. Both Rule-of-Thumb and Concept-based approaches would predict that modalities containing the verb *lamentar* would elicit with the subjunctive, but in some cases individual speakers may use the indicative, as is the case mentioned with *sentir* and *alegrar*. This perhaps accounts for the student’s answer. However, this example also shows that the student was unable to perceive that she used an indicative verb form with a subjunctive explanation.

Student 3 remains the most unreliable due to the inconsistent nature of her responses. In the pretest student 3 (like the others) bases her response on an “if, then” rule, i.e., if there is a doubt then the subjunctive mood will be used and likewise, if a fact is implied then the indicative mood is used. As seen previously this mind set can lead to errors and can mislead students to produce overgeneralizations. . Student 3 often is unable to completely understand the full meaning of the sentence and bases her response on the limited information that she possesses. In the example, “*Antonio cree que no encuentre su billetera*” coupled with explanation, “‘*Cree que*’ indicates doubt so I used subjunctive” shows this lack of complete comprehension. This, however, may not result from a lack of comprehension with regards to Spanish mood, but rather due to a lack of

comprehension with words that are not full cognates in English and Spanish. Student 3 assumes that the word *creer* has the same meaning as belief in English, but does not understand that the English version carries a sense of doubt as opposed to the Spanish *creer*. This incomplete understanding is also seen in her response to question 13 of the pretest, “*Margarita pide que el Sr. López traiga un café*, and “*I used indicative because Margarita is not demanding, she is asking politely.*” Student 3 mistakenly assumes that Margarita is necessarily asking politely (which this student assumes would require the indicative) rather than expressing volition (requiring the subjunctive) in her response.

It is possible like before that this is due to more of a lack of pragmatic comprehensibility of the culture’s norms and not due to a lack of knowledge of the Spanish mood completely. In her culture it is normal to see a client ask his or her waiter for coffee in a polite manner and is considered rude to “demand” service, and therefore projects this on the example and chooses to answer as shown above. Student 3 improved greatly from her inconsistency in the pretest and proved her development in the post-test. The first example provided in the analysis of a projection of an English meaning to a Spanish word was correct in the post-test. The student refers to the “uncertainty” of the word and explains that it should be in the subjunctive mood. The latter example mentioned above in this case study also saw signs of improvement in that the student correctly used the subjunctive form and reasoned that “Margarita is requesting a coffee, so I used subjunctive.” It is important to note that as well as with Student 2, Student 3 still made errors rooting back to a Rule-of-Thumb comprehension, although these errors decreased from 40% to 20% when comparing the pretest to the post-test.

Student 4

Table 29 shows the responses to the prompts that allow for the subjunctive mood with regards to Rule-of-Thumb and Concept-based explanations for student 4.

Table 29

Student 4 Types of Explanations Used with Subjunctive Modalities in the Pre- and Post-Tests Uses of Correct Forms With Correct Explanations With Subjunctive Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	1 (100%)	0	0	1
Post-test	4 (67%)	2 (33%)	0	6
Total	0	0	0	7

Uses of Correct Forms with Incorrect Explanations with Subjunctive Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	7 (100%)	0	0	7
Post-test	0	0	0	0
Total	0	0	0	7

Uses of Incorrect Forms with Incorrect Explanations with Subjunctive Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	1 (100%)	0	0	1
Post-test	2 (100%)	0	0	2
Total	3	0	0	3

Like the other students, Student 4 increased in accuracy over time in correctly choosing an appropriate mood form. This increase in mood choice in the previous three students also saw an increase in awareness of the conceptual reasons that govern that mood choice. This was the case as well with student 4, who increased his use of Concept-based explanations in the post-test. The examples below and explanation provide insight into this change.

Correct form with Incorrect Explanation (pretest)

Student 4:

Scenario: A number of people are at a fair. In the foreground, Carla is talking with her daughter (su hija).

Tía Rita: ¿Por qué no me traes una bebida, hija?

Pregunta: ¿Qué pide Carla?

Respuesta: Carla pide que Carla pide que Tía Rita le traiga una bebida.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) I used subjunctive because the subject changed.

Student 4 correctly uses the subjunctive form of the verb, but is unable to come up with a complete reason for why the subjunctive mood would fit the context. The student indicated that the subject changed, which does show an awareness of two clauses with two separate structures in volitional modalities, but fails to rationalize the reason why the verb is used in one mood versus another. This is only a partial Rule-of-Thumb approach, and shows that the student was unable to explain the conceptual reason for subjunctive use and focused only on the grammatical structure involved, which involved a change of subject.

Incorrect Form with Incorrect Explanation (post-test)

Student 4:

Scenario: A number of people are at a fair. In the foreground, Carla is talking with her daughter (su hija).

Carla: ¿Por qué no me traes una bebida, hija?

Question: ¿Qué pide Carla?

Answer: Carla pide que... Carla pida que tener una bebida.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) I saw that the subject didn't change so I left tener in the indicative.

Student 4 made an incorrect assumption in the above example, resorting to the infinitive form of *tener*. She incorrectly reasoned that as no subject change occurred the indicative mood was required. However, the form used is actually the infinitive and shows that the student lacked a connection between form and explanation. Modalities of volition seemed to cause this disconnect and accounted for most of student 4s mistakes. However, a form-explanation connection seems to form over time when looking at other post-test examples from this student. For instance, verbs that involved emotion and doubt show evidence of conceptual development in the post-test.

Correct Form with Incorrect Explanation (pretest)

Scenario: An elderly lady (la viejita), who is apparently confused, looks at a baby boy (el niño) who is wearing glasses. The glasses look like ladies' glasses.

La viejita: ¿Ese niño lleva lentes de mujer?

Pregunta: ¿Qué no es cierto?

Respuesta: No es cierto que No es cierto que el niño lleve lentes de mujer.

What reasoning did you use to come up with your answer? What guidelines did you follow for choosing either the indicative or the subjunctive in this context?)

The lady was confused, so the glasses weren't really women's. I used subjunctive because the subject changed.

In the pretest the student seemingly focuses on the use of subjunctive due to a subject change. She mentions the confusion of the Lady, but in no way ties in that reason to the use of the subjunctive.

Correct Form and Explanation (Post-test)

Scenario: *An elderly lady (la viejita), who is apparently confused, looks at a baby boy (el niño) who is wearing glasses. The glasses look like ladies' glasses, but she's not sure.*

The elderly lady: *¿Ese niño lleva lentes de mujer?*

Question: *¿Qué no es cierto?*

Answer: *No es cierto que... **No es cierto que el niño lleve las gafas.***

*What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) **I used subjunctive for el niño because the old lady was conveying an attitude of uncertainty about what the child was wearing and also the subject changed from la viejita to el niño.***

The student here was able to provide a correct form, and correct explanation to the prompt given. The change in the student's conceptual development is very evident

when comparing the pretest and post-test responses. The student here no longer relies only on one rule to govern her response, but is able to correctly assess the situation and presuppose an attitude of uncertainty from the speaker. These types of changes in conceptual understanding in the post-test contribute to the large increase of accurate forms and explanations in the post-test.

Student 5

Table 30 shows the responses to the prompts that allow for the subjunctive mood with regards to Rule-of-Thumb and CBI for student 5.

Table 30

Student 5 Types of Explanations Used with Subjunctive Modalities in the Pre- and Post-Tests Uses of Correct Forms with Correct Explanations with Subjunctive Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	0	0	0	0
Post-test	0	4(100%)	0	4
Total	0	4	0	4

Uses of Incorrect Forms with Correct Explanations with Subjunctive Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	1(100%)	0	0	1
Post-test	0	1 (100%)	0	1
Total	1	1	0	2

Uses of Incorrect Forms with Incorrect Explanations with Subjunctive Modalities

	Rule-of-Thumb	Concept	Other	Total
Pretest	4	5	0	9
Post-test	1(17%)	5 (83%)	0	6
Total	5	10	0	15

Like the other students, Student 5 showed gains in the post-test in the use of correct forms with correct explanations (see Table 19). This increase, however, was complicated by an incomplete understanding or confusion of mood choice in the

explanations given. For instance, Student 4 consistently states fact and certainty as reasons that govern his choice when faced with prompts allowing the subjunctive mood. To the prompt *es triste que...* he reasoned, “Although sadness is an emotion, I’m going with indicative, because the answer states the truth of a situation.” This answer shows a mid-level of comprehension that is somewhere stuck between a Rule-of-Thumb and CBI approach. The fact that the student addresses emotion as the prompt shows that he is aware of the subjunctive modalities requiring subjunctive mood use with a Rule-of-Thumb theory; however this rule is partially ignored to consider a “truth” of the situation. The student justifies his answer by stating that the sentence should be indicative because it is a true statement. Although adding new information to a prompt can elicit indicative moods, a known truth does not constitute one use over the other, rather a reaction or assertion of that truth by the choice of the speaker is the governing trigger. Student 5 remained stuck in between both approaches, un-committed to one or another, and, as such, many times over analyzed the prompts and was unable to explain his choices with clarity. Thus, for Student 5, an exposure to CBI, did show positive results in form, but failed to help the student develop a conceptual connection to the appropriate use of Spanish mood.

Results Analyzed by Type of Subjunctive Modality

When comparing the results and explanations of the pre and post-test a clear change of cognitive perception seems evident. As noted from the example above, Student 5 was unable to consistently apply the CBI to the examples in the tests. Students 1, 2, 3, and 4 however did increase their use of correct forms and explanations with subjunctive modalities from the beginning of the class to the end and did (in most cases) produce a

concept-based rationale for their choices. A breakdown of responses for each modality will illustrate how the type of prompt may have produced differences in development over the time of the study.

Volition

The results show that the students were able to accurately choose the subjunctive mood for modalities containing volition 50% and 40% percent of the time for the pretest and post-test respectively. This modality is perceived as being less susceptible to attitudinal choices by the speaker compared with the other modalities mentioned (doubt and emotion). This is not to say that verbs such as *esperar* cannot be used without using a subjunctive mood; for such is the case in the sentence *espero que me va a dar tarea esta noche el profesor*, in which the speaker is not imposing a will on that of the professor, rather the verb infers more of a pensive or introspective suspicion of what may occur (Foster 1982). Nevertheless it is easy to assume that students tend to have an easier time recognizing volition and producing the subjunctive mood in subordinate clauses due to the straightforward lexical clues associated with it. The results show, however, that subjunctive use with modalities of volition in fact decreased in percentage in the post-test. Most of the students were able to correctly choose the subjunctive mood in the examples that used word such as *quiero que* and even *pide que*, but struggled to see any type of volition with the sentence *el carnicero le grita que....* In fact, only one student out of the five correctly chose the indicative mood for the latter example in the pretest, where the context implies a command. The troubles for volition did not stop with the one example however, as several students were inconsistent when dealing with volition modalities. Some implemented a verb in the infinitive form “*Carla pida que tener una*

bebida” in the subordinate clause, and changed the verb in the main clause to a subjunctive form. One student changed the whole structure of the sentence and removed the verb altogether; “*Margarita pide que el Sr. López para un café*”, perhaps due to being unable to come up with the correct form.

Emotion

The results show a significant increase in development from the students’ ability to correctly conjugate the verb in the subjunctive form in contexts of emotion. The students’ subjunctive use with this modality went from 33% in the pretest to 67% in the post-test. This increase in proficiency may be due to the effect of a Concept Based Instruction which focuses on those noun clauses where the verb is more susceptible to a mood change depending on the attitude portrayed by the speaker. This conceptual perspective is evident in the post-test. Student 5 wrote in the context of “*Para Carlos es sorprendente que la mujer esté quejándose*” that “*I thought my answer was subjunctive, because I evaluated and commented on Carlos’ reasoning for his emotion.*” This explanation focuses more on the emotion portrayed by Carlos than it does by a required trigger, in fact in cases where the students incorrectly conjugated the verb in the subordinate clause the explanation still focused on a conceptual basis saying, “*Es triste que el familia perro murió*” and “*Although sadness is an emotion, I’m going with indicative, because the answer states the truth of a situation.*” Again, it is true that the explanation is incomplete and she chooses the wrong mood. However, this answer proves that the students were becoming aware of the need to make a more context-sensitive mood choice mood rather than one based on a Rule-of-Thumb.

Doubt

The use of the subjunctive with modalities of Doubt did not change from the pretest to the post-test, but did receive the highest percentage of correctly produced forms in the subordinate clause. In the pretest and post-test the students were able to produce the subjunctive mood 80% of the time with modalities of doubt. The author posits that the high percentage of correct forms may be due to a more noticeable verb *dudar* that students readily identify meaning to doubt. It seems that the students saw this modality as an automatic trigger for the subjunctive and chose it in all instances. It is interesting to note that due to this automatic association of the subjunctive with the doubt modality, the students erroneously extended their concept of doubt from verbs that inferred doubt in their native language to those in Spanish that do not. One instance of this is noted in this example, “*Antonio cree que no encuentre su billetera,*” accompanied by the explanation “‘*Cree que*’ indicates doubt so I used subjunctive.” Another example of transfer is seen in the rejoinders to impersonal expressions containing doubt “*es probable que*” where students struggled to correctly use the subjunctive mood, due to the higher degree of certainty attributed to the English meaning of probable.

In essence, the modalities other than volition (doubt and emotion) saw results that supported the increase of a conceptually-based understanding of the ability to more correctly produce the subjunctive mood in the appropriate context. These increases or lack thereof will be further discussed below.

Discussion

Overall the study shows that the students over time were able to produce more accurate forms for both the indicative and subjunctive moods. This increase in accuracy of forms becomes more apparent when the correct forms are analyzed according to the types of explanations the students were able to produce in the post-test as compared to the pretest. In the pre-test students consistently chose to use a Rule-of-Thumb based approach, citing a rule that would govern their choice of mood. As was seen in the data, this often produced good results (correct forms), but also attributed to some inaccurate applications that lead to confusion and mistakes.

After being exposed to the CBI the data show that the overall results of the study saw an increase in accuracy and conceptual development. Students more consistently answered the prompts correctly (in form and explanation) in the post-test than in the pretest. The results of this study did not concur with those of Collentine (1995), who showed that students at the intermediate level were unable to produce subordinate structures containing subjunctive mood consistently. In Collentine (1995) he also proposed that an intervention of sorts focusing on the concepts behind mood would expose the students to a rich enabling environment that might facilitate syntactic development. He stated, “perhaps syntactic intervention would enhance learners’ abilities to manipulate word order within clauses; learners might also learn to parse complex utterances earlier than they normally do” (Collentine, 1995, p. 131). Although the treatment took place in an online classroom format, students were given opportunities to meet together and discuss issues, as would be the case in a classroom setting.

The results of this study show a high level of competency on the part of the students that does not match the results found in Collentine (1995) and Kaufman (2010), but supports the claims mentioned in Negueruela (2006). Collentine and Kaufman both saw results that indicated a low ability in producing the subjunctive form in a dependent clause. The results of this study saw much higher results and accuracy when dealing with both indicative and subjunctive modalities. This perhaps was due to the fact that the students were not asked to develop a dependent clause on their own, rather they were provided with the conjoining conjunction and were simply asked to provide the verb in the correct mood that would complete the sentence. The results of this study are more similar to those found in Negueruela (2006) that showed that students demonstrated a higher level of cognitive reasoning with regards to mood choice after being exposed to a CBI. Both Kaufman, and Collentine's studies focused on assessing the specific state in which intermediate students were found rather than on reviewing any conceptual development that might occur after a CBI treatment focused on mood choice might bring. Although some students in the present study were able to produce correct forms in the pretest, perhaps due to previous exposure to Spanish mood, it is not until after in the being exposed to a CBI that all students increased in producing accurate mood choices. The results of the study could serve to encourage more complete pedagogical methods incorporating CBI in a classroom or online setting.

Conclusions

Summary of Results

In conclusion, the results of this study revealed that the students showed an improvement from the pretest to the post-test in both forms and explanation when dealing with indicative modalities and modalities that allow for the subjunctive. Students increasingly became aware of the reasons behind their mood choices in both moods, showing a growing ability to explain the concepts that govern their decisions. This change of ability comes with an increase of use of Concept Based reasoning. The results have proven that although students continued to implement Rule-of-Thumb approaches in the majority of their responses, it was not until after the treatment of CBI that the students were able to more accurately assess the prompt and explain their answers.

Because a Concept-based approach bases its teaching on more of a flexible allowance of mood choice, this flexible CBI approach may seem more useful to the students when dealing with emotion, rather than doubt or volition (two modalities with which NSs tend to favor subjunctive forms). As was seen in other studies (Negueruela 2006) a CBI approach can be used to teach other points of grammar based on the mindset of the native speaker, rather than on a handful of rules that restrict both the listener and speaker into a finite group of acceptable uses. The results of this study suggest that the use of a CBI approach to teach the Spanish subjunctive may provide teachers with an effective way of presenting difficult aspects of grammar to their students that will lead to better acquisition.

Limitations and Future Research

The following issues are considered to be limitations of this study: (1) the study was limited to using just written data when analyzing the results of the study, (2) the think aloud data recorded during the CBI treatment was not analyzed in the results, and should be included in later studies, (3) due to logistical reasons, the study did not use a random sample, (4) the study did not control for researcher/teacher bias. Due to logistical applications the treatment was presented to both groups by means of PowerPoints from the researcher, (5) the study was limited in scope to only 5 participants.

Further research on the effectiveness of CBI is encouraged so that both pedagogues and researchers can understand the possible benefits or drawbacks of this approach to the teaching of L2 grammar points. The figure used to guide students in conceptually mapping out their process of deciding mood from Negueruela (2008) does not give a complete theoretical approach for all cases in the subjunctive. Instances that deal with adverbial conjunctions such as *para que*, or *en caso de que* are not mentioned in the map, or do not give a full understanding of its use. As a result, this didactic map may be useful for modalities of emotion and doubt but fails to give a conceptual map without exceptions. Further study is needed to develop a more complete didactic map that students can use to make conceptually-based decisions regarding mood. .

References

- Bull, W. (1984/1965). *Spanish for teachers*. Malabar, FL: Robert E. Krieger Publishing Company Inc.
- Bolinger, D. (1968). Entailment and the meaning of structures. *Glossa*, 2, 119-27.
- Castro, O., & Peck, V. (2008). Learning styles and foreign language learning difficulties. *Foreign Language Annals*, 38, 401-409.
- Collentine, J. (1995). The development of complex syntax and mood selection abilities by intermediate-level learners of Spanish. *Hispania*, 78, 122–135.
- Collentine, J. (2010). The acquisition and teaching of the Spanish subjunctive: An update on current findings. *Hispania*, 93(1), 39-51.
- Collentine, J. (2003). The development of subjunctive and complex-syntactic abilities among FL Spanish learners. In B. Lafford & R. Salaberry (Eds.), *Studies in Spanish second language acquisition: The state of the science* (pp. 74-97). Washington, DC: Georgetown UP.
- Davydov, V. V. (1988). The concept of theoretical generalization and problems of educational psychology. *Studies in Soviet Thought*, 36, 169-202.
- Foster, D.W. (1982). Internal contradictions of a Spanish subjunctive. *IRAL*, 20, 131-138
- Gal'perin, P. (1969). Stages in the development of mental acts. In M. Cole & I. Maltzman (Eds.), *A handbook of contemporary Soviet psychology* (pp. 248-273). New York: Basic Books.
- Gili Gaya, S. (1973). *Vox curso superior de sintaxis española*. Barcelona: Bibliography
- Givón, Talmy. 1979. *On Understanding Grammar*. New York: Academic Press.
- Goldin, M. (1972). Indirect objects in Spanish and English. In J. Casagrande & B. Saciuk (Eds.), *Generative studies in Romance languages* (pp. 376-83). Rowley, Mass.: Newbury House.
- Kaufman, J. (2011) The acquisition of the subjunctive mood by intermediate-level learners of Spanish: The relationship between mood and modality. MA thesis, Arizona State University.
- Krashen, S. (1982). *Principles and practice in second language acquisition*. Oxford: Pergamon.

- Lantolf, J., & Thorne, S. (2006). *Sociocultural theory and the genesis of second language development*. Oxford: Oxford University Press.
- Lozano, A. (1975). In defense of two subjunctives. *Hispania*, 58,277-83.
- Negueruela, E. (2003). A sociocultural approach to teaching and researching second language: Systemic-theoretical instruction and second language development. Ph.D. dissertation, Pennsylvania State University.
- Negueruela, E. (2008). Revolutionary pedagogies: Learning that leads to second language development. In J. P. Lantolf, & M. E. Poehner (Eds.), *Studies in Applied Linguistics* (pp.189-227). Washington, D.C.: Georgetown University Press
- Negueruela, E., & Lantolf, J. P. (2006). Concept-Based instruction and the acquisition of L2 Spanish. In B. Lafford & R. Salaberry (Eds), *The art of teaching Spanish: Second language acquisition from research to praxis* (pp. 79-102). Washington, DC: Georgetown University Press.
- Seliger, H. W. (1979). On the nature and function of language roles in language teaching. *TESOL*, 12, 359-70.
- Terrell, T. D., Baycroft, D., & Perrone, C. (1987). The subjunctive in Spanish interlanguage: Accuracy and comprehensibility. In B. Van-Patten, T. Dvorak, & J. F. Lee (Eds.), *Foreign language learning: A research perspective* (pp. 23-48). Cambridge University Press.
- Whitley, S. M. (2002). *Spanish/English contrasts*. Washington D.C.: Georgetown University Press.

APPENDIX A

DATA COLLECTED DECEMBER 2012

COVER LETTER

THE ACQUISITION OF THE SUBJUNCTIVE BY INTERMEDIATE LEARNERS OF SPANISH: THE RELATIONSHIP BETWEEN MOOD AND MODALITY

Dear Participant:

I am a graduate student under the direction of Professor Barbara Lafford in the School of International Letters and Cultures at Arizona State University.

I am conducting a research study to determine student's ability to produce the indicative and subjunctive moods within their proper contexts when responding to a set of test questions. I am inviting your participation, which will involve taking a test of 20 questions and responding with short answers. In addition, you will be asked to fill out a short demographic questionnaire. The filling-out of these forms should take no more than 45 minutes of your time during your Spanish class.

Your participation in this study is voluntary. You can skip questions if you wish. If you choose not to participate or to withdraw from the study at any time, there will be no penalty, and it will not affect your grade. You must be 18 or older to participate in the study.

Although there may be no benefit to you, this research will help teachers focus on the areas that will help students improve their language skills. There are no foreseeable risks or discomforts to your participation.

The measures that will be taken to protect confidentiality include storing your

answers in a safe place where no one will have access to them other than the researcher. Also, the questionnaire at the end of the test asks for your participant number instead of your name, which will also keep your responses anonymous. The results of this study may be used in reports, presentations, or publications but your name will not be known.

If you have any questions concerning the research study, please contact the research team at: ericandalexis@gmail.com , send emails to the attention of Eric Beus. If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788.

Return of the questionnaire will be considered your consent to participate.

INSTRUCTIONS AND SAMPLE TEST QUESTIONS

SPANISH 202

Instructions: Read the following scenarios and for your responses (i.e., Respuesta) complete the sentence including another verb of your own choosing or from the comments or scenario (see sample questions). Be sure to use the appropriate verb form in your responses. At the end of the test you will fill out a questionnaire that inquires about your experience with foreign language(s). You will have 30 minutes to finish the test and questionnaire.

QUESTION 1:

People involved: El empleado and el jefe

Scenario: An employee (el empleado) stands in front of a group of workers. Off to the side of the workers, the boss (el jefe) listens with a concerned look on his face.

Empleado: No queremos trabajar aquí más.

Pregunta: ¿Qué escucha el jefe?

Respuesta: El jefe escucha que _____.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) _____

How sure are you that the answer you gave is correct?

DEFINITELY SURE REASONABLY SURE SOMEWHAT UNSURE

1

2

3

DEFINITELY UNSURE

4

QUESTION 2:

People involved: Los pasajeros and el guía

Scenario: In a tour bus, a guide (el guía) is standing up in front of the tour's passengers (Los pasajeros), who sit in their seats and look very bored.

Un pasajero: ¿Por qué están aburridos todos?

Pregunta: ¿Qué observa el guía?

Respuesta: El guía observa que _____.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) _____

How sure are you that the answer you gave is correct?

DEFINITELY SURE REASONABLY SURE SOMEWHAT UNSURE

1

2

3

DEFINITELY UNSURE

QUESTION 3:

People involved: Tía Rita and Luis

Scenario: A number of people are at a small party in someone's living room. In the foreground, a lady (Tía Rita) is talking to a small boy (Luis) with her hand on his shoulder.

Tía Rita: ¿Por qué no me traes una bebida, Luis?

Pregunta: ¿Qué pide la Tía Rita?

Respuesta: Tía Rita pide que _____.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) _____

How sure are you that the answer you gave is correct?

DEFINITELY SURE REASONABLY SURE SOMEWHAT UNSURE

1

2

3

DEFINITELY UNSURE

QUESTION 4:

People involved: La viejita and el niño

Scenario: An elderly lady (la viejita), who is apparently confused, looks at a baby boy (el niño) in a highchair. On the highchair's tray is a birthday cake with fourteen candles.

La viejita: ¿Ese niño tiene catorce años?

Pregunta: ¿Qué no es cierto?

Respuesta: No es cierto que _____.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) _____

How sure are you that the answer you gave is correct?

DEFINITELY SURE REASONABLY SURE SOMEWHAT UNSURE

1

2

3

DEFINITELY UNSURE

QUESTION 5:

People/thing involved: La fruta

Scenario: In a supermarket, a man (Carlos) and a woman are standing in front of a number of storage bins containing fruits and vegetables. The woman is holding a melon in her hand and the man some grapes.

La mujer: Toda la fruta es horrible.

Pregunta: Para Carlos, ¿qué es sorprendente?

Respuesta: Para Carlos es sorprendente que _____.

Pregunta: ¿Qué es triste?

Respuesta: Es triste que _____.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) _____

How sure are you that the answer you gave is correct?

DEFINITELY SURE REASONABLY SURE SOMEWHAT UNSURE

1

2

3

DEFINITELY UNSURE

QUESTION 9:

People involved: Lisa and Eduardo

Scenario: In a gas station, a client (Eduardo) stands next to his car, which has a flat tire, talking to a mechanic (Lisa). He is obviously surprised that the mechanic is female.

Eduardo: Pero tú no puedes arreglar carros... eres una mujer.

Pregunta: ¿Qué duda Eduardo?

Respuesta: Eduardo duda que _____.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) _____

How sure are you that the answer you gave is correct?

DEFINITELY SURE REASONABLY SURE SOMEWHAT UNSURE

1

2

3

DEFINITELY UNSURE

QUESTION 10:

People involved: Eduardo and el periódico

Scenario: In the living room of a house, a gentleman is sitting on a couch. His son (Eduardo) interrupts him from reading the newspaper (el periódico).

Eduardo: Papá, tienes el periódico de ayer.

Pregunta: ¿Qué le informa Eduardo?

Respuesta: Eduardo le informa que _____.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) _____

How sure are you that the answer you gave is correct?

DEFINITELY SURE REASONABLY SURE SOMEWHAT UNSURE

1

2

3

DEFINITELY UNSURE

QUESTION 11:

People involved: Margarita and El Sr. López

Scenario: In a small store a man (el Sr. López) is weighing some meat for a lady

(Margarita) who stands in front of a counter giving instructions.

Margarita: ¡Dos kilos, por favor!

Pregunta: ¿Qué le pide Margarita al Sr. López?

Respuesta: Margarita pide que _____.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) _____

How sure are you that the answer you gave is correct?

DEFINITELY SURE REASONABLY SURE SOMEWHAT UNSURE

1

2

3

DEFINITELY UNSURE

QUESTION 12:

People involved: El perro and el carnicero

Scenario: A dog (el perro) is running from a butcher (el carnicero) with a piece of meat in his mouth.

El carnicero: ¡Ven aquí con esa carne!

Pregunta: ¿Qué le grita el carnicero?

Respuesta: El carnicero le grita que _____.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) _____

How sure are you that the answer you gave is correct?

DEFINITELY SURE REASONABLY SURE SOMEWHAT UNSURE

1

2

3

DEFINITELY UNSURE

QUESTION 13: (See scenario from question 12)

Pregunta: ¿Por qué está corriendo el perro?

Respuesta: El perro está corriendo porque _____.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) _____

How sure are you that the answer you gave is correct?

DEFINITELY SURE REASONABLY SURE SOMEWHAT UNSURE

1

2

3

DEFINITELY UNSURE

QUESTION 14:

People involved: Manolo and el brazo

Scenario: In a locker room, a number of athletes sit on the benches, exhausted from soccer practice. One of the athletes (Manolo) has his arm (el brazo) in a sling.

Manolo: ¡Hay! ¿Qué voy a hacer con mi brazo roto?

Pregunta: ¿De qué se lamenta Manolo?

QUESTION 20:

Person involved: El Sr. Gómez

Scenario: In a restaurant a man (el Sr. Gómez) stands at the cash register showing the cashier that his wallet is empty. The look on his face is one of anguish.

El Sr. Gómez: Pero no tengo dinero ahora.

Pregunta: ¿Qué le explica el Sr. Gómez?

Respuesta: El Sr. Gómez le explica que _____.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) _____

How sure are you that the answer you gave is correct?

DEFINITELY SURE REASONABLY SURE SOMEWHAT UNSURE

1

2

3

DEFINITELY UNSURE

POST- TEST QUESTIONS

SPANISH 202

Instructions: Read the following scenarios and for your responses (i.e., Respuesta) complete the sentence including another verb of your own choosing or from the comments or scenario (see sample questions). Be sure to use the appropriate verb form in your responses. At the end of the test you will fill out a questionnaire that inquires about your experience with foreign language(s). You will have 30 minutes to finish the test and questionnaire.

QUESTION 1:

People involved: Los pasajeros and el aeromozo

Scenario: In a plane, a steward (el aeromozo) is standing up in front of the plane's passengers (Los pasajeros), who sit in their seats and look very bored.

Un pasajero: ¿Por qué están aburridos todos?

Pregunta: ¿Qué observa el aeromozo?

Respuesta: El aeromozo observa que _____.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) _____

How sure are you that the answer you gave is correct?

DEFINITELY SURE REASONABLY SURE SOMEWHAT UNSURE

1

2

3

DEFINITELY UNSURE

QUESTION 2:

People involved: Un profesor y un estudiante

Scenario: A professor (un profesor) stands in front of a group of students. Off to the side of the students, the boss (el profesor) listens with a concerned look on his face.

Empleado: No queremos estudiar más.

Pregunta: ¿Qué escucha el profesor?

Respuesta: El profesor escucha que _____.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) _____

How sure are you that the answer you gave is correct?

DEFINITELY SURE REASONABLY SURE SOMEWHAT UNSURE

1

2

3

DEFINITELY UNSURE

4

QUESTION 3:

People involved: Carla y su hija

Scenario: A number of people are at a fair. In the foreground, Carla is talking with her daughter (su hija).

Tía Rita: ¿Por qué no me traes una bebida, hija?

Pregunta: ¿Qué pide Carla?

Respuesta: Carla pide que _____.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) _____

How sure are you that the answer you gave is correct?

DEFINITELY SURE REASONABLY SURE SOMEWHAT UNSURE

1

2

3

DEFINITELY UNSURE

QUESTION 4:

People/thing involved: La fruta

Scenario: In a supermarket, a man (Carlos) and a woman are standing in front of a number of storage bins containing fruits and vegetables. The woman is holding a melon in her hand and the man some grapes.

La mujer: Toda la fruta es horrible.

Pregunta: Para Carlos, ¿qué es sorprendente?

Respuesta: Para Carlos es sorprendente que _____.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) _____

How sure are you that the answer you gave is correct?

DEFINITELY SURE REASONABLY SURE SOMEWHAT UNSURE

1

2

3

DEFINITELY UNSURE

QUESTION 5:

People involved: La viejita and el niño

Scenario: An elderly lady (la viejita), who is apparently confused, looks at a baby boy (el niño) who is wearing glasses. The glasses look like ladies' glasses.

La viejita: ¿Ese niño lleva lentes?

Pregunta: ¿Qué no es cierto?

Respuesta: No es cierto que _____.

What reasoning did you use to come up with your answer? (What rule or other guidelines did you follow for choosing either the indicative or the subjunctive in this context?) _____

How sure are you that the answer you gave is correct?

DEFINITELY SURE REASONABLY SURE SOMEWHAT UNSURE

1

2

3

DEFINITELY UNSURE

4

APPENDIX A

QUESTIONNAIRE – FOREIGN LANGUAGE EXPERIENCE

- a. Participant Number: _____
- b. Gender: Male _____ Female _____
- c. Age: _____
- d. Native language(s): _____. If more than one native language, with whom do you speak these language?

- e. Language spoken at home: _____
- f. Country of birth: _____
- g. Year: freshman _____ sophomore _____ junior _____ senior _____
- h. What foreign Language classes have you previously taken and for how many years?
Class _____ Years _____
Class _____ Years _____
Class _____ Years _____
Class _____ Years _____
- i. Have you ever studied abroad in a Spanish-speaking country? _____
- j. If yes, where? _____
- k. For what length of time? _____
- l. Did you take Spanish in high school? _____
- m. If yes, for how many years? _____
- n. Do you speak Spanish outside of class? _____.

- o. If yes, how often? _____.
- p. On average, how many hours do you study per week? _____.
- q. Have you ever studied any other language in college? _____.
- r. If so, what other language(s)? _____.
- s. What is your major? _____.