2009

The effects of processing instruction, structured input, and visual input enhancement on the acquisition of the subjunctive in adjectival clauses by intermediate-level distance learners of Spanish

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The Effects of Processing Instruction, Structured Input, and Visual Input Enhancement on the Acquisition of the Subjunctive in Adjectival Clauses by Intermediate-Level Distance Learners of Spanish

by

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A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
Department of Secondary Education
College of Education
and
Department of World Language Education
College of Arts & Sciences
University of South Florida

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Date of Approval:
November 2, 2009

Keywords: complex L2 grammar, distance language learning, focus on form, Spanish as a foreign language, web based instruction, word animation

Dedication

This work is dedicated to the three most important people in my life: my husband, Mark, and our two sons, Nicholas and Stephen.

Acknowledgments

I would like to thank a number people whose assistance made this dissertation study possible. First, I would like to thank my co-major professors, Dr. Marcela van Olphen and Dr. Camilla Vásquez, who provided constant support, encouragement, and speedy help whenever it was needed. It has been a privilege to work closely with both of these outstanding professors over the past year and a half. I could not have asked for better mentorship, advice, and inspiration than I received from them. I would also like to thank Dr. Constance Hines, who taught me everything that I know about statistics. Her guidance and expertise ensured that this study was rigorous, and for that I thank her very much. Dr. Glenn Smith also deserves my thanks for teaching me the principles of instructional design and lending his expertise to this study. I feel so fortunate to have had these professors serve on my committee, and I am grateful that they shared their time and talents with me.

I would like to give a special thanks to Beatríz Franco and Dr. Nancy Blain for allowing me access to their students and for modifying the syllabus in their courses to accommodate my research study. This study would not have been possible without their help and support. I am also grateful to all of the Spanish II students who took the time and effort to participate in the study.

In addition, I would like to thank all of the students and faculty who are part of the Second Language Acquisition and Instructional Technology (SLAIT) Ph.D. program for their encouragement and support. In particular, I would like to thank my colleagues

Shengrong Cai, Angela Cresswell, Jane Harvey, Radhika Lothe, and Aylin Tekiner for sharing this journey and their friendship with me. I also thank Corina Owens from the Educational Measurement and Research Department and Maritza Chinea-Thornberry, Carla Zayas-Santiago, and Manuela Garcia-Luque from the World Language Education Department for their assistance with this project.

I would also like to thank Dr. Carrine Feyten and Dr. Jeffra Flaitz for having the vision to establish the SLAIT program. This program has brought together many diverse and talented people from all over the world, and it has been a privilege to be a part of it for the past four and half years.

Finally, I would like to thank my husband, Mark. I would not have been able to complete the Ph.D. program and the dissertation without his unselfish love and unconditional support. I would also like to thank my sons, Nicholas and Stephen. They never complained once even though working on this dissertation took away time that I could have spent with them. I hope that they will reflect back on my example and know that with hard work and determination, they too can reach whatever goals they set for themselves in life.

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ABSTRACT

This study investigated the effects of processing instruction (PI) on the acquisition of the subjunctive in adjectival clauses by 92 intermediate-level distance learners of Spanish. PI is a novel instructional technique that is based on VanPatten's principles of input processing (1993, 1996, 2002, 2004), and it has three key components: (a) an explicit explanation of grammar that is not paradigmatic, (b) information on processing strategies, and (c) structured input tasks and activities.

Structured input activities were isolated and combined with computerized visual input enhancement (VIE) in an attempt to increase the salience of targeted grammatical forms for web based delivery. VIE was operationalized as word animation of subjunctive forms through flash programming language.

An experiment comparing four experimental groups with traditional instruction indicates that for interpretation and production tasks, there were no significant differences between PI and traditional instruction. However, learners who received PI combined with VIE outperformed learners who received structured input activities without VIE for interpretation tasks.

In addition, the present study examined the effects of PI when learners encountered targeted forms that were embedded in an authentic input passage that was received following the experimental exposure. Thus far, studies in the PI strand have only examined how learners interact with structured, or manipulated, input. The results of the present study indicate that participants who received PI in combination with VIE noticed targeted forms in subsequent authentic input with metalinguistic awareness, and they demonstrated a significantly higher level of awareness than participants who received traditional instruction or structured input activities. Further, learners who received PI, with or without VIE, were better processors of targeted forms that were embedded in subsequent authentic input than learners who received structured input activities without VIE.

Chapter 1

Introduction

Background

Traditionally, foreign languages (FL) in secondary schools, colleges, and universities across the United States use textbooks and materials that present learners with explicit grammar explanations followed by practice activities where students are required to produce target language (TL) output from the moment that they first enter class. When FL students first encounter a new language, in effect all linguistic input in the second language (L2) is new to them. Novice language learners typically struggle to extract meaning from their L2 input (Færch & Kasper, 1986; Krashen, 1982), and a large part of their attentional resources are consumed during the comprehension process (Just & Carpenter, 1992).

Traditional FL textbooks place a heavy emphasis on grammar instruction and output-based practice, which requires beginning-level learners to focus on the formal features of language. When novice FL learners are required to focus on grammatical forms and structures, they may not have enough attentional resources to attend to both meaning and grammatical form simultaneously. Therefore, while FL learners attempt to comprehend grammar, they often miss the intended message of their TL input.

With traditional instruction, teachers and textbook authors commonly use mechanical drill activities to encourage students to focus on a targeted grammatical form. During mechanical drills, the teacher/textbook author has complete control over the response, and there is only one possible correct answer. According to Paulston (1972), the goal of the mechanical drill is to give students practice with TL structure in order to assist them in moving from repetition to self-expression without making grammatical errors. Paulston's taxonomy of practice types for FL classrooms is shown in Table 1.1. A drawback of mechanical drills is that students do not have to understand the stimulus to produce a correct answer. Therefore, it is not uncommon for students to fail to understand the meaning of even their own TL utterances when they are engaged in mechanical drills.

Some scholars (Krashen, 1980, 1981, 1982; VanPatten, 2003) claim that language learners need adequate time to process linguistic input before they are required to produce output in a second language (L2). According to VanPatten (2003), linguistic input is language that is "directed to the learner or language that the learner hears in the speech around him or her" (p. 26). Thus, input can be interactional, as in the input learners hear during their communicative exchanges, or noninteractional, as in input that is either not specifically directed to the individual learner or where the learner is not part of the communicative exchange (R. Ellis, 1994). In order for input to be available for acquisition, it must be made comprehensible to the learner because incomprehensible language is not useful for SLA (Krashen, 1980, 1981, 1982). Further, VanPatten claims

Table 1.1

Paulston's Taxonomy of Practice Types and Their Sequential Ordering

Sequencing	Characteristics
mechanical	1. Learner does not need to attach meaning to sentences in order to complete the practice. 2. There is one and only right correct response Ex: transformation drill.
↓	
meaningful	1. Learner needs to attach meaning to both stimulus and response. 2. There is one and only right correct response; the intended meaning of the learner is already known by the instructor (or fellow learner). Ex: answering questions such as, "What time does class begin?
↓	
communicative	1. Learner needs to attach meaning to both stimulus and response. 2. Intended meaning of the learner is not known by the instructor (or fellow learner). Ex: answering questions such as, "Do you have posters in your dorm room?"

Note. From Paulston (1972). *Structural pattern drills: A classification*. In H. B. Allen & R. N. Campbell (Eds.), *Teaching English as a second language* (pp. 129-138). New York: McGraw-Hill.

that input is the single most important factor for Second Language Acquisition (SLA), with all theories of SLA relying on input, in some way, to explain language acquisition.

VanPatten's model of input processing (1993, 1996, 2002, 2004) proposes a set of principles that describe the strategies that learners use to process L2 input. The principles of this model also serve as the foundation for processing instruction, a novel instructional technique that is informed by SLA research. According to VanPatten (1993, 1996, 2002, 2004), there are two subprocesses involved with input processing: (a) making form-meaning connections, and (b) parsing. Form-meaning connections refer to the cognitive mapping that learners make between a formal feature of language and its referential meaning. For example, with the Spanish verb *irá*, which is rendered *will go* in English, the *–á* ending on the verb *ir* encodes a future tense meaning. VanPatten (1996) asserts that L2 learners must notice a formal feature of the language and the referential meaning that the form encodes for SLA to take place. In the previous example, L2 learners of Spanish would need to notice the *–á* ending attached to the infinitive *ir* and be able to connect the *–á* ending with the future tense meaning. This process is known as making a form-meaning connection. The future tense inflectional morpheme in Spanish has a high communicative value, meaning that its presence contributes to the overall referential meaning of the sentence (J.F. Lee, 2002). VanPatten (1996) claims that L2 learners are more likely to make the necessary form-meaning connections when a linguistic form has a high communicative value.

VanPatten (1996) also asserts that when learners make form-meaning connections, the related input becomes intake for learning and has the potential to

become internalized into the developing interlanguage system. Intake is defined as the subset input data that is available to learners for further language processing (Gass, 1988, 1997), and interlanguage (IL), a term coined by Selinker (1972), refers to learners' transitional competence in the L2. Further, VanPatten's model of SLA claims that linguistic information must first be incorporated into the developing IL system before any output processing is possible.

The second subprocess in input processing is parsing, which is defined as "the projection of a syntactic structure onto a sentence as one is engaged in comprehension" (VanPatten, 2003, p 118). Parsing is an important element in input processing because what elements learners expect to encounter in their linguistic input influences comprehension. Due to the principles that guide parsing, L2 learners of Spanish whose first language is English will typically assume that the first noun that they hear or read in a sentence is the subject of the sentence. VanPatten (1993, 1996, 2002, 2004) refers to this as the first noun principle. Due to this faulty assumption, it is expected that L2 learners of Spanish whose L1 is English will have delayed acquisition of pronouns, case markings, and passives (VanPatten, 2003).

In order to overcome delays in acquisition, VanPatten developed processing instruction (PI), which draws upon the principles that guide input processing. The main objective of PI is to provide ample opportunities for L2 learners to make form-meaning connections through tasks and activities that supply them with structured input, in particular input that elevates the communicative value of specific linguistic forms. PI has three key elements: (a) explicit information regarding how a grammatical form or

structure works, (b) information on processing strategies and how to avoid faulty input processing, and (c) structured input tasks and activities. Structured input activities are designed in such a way as to increase learners' noticing of linguistic forms and to alter their processing strategies in order to facilitate the conversion of input to intake.

Researchers such as Collentine (1998a), and Hwu (2004) suggest that PI is a perfect fit for computer-assisted language learning (CALL) activities because teachers can easily manipulate the linguistic input that they provide to learners. Structured input is an input enhancement technique that focuses learners' attention on the semantic value of a linguistic item relative to its position in the surrounding sentence, and it is thought to increase the likelihood that input will be converted to intake for learning (VanPatten, 1993, 1995, 1996). Hwu (2004) claims that computer-based instruction is superior to teacher-delivered instruction for input-based activities, such as structured input tasks, because "these activities can be enhanced by multimedia or other advanced features of computer technology"(p. 324). Further, these activities can be delivered via the Internet, which makes them an ideal fit for web-based instruction (WBI).

Research that has compared PI to traditional instruction has found that PI is superior to traditional instruction when learners are engaged in interpretation activities and that PI is equal to traditional instruction when learners are engaged in production activities (Benati, 2001, 2005; Cheng, 2002; Cadierno, 1995; VanPatten & Cadierno, 1993a, 1993b; VanPatten & Wong, 2004). These results are somewhat surprising because the L2 learners who received PI in the aforementioned studies did not engage in any output activities during the instructional treatments, yet their production in the TL

was equivalent to that of the L2 learners who produced output during instructional treatments. Further, it would appear that PI is superior to traditional instruction because participants who received PI demonstrated superior interpretation of targeted grammatical forms compared to their counterparts who received traditional instruction. In addition, research by VanPatten and Fernández (2004) indicates that the beneficial effects of PI are durative, with participants still demonstrating learning gains eight months after their instructional treatments.

A drawback of PI is that not all TL forms are amenable to structured input activities, a key component of PI. In order to create structured input activities, all contextual cues that are redundant to the targeted grammatical form must be removed in order to elevate the form's communicative value. For example, in the sentence *Mary walked to the bank yesterday*, the word *yesterday* would be removed from the input so that the learners must derive the past tense meaning from the bound inflectional morpheme *-ed* rather than from the lexical item *yesterday*. In addition, forms that are devoid of meaning, such as definite articles in Spanish, are not suitable for PI because they only carry grammatical information and no semantic meaning. In order to benefit from processing instruction, a grammatical form or structure must convey some type of semantic meaning.

Another instructional technique that attempts to help learners focus on form is input enhancement, which is a pedagogical attempt to promote SLA by increasing L2 learners' attention to grammatical form through external manipulation of their linguistic input. Input enhancement is an input-based technique that does not attempt to alter

learners' processing strategies; rather, the goal of input enhancement is to make certain aspects of the L2 input more salient for learners, whether the enhancement technique is explicit and elaborate, such as the provision of metalinguistic rule explanations, or implicit and simple, such as using colored markers or chalk to highlight targeted forms on the board (Sharwood Smith, 1991). Sharwood Smith (1981) claims that grammar instruction does not have to take the traditional form of metalinguistic discussions; rather, teachers can help their students pay attention to grammar through a variety of input enhancement techniques. Rutherford and Sharwood Smith (1985) proposed a number of input enhancement techniques, including: input flood, typographical enhancement, and grammatical consciousness-raising. Currently, the most common forms of input enhancement techniques are structured input, input flood, and textual or visual input enhancement (Wong, 2005). Structured input, a key element in processing instruction, is a technique that elevates the communicative value of linguistic forms by eliminating any lexical redundancies in the input and by simplifying the input surrounding the targeted structure to increase the likelihood that L2 learners will notice the form's semantic value and make a form-meaning connection. Input flood is an input enhancement technique where the teacher or researcher manipulates the input in order to saturate it with the targeted linguistic form. Theoretically, L2 learners are more likely to notice the targeted form due to its increased frequency in their input (Gass, 1997, Wong, 2005). Grammatical consciousness-raising is an input enhancement technique that utilizes inductive grammar activities. L2 learners are encouraged to discover grammatical rules on their own by interacting with the input while performing some task (R. Ellis, 1997).

This instructional method operates on the premise that when students understand how certain features of grammar work in the L2, then they will be more likely to notice those features in subsequent input (R. Ellis, 1997; Fotos, 2002). Visual Input enhancement (VIE) is one of the simplest forms of input enhancement. It is used to make certain features of written L2 input more salient for L2 learners through formatting techniques such as bolding, capitalizing, highlighting, and/or a change in font style or size.

Of all the previously mentioned input enhancement techniques, VIE is perhaps the most controversial in SLA research. The results of research studies on whether VIE is facilitative for SLA have been largely mixed, as some studies have demonstrated a positive effect for VIE (Doughty, 1988, 1991; Jourdenais, Ota, Stauffer, Boyson, & Doughty, 1995; Shook, 1994; Williams, 1999; Wong 2002), some have found only a minimal effect (Alanen, 1995; Izumi, 2002; Robinson, 1997; J. White, 1998), and still others have demonstrated no beneficial effect for VIE (Leow, 1997, 2001; Leow, Nuevo, & Tsai, 2003; Jordenais, 1998; Overstreet, 1998; Wong, 2003).

Of note, Sharwood Smith (1981, 1991) posits that input enhancement techniques are designed to help L2 learners pay attention to the formal features of language. However, he cautions form learning may not occur in the presence of input enhancement because even if L2 learners do consciously attend to a linguistic form due to the presence of input enhancement, there is no guarantee that intake into the developing IL system will occur, as learners may make incorrect form-meaning connections. While there is no guarantee of a beneficial instructional outcome through the use of input enhancement

techniques, there is an increased likelihood that learners will notice the enhanced form, which may or may not lead to further language processing.

Both PI and VIE are instructional techniques that are designed to focus learners' attention on the formal features of their input in order to facilitate language acquisition. Although these instructional methods are both input-based and emphasize comprehension over production strategies, PI is not a comprehension-based teaching method. Teaching methods such as the natural approach and total physical response, which are comprehension-based teaching methods, do not take into account input processing mechanisms, nor do they seek to influence learners' intake of the targeted grammatical forms. Conversely, PI attempts to alter L2 learners' faulty processing strategies while prompting learners to make correct form-meaning mappings. According to VanPatten (1996), language acquisition occurs when learners' developing linguistic systems are provided with repeated examples of correct form-meaning mappings that result when learners process their input correctly. A key difference between PI and VIE is that the goal of input enhancement is to help L2 learners notice certain features of their linguistic input by making the targeted features more salient for them. Once key elements are noticed, however, input enhancement does not provide a way to help learners understand the meaning of the noticed input, and it is possible that learners may make incorrect form-meaning mappings in the presence of input enhancement techniques.

In contrast to the aforementioned input-based instructional methods, traditional instruction relies heavily on learners' production of linguistic output, which is believed to be a key factor in developing fluency and accuracy in the L2 (Swain, 1985). Traditional

instruction typically presents grammar points via an explicit explanation of grammar followed by output practice. Paulston (1972) describes traditional FL instruction as presentation/explanation of a targeted grammatical form followed by mechanical, then meaningful, then communicative activities. VanPatten (2004) asserts that the model described by Paulston is currently "the dominant approach to grammar in foreign language classrooms in the U.S. and is the model followed by almost every major language textbook published for the secondary and post-secondary market" (p. 94).

Research by Swain (1985, 1993, 1995, 1998) supports the role of output in the FL classroom. Swain (1985) developed the Output Hypothesis based on her observations of long-term French immersion students in bilingual education programs in Canada. She concluded that comprehensible input, although necessary for SLA to take place, was not sufficient for learners to fully develop native-like proficiency in a second language. Swain (1985) found that long-term French immersion students who received large amounts of comprehensible input in the L2 developed high levels of comprehension and native-like accents, but failed to attain native-like production, especially in the area of grammatical accuracy. She observed that long-term immersion learners were not prompted or pushed by their teachers to produce linguistic output in the L2 during subject matter instruction. Immersion learners tended to only produce a very small amount of language in the L2, which Swain described as the minimum amount of language that was necessary to "get by" in class.

Further, the immersion classes that she observed were mainly teacher-fronted, and teachers failed to correct grammatical errors if students were able to adequately convey

meaning in the L2. Swain (1985) claims that L2 learners need to be pushed to produce output in the target language because the provision of abundant amounts of linguistic input (as in the case in bilingual immersion education) is not enough to develop native-like grammatical accuracy. She posits that when L2 learners produce output, they shift from semantic to syntactic processing, which is a deeper level of language processing. Swain asserts that when students are not pushed to produce output in the L2, they will only attend to linguistic meaning at the expense of grammatical form. While the Output Hypothesis is not a theoretical unpinning of traditional instruction, it lends weight to the importance that traditional instruction places on production practice (DeKeyser & Sokalski, 1996).

Swain (1993, 1995, 1998) extended the Output Hypothesis when she identified three functions that output serves in SLA: (a) the hypothesis-testing function, (b) the metalinguistic function, and (c) the noticing / triggering function. The hypothesis-testing function and the metalinguistic function are thought to enhance learners' fluency and accuracy in the TL. Through the first two functions, learners become aware of and test out their theories regarding the TL rules and structures. The noticing function of output is consistent with the Schmidt's Noticing Hypothesis (Schmidt, 1990, 1993, 1995; Schmidt & Frota, 1986), which states that L2 learners must first notice target language forms in order for input to be converted into intake for learning. Schmidt claims that learners must "notice the gap" or the mismatch between their own production and the correct target language form for SLA to take place (Schmidt & Frota, 1986). According to Swain and Lapkin (1995), when learners attempt to produce output in the L2, they may

not know or remember the necessary linguistic forms and structures that they need to communicate. At that point (the moment of production), L2 learners notice a "hole" in their IL knowledge. Thus, by attempting to produce output, learners are forced into noticing what they do not know, or what they know only partially. Swain (1995) posits that noticing holes or gaps in their IL knowledge primes learners to pay more careful attention to the relevant forms in their future input.

A criticism of the Output Hypothesis is that there has been little empirical research to support it (Swain, 1998; Swain & Lapkin, 1995). Further, only a handful of studies have investigated the noticing function of output by providing participants with relevant input following output-based activities (Izumi, 2002; Izumi & Bigelow 2000; Izumi, Bigelow, Fujiwara & Fearnow, 1999). Moreover, the results of only one published study (Izumi, 2002) partially support the noticing function of the output hypothesis.

Theoretical Framework

In the 1990's, the focus of SLA research began to examine how learners process input, with the recognition that not all of the linguistic input that learners are exposed to becomes intake for learning (Gass, 1988). Intake is defined as the subset input data that is available to learners for further language processing (Gass, 1988, VanPatten, 1996). Schmidt (1990, 1995, 2001; Schmidt & Frota, 1986) claims that noticing is what mediates input and intake, and that noticing is a necessary condition for second language acquisition. In other words, Schmidt claims that conscious rather than subliminal processes drive SLA. Schmidt (2001) also asserts that noticing requires focal attention

and awareness on the part of the learner, and learners must notice their TL input with understanding for language acquisition to take place. One of the primary goals of both input enhancement and PI is to direct learners' attention to the formal features on the L2 that they would not otherwise notice. Thus, the Noticing Hypothesis serves as a theoretical underpinning for Sharwood Smith's input enhancement techniques (1981, 1991, 1993) and VanPatten's model of input processing (1993, 1996, 2002, 2004). It is important to note that according to VanPatten (2004), input processing assumes that learners have perceived and noticed the targeted grammatical forms; however, noticing alone does not signify that learners have processed the forms in their working memories. VanPatten (2004) posits that intake does not occur until learners make form-meaning connections, which occurs during "real time comprehension" in their working memories (p. 7). In addition to the Noticing Hypothesis, VanPatten's model of input processing also serves as the theoretical framework for PI's components and tasks. Both the Noticing Hypothesis and VanPatten's model of input processing presume that internal or mental processes are responsible for SLA and that new knowledge must be integrated into the mental organization of learners' existing knowledge. When learners change their organized cognitive systems or networks to accommodate new knowledge, restructuring is said to take place. The integration of new knowledge and restructuring are key components of a cognitive approach to SLA, which views all language learning as a mental construct. Thus, both input enhancement and processing instruction are instructional techniques that are based upon a cognitivist framework for SLA.

The major theoretical underpinnings of traditional instruction are behaviorism and skill acquisition theory (Anderson, 1976). The mechanical drill activities that are at the core of traditional instruction are vestiges of the audiolinguial teaching method, which dominated FL instruction in the United States in the 1950s and 1960s. The principles of behaviorism underlie the basic tenets of the audiolingualism (Omaggio-Hadley, 2001). Skinner's (1957) theory of verbal behavior regarded language learning as habit formation that depended on imitation, practice, and reinforcement. Skinner described language as a sophisticated stimulus-response system, and the goal of instruction was to establish and strengthen stimulus-response connections. In essence, the principles of behaviorism propose that language is best learned through extensive drills and practice. In addition, Anderson's skill acquisition theory posits that all knowledge begins in a declarative form and is converted to procedural knowledge through practice. Thus, the role of output-practice in traditional instruction is paramount.

Although the audiolingual method fell into disfavor in the 1980s, many FL teachers and most textbook authors still rely heavily on the output-based mechanical drill activities that stemmed from this methodology. These activities emphasize the teaching of structural patterns through the use of repetitive drill activities. According to Chastain (1976), every audiolingual textbook included pattern drills, of which there were two main types: (a) repetition drills, where learners made no change to the teacher's model, and (b) transformation drills, where learners made a minimal change to the teacher's model. The latter type of drill was subsequently reinforced by the teacher or by an audio recording.

While all of the instructional techniques that were examined in this study (PI, structured input, visual input enhancement, and traditional instruction) attempt to focus learners' attention on the formal features of language, they differ with respect to their theoretical underpinnings. Both input enhancement and PI fall within a cognitive framework for SLA and rely heavily on the Noticing Hypothesis; however, PI is also based upon VanPatten's model of input processing (1993, 1996, 2002, 2004), as the main focus of this technique is to alter learners' initial processing of TL input. Unlike the other two methods, traditional instruction relies heavily on skill acquisition theory and behaviorism. While skill acquisition theory and behaviorism are still cognitive approaches to SLA, behaviorist theory emphasizes the importance of repetition and rote practice for learning foreign languages, and skill acquisition theory stresses the importance of practice in order to convert declarative knowledge to procedural knowledge. With traditional instruction, the primary way to engage students in rote practice of novel forms and structures is through the use of mechanical and pattern drill activities, both of which require an extensive amount of TL output in the oral and written modalities. Table 1.2 provides a visual display of the various instructional techniques that were examined in the present study.

Table 1.2

Type of Instruction by Group Examined in the Present Research Study

Instructional method	Components	Approach	Type
Processing instruction (+PI -VIE)	1. Explicit grammar explanation 2. Information on processing strategies 3. Structured input activities	Deductive	Input-based
Processing instruction with visual input enhancement (+PI+VIE)	1. Explicit grammar explanation 2. Information on processing strategies 3. Structured input activities with visual input enhancement	Deductive	Input-based
Structured input (+SI-VIE)	Structured input activities	Inductive	Input-based
Structured input with visual input enhancement (+SI+VIE)	Structured input activities with visual input enhancement	Inductive	Input-based
Traditional instruction (comparison group)	1. Explicit grammar explanation 2. Mechanical output-based activities 3. Meaningful output-based activities 4. Communicative (open-ended) output-based activities	Deductive	Output-based

Statement of the Problem

Today, more than 3.9 million college students take at least one class online, and both web facilitated and blended/hybrid courses are growing in popularity (E. Allen & Seaman, 2008). While traditional face-to-face (FTF) instruction does not rely on web based technology to deliver instruction, web facilitated courses are becoming more popular due to the ease of using courseware management systems to post syllabi and assignments. A new type of course is the hybrid, where online instruction is blended with FTF delivery. In hybrid courses 30% to 79% of instruction is delivered online (E. Allen & Seaman, 2008). With the growth of WBI, it is important to look for new instructional techniques that are suitable for online delivery. Currently, many textbook companies provide web based versions of their textbooks for online or distance education classes. According to Fraser (1999), the developers of most of these products offer little more than an identical version of the printed textbook that is adapted for online use. This common practice of indiscriminately converting information from one format into another without regard for ease of use, appearance, or capabilities is known as "shovelware" (Fraser, 1999). Often, developers convert textbooks into online products without considering how the learning environment may be different or optimized in the new format. M. Allen (2003) recommends that time and resources should be invested into the process of planning, analysis, and design before developing e-learning materials. Since web facilitated and web delivered courses are growing in popularity, it is important to examine the body of research on computer assisted language learning (CALL), in particular research that seeks to determine which instructional methods and techniques

yield the most benefits for online language learning, before "shoveling" language learning materials onto the web.

An overview of the literature on PI and VIE suggest that these techniques might be beneficial for web based foreign language instruction; however, there is scant research to support this claim. More research is needed on the components of PI, in particular on structured input activities, which may be a good fit for WBI because teachers have greater control over their students' TL input compared to FTF classrooms where learners receive linguistic input from their peers as well as their teacher. Furthermore, when studying a FL online, the input that is provided to the learner is a key feature of instruction because online learning typically provides fewer opportunities for students to produce verbal output and to interact with one another and/or their teacher than traditional FTF instruction. Thus, the role of linguistic input takes on even greater significance for distance FL learning.

VanPatten and Oikkenon (1996) examined the components of PI to determine which part (explicit grammar explanation, structured input, or both) is the most beneficial for learners' interpretation and production of targeted forms. The researchers targeted object pronouns and word order in Spanish, and they found that structured input activities alone are as effective as PI. Interestingly, VanPatten and Oikkenon did not find the same effect for explicit grammar explanation alone. Benati (2004b, 2005) replicated VanPatten and Oikkenon with a different TL and a different grammatical form and obtained the same results. Doughty (2004) posits that the explicit instruction component of PI only leads to the learning of metalinguistic knowledge, or knowledge about the

language, and not to learners' ability to use the language. She contends that the only role for the explicit explanation component of PI is to orient the learners to the processing problem. Since structured input activities (the second component of PI) also orient learners to the processing problem, Doughty suggests that the explicit explanation component is not necessary. Farley (2004b), however, found that explicit instruction plays a key role in PI when the targeted grammatical form is complex. He replicated VanPatten and Oikkenon (1996) with the present subjunctive in Spanish in noun clauses following expressions of doubt or denial, a much less transparent form than object pronouns. Farley found that participants that had an explicit grammar explanation with structured input activities performed significantly better on posttests than participants who only received structured input activities. Thus, the findings are mixed on the effectiveness of the explicit grammar explanation component of PI, and it is unclear if learners require an explicit explanation when the targeted grammatical form is complex.

Further, it is presently unknown whether other types of input enhancement in combination with structured input activities, as suggested by Collentine (1998a), Doughty (2004), and Hwu (2004), are as beneficial for L2 learners as PI. In addition, novel forms of input enhancement need to be developed and investigated in order to determine if they are able to attract learners' attention as they work online. It may be that traditional forms of textual and visual input enhancement such as bolding and underling text no longer capture learners' attention in a web based learning environments. M. Allen (2003) asserts that learners filter out stimuli that are perceived as uninteresting in computer-based media. Visual enhancement in computer and web based environments can take on

many different forms. Text can be enhanced acoustically, with color, with graphics, and/or animations. Thus far, no study has investigated the combined effects of VIE and PI in a web based learning environment

Finally, all of the research to date in the PI strand has failed to investigate whether PI is able to affect how learners process authentic input subsequent to receiving their instructional treatments. Collentine (2004) states, "we do not know if learners respond to forms constituting the targeted grammatical phenomenon in normal input conditions (i.e., authentic input) once they have left the processing instruction laboratory" (p. 179). Theoretically, L2 learners will notice targeted forms in subsequent authentic input, avoid faulty processing strategies, and make correct form-meaning mappings following PI; however, the current body of research has failed to demonstrate this facilitative effect as learners engage with authentic, rather than structured, input after the experimental exposure.

Purpose

Motivated by previous research on processing instruction (PI) and visual input enhancement (VIE) and the existing gaps in the literature in these areas, the overarching purpose of this study was to investigate novel instructional techniques (processing instruction, structured input, and visual input enhancement) for teaching complex grammar to distance learners of Spanish and to compare these methods to traditional instruction, the dominant instructional paradigm in both FTF and web based formats in the United States today.

In summary, a review of the relevant research in the field predicts that PI and structured input activities will be superior to traditional instruction for interpretation tasks, but that PI and structured input activities will be relatively equal to traditional instruction for production tasks (Benati, 2001, 2005; Cadierno, 1995; Cheng, 1995; Farley, 2001a; VanPatten & Cadierno, 1993a, 1993b; VanPatten & Wong, 2004). The present study combined structured input activities with VIE to determine if additional enhancements increase the effectiveness of these techniques in a web based learning environment. Theoretically, the presence of two types of input enhancement (structured input with VIE) should be superior to only one type (structured input alone) for participants' ability to notice the targeted grammatical forms. In addition, as the current research is mixed regarding the beneficial effect of structured input alone on the acquisition of complex grammatical features, the present study also isolated structured input activities from PI to determine whether the explicit explanation component of PI is necessary when the targeted grammatical form is complex.

Finally, the present study also investigated learners' noticing and processing of subjunctive verb forms that were embedded in an authentic TL text that participants received post experimental exposure. This portion of the study attempted to determine if exposure to a particular instructional technique had an effect on how learners noticed, processed, and comprehended subsequent L2 input that contained the targeted grammatical forms. In addition, the relationship between comprehension and input processing was examined to determine if there was a relationship between these two

constructs. Although J.F. Lee and VanPatten (1995) assert that these are two distinct processes (making meaning versus making form-meaning connections), they are likely to overlap.

Research Questions

Five instructional treatments were examined in the present study as follows: processing instruction without visual input enhancement (+PI -VIE), processing instruction with visual input enhancement (+PI +VIE), structured input with visual input enhancement (+SI +VIE), structured input without visual input enhancement (+SI -VIE), and traditional output-based instruction (TI). The following research questions were addressed within the context of this study:

1. Is there a differential performance between treatment groups for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by interpretation tasks over time?
2. Is there a differential performance between treatment groups for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by production tasks over time?
3. Is there a differential performance between treatment groups in participants' ability to notice targeted forms in subsequent authentic input as measured by note-scores and awareness scores?
4. Following the instructional treatments, is there a differential performance between treatment groups in participants' ability to comprehend the referential meaning of the targeted grammatical form (input processing) and the message of the authentic

input text in which it is embedded as measured by grammar comprehension and text comprehension scores?

5. What is the relationship between text comprehension and input processing when learners encounter the targeted grammatical form in subsequent authentic input?

Research Hypotheses

Hypothesis 1 is that learners who are exposed to processing instruction and structured input activities will outperform learners who are exposed to traditional instruction for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by interpretation tasks. (+PI -VIE and +SI -VIE > TI)

Hypothesis 2: Learners who are exposed to processing instruction and structured input activities will perform as well as learners who are exposed to traditional instruction for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by production tasks. (+PI -VIE and +SI -VIE = TI)

Hypothesis 3: Learners who are exposed to processing instruction and structured input activities with visual input enhancement will outperform learners who are exposed to traditional instruction for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by interpretation tasks. (+PI +VIE and +SI +VIE > TI)

Hypothesis 4: Learners who are exposed to processing instruction and structured input activities with visual input enhancement will perform as well as learners who are exposed to traditional instruction for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by production tasks. (+SI +VIE and +SI +VIE = TI)

Hypothesis 5: Learners who are exposed to processing instruction and structured input activities with visual input enhancement will outperform learners who are exposed to processing instruction and structured input activities without visual input enhancement for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by interpretation tasks. (+PI +VIE and +SI +VIE > +PI -VIE and +SI –VIE)

Hypothesis 6: Learners who are exposed to structured input activities alone will not perform as well as learners who are exposed to processing instruction for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by interpretation tasks. (+SI -VIE < +PI -VIE)

Hypothesis 7: Learners who are exposed to structured input activities combined with visual input enhancement will perform as well as learners who are exposed to processing instruction for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by interpretation tasks. (+SI +VIE = +PI -VIE)

Hypothesis 8a: Learners who are exposed to processing instruction and structured input activities with visual input enhancement will notice more targeted verb forms that are embedded in a subsequent authentic input passage than learners who are exposed to traditional instruction and learners who are exposed to processing instruction and structured input activities without visual input enhancement. (+PI +VIE, +SI +VIE > TI, +PI -VIE and +SI -VIE)

Hypothesis 8b: Learners who are exposed to processing instruction and structured input activities with visual input enhancement will have a higher level of awareness (or a deeper level of noticing) of the targeted verb forms that are embedded in

a subsequent authentic input passage than learners who are exposed to traditional instruction and learners who are exposed to processing instruction and structured input activities without visual input enhancement. (+PI +VIE, +SI +VIE > TI, +PI -VIE and +SI -VIE)

Hypothesis 9a: Learners who are exposed to processing instruction and structured input activities with and without visual input enhancement will perform as well as learners who are exposed to traditional instruction for comprehending the message of a subsequent authentic input text in which the targeted grammatical form is embedded as measured by text comprehension scores. (+PI +VIE, +PI -VI, +SI +VIE, +SI -VIE = TI)

Hypothesis 9b: Learners who are exposed to processing instruction and structured input activities with and without visual input enhancement will outperform learners who are exposed to traditional instruction for processing targeted forms that are embedded in a subsequent authentic input text as measured by grammar comprehension scores. (+PI +VIE, +PI -VI, +SI +VIE, +SI -VIE > TI)

Hypothesis 10: There will be a significant positive correlation between input processing and text comprehension.

Significance of the Study

This study is significant because it contributed to the present body of knowledge on PI, structured input, and VIE in the field of SLA. More specifically, the present study was the first to investigate the effects of PI with distance language learners, which is of particular importance since more than 3.9 million undergraduates in the United States

currently take at least one course online, and the numbers of online learners continues to grow (E. Allen & Seaman, 2008).

In addition, all previous studies that examined VIE employed simple typographical enhancements or enhancements through the use of highlighting and/or color. The present study was the first of its kind to operationalize VIE with word animation through the use of flash programming language, which took advantage of the capabilities of the web based learning environment.

Further, the present study is significant because it examined whether PI and VIE were able to facilitate learners' noticing and processing of targeted forms in subsequent authentic input post experimental exposure. Past studies in the PI strand only examined the effect of PI on learners' ability to process structured, or manipulated, input.

Finally, the findings of the present study have the potential to improve FL pedagogy. The results will assist FL practitioners in determining which instructional techniques are the most beneficial for teaching complex grammar in web based and blended learning environments.

Definition of Terms

Awareness: A particular state of mind in which an individual has undergone a specific objective experience of some cognitive content or external stimulus (Tomlin & Villa, 1994). Awareness can occur at the level of noticing, which indicates meta-awareness, or at the level of understanding, which indicates a learner's ability to state the underlying grammatical rule (Rosa & O'Neill, 1999; Rosa & Leow, 2004). Participants' level of awareness, or depth of noticing, was measured by a Posttreatment Questionnaire

(an off-line measure). The Posttreatment Questionnaire was a retrospective measure of participants' awareness of the targeted grammatical form as it appeared in authentic input, and it required participants to provide metalinguistic information about the use of the subjunctive in adjectival clauses. Participants demonstrated meta-awareness, or awareness at the level of noticing, if they were able to articulate that the subjunctive mood was present in the authentic input text. They were also asked to give a TL example of the grammatical form as proof of their meta-awareness. Participants demonstrated awareness at the level of understanding if they were able to state the morphological rule for using the subjunctive in adjectival clauses.

Comprehension: A Comprehension Test that was created for this study measured two types of comprehension: (a) participants' comprehension of the propositional content of the input passage, and (b) participants' comprehension of the referential meaning of the targeted verb forms. Comprehension of the propositional content of the input passage was measured by multiple-choice test items that queried information from different levels of the passage including the main idea and specific details (Wolf, 1993). Comprehension of the referential meaning of the targeted verb forms was measured by multiple-choice and short answer questions. The multiple-choice questions were intended to measure whether participants were able to identify the grammatical form of the conjugated verb (present subjunctive or present indicative). The short answer questions were intended to measure whether participants were able to comprehend the referential meaning of the subjunctive forms.

Detection: "The process that selects, or engages, a particular and specific bit of information" (Tomlin & Villa, 1994, p. 192).

Form-Meaning Connection: The connection between a grammatical form and the referential meaning that it encodes (VanPatten, 1993, 1996, 2002, 2004).

Input: The linguistic data that is available to the learner.

Input Processing: "Making form-meaning connections from the linguistic data in the input for the purposes of constructing a linguistic system" (J.F. Lee & VanPatten, 1995, p. 96).

Intake: The subset input data that is available to learners for further language processing.

Interpretation: "Learners identify the meaning(s) realized by a specific grammatical feature (i.e. too help them carry out a form-function mapping). In this case, the goal is *grammar comprehension* to distinguish what might be termed *message comprehension*, which can take place without the learner having to attend to the grammatical form" (R. Ellis, 1995, p. 94). Interpretation was measured by three forms of an Interpretation Subtest that were created for this study. These tests were designed to measure whether participants understood that the subjunctive in adjectival clauses in Spanish connotes a non-referential antecedent (a referent that is hypothetical, uncertain, or unknown to the speaker).

Noticing: What learners detect in their linguistic input with conscious awareness (Schmidt, 1990). Noticing was measured by notes that participants took as they read an authentic input text following their instructional treatments. Participants were instructed

to note the words that they considered to be important to comprehend an authentic input passage that was delivered online. They recorded their notes in a text box, and their notes were converted to a note-score. One point was awarded for each instance of the targeted grammatical form that was noted.

Output: What learners produce, verbally or in writing, in the target language.

Processing Instruction: In the present study, processing instruction was operationalized as an explicit grammar explanation of the targeted grammatical form that was not paradigmatic, followed by information about processing strategies and how to avoid faulty input processing, followed by referential and affective structured input activities.

Production: Three versions of a Production Subtest were created for this study to measure production. The Production Subtest was designed to measure learners' production of the present subjunctive in adjectival clauses in Spanish when the referent is unknown to the speaker. Participants were required to determine if a verb had to be conjugated in the present indicative or in the present subjunctive in Spanish depending upon the context of the sentence, and they had to produce the correct verb form in writing. The Production Subtest required participants to produce both regular and irregular verbs in the subjunctive as well as verbs that take an orthographical change.

Text Comprehension: "Making or creating meaning from the informational content in the input for the purpose of interpreting a message" (J.F. Lee & VanPatten, 1995, p. 96).

Traditional Instruction: The present study operationalized traditional instruction as an explicit grammar explanation of the targeted grammatical form that was paradigmatic followed by mechanical, then meaningful, then communicative activities. Learners were required to produce target language output immediately following the explicit grammar explanation.

Visual Input Enhancement: A visual means of rendering certain features of the written input data more salient in order to attract learners' attention. In the present study, VIE was operationalized as the enhancement of targeted grammatical forms through the use word animation as learners read input sentences online. The subjunctive verb forms in each input sentence grew larger and smaller over a period of seven seconds to attract participants' attention to the targeted forms as they worked online. Animated words were delivered consecutively rather than simultaneously in order not to distract participants' attention from other static elements on the screen.

Delimitations

The findings of this study are not generalizable to the entire population of Spanish language students in the United States because there was not random selection of participants from universities across the country. The findings are only generalizable to students of Spanish from urban/suburban universities in the southeast who complete their foreign language coursework online. Two teachers of second semester Spanish language students who deliver their instruction online from two institutions (one urban university and one suburban university) in the southeast were invited to have their classes take part in the study.

Limitations

As with all studies, the present study was not free from threats to internal validity. The pre- and posttests were delivered over the web since the online Spanish courses from which students were selected had few face-to-face class meetings (for orientations, reviews, and exams only). In order to keep the students from consulting their texts, notes, other individuals, or resources on the Internet, the pre- and posttests were timed, only allowing enough time for students to answer each question rapidly and from their own working memories. Due to the nature of timed tests, some students may have experienced greater test anxiety than others, which may have inhibited their performance on the pre- and posttests. In addition, it is likely that extraneous variables such as gender, age, SES, and language aptitude may have exerted some influence on the outcome measures. However, these variables were controlled by random assignment to groups. As all three instructional methods were delivered via WBI, teacher was not an extraneous variable in the present study.

Chapter 2

Review of Literature

Introduction

This chapter begins with an overview of VanPatten's model of input processing (1993, 1996, 2002, 2004), which serves as the foundation for processing instruction (PI), a relatively novel type of focus on form instructional technique that utilizes tasks and activities that are designed to improve second language (L2) learners' initial input processing of specific grammatical forms. PI is unique in that it is one of the few instructional methods that is informed by second language acquisition (SLA) research. A thorough description of PI and its characteristics are provided in this chapter. In addition, the relevant research on the efficacy of PI, and structured input, a component of PI, are reviewed, and any limitations, design flaws, or gaps in the literature are explicated. As input enhancement and traditional (output-based) instruction are also examined in the present study, the pertinent literature on these topics is also reviewed in this chapter. It is the aim of the present study to build upon and add to the current body of knowledge on the efficacy of each of the aforementioned instructional techniques. The chapter ends with an examination of the targeted grammatical form under investigation in the present study, the present subjunctive in adjectival clauses in Spanish when the referent is hypothetical or unknown.

VanPatten's Model of Input Processing

VanPatten's model of input processing (1993, 1996, 2002, 2004), by his own admission, is a working model and has not yet evolved to the level of theory in SLA. Although the model is not a theory of SLA, the principles and subprinciples that are attached to it serve as the foundation for PI. VanPatten (2004) defines input processing as learners' initial form-meaning mappings that occur during real time comprehension of TL input. Thus, a prerequisite for the model is the provision of comprehensible input to the learner. Form-meaning mappings occur when learners assign meaning to a grammatical form, which is defined as a surface feature of language. Grammatical forms include inflectional morphology as well as function words such as pronouns, prepositions, and articles. Input processing is a phenomenon that occurs within learners' working memories; thus, it is not directly observable. In order for input processing to occur, learners must first perceive and notice a grammatical form in their TL input, and then they must assign meaning to it. It is important to note that L2 learners may process forms incorrectly by assigning incorrect meanings or functions to forms. Also, input processing is constrained by working memory limitations, or the amount of information that can be perceived, noticed, and processed as L2 learners attempt to comprehend TL input in real time (Just & Carpenter, 1992).

VanPatten (1993, 1996, 2002, 2004) defines input processing as the initial phase of the acquisition process, and he is careful to explain that his model of input processing is not a model of SLA. See Figure 1 for VanPatten's Sketch of the Basic Processes in Acquisition. According to VanPatten (2004), once a grammatical form is processed, it

becomes intake, which is input that has been filtered by the learner and that is available for further language processing. Once initially processed, a form may be either partially or fully accommodated into the developing linguistic system (McLaughlin, 1990). VanPatten (1996) defines the developing system as "the complex of mental representations that as an aggregate constitutes the learner's underlying knowledge of the second language" (p. 9). As individuals learn language, whether their L1 or L2, they create an unconscious system of rules that govern phonology, morphology, syntax, and semantics. This unconscious system of rules is referred to as an implicit linguistic (or developing) system, which is made up of complex and varied components that interact with one another (J.F. Lee & VanPatten, 2003). As learners encounter new forms and structures, in order to acquire them, they must accommodate new knowledge into their already existing implicit linguistic systems. If accommodation occurs, then it may trigger L2 learners to restructure their internal grammars. Restructuring is a necessary precursor to production, which requires learners to access their developing systems in order to produce target language (TL) forms (Gass, 1988, 1997; Terrell, 1991). According to VanPatten (2004), output is not part of the basic processes in language acquisition. Rather, the production of output is a result of the acquisition process. He claims that acquisition occurs when learners use their input to take in and store pairs of form-meaning relationships. Conversely, when learners produce output they must retrieve TL forms that are already part of their implicit linguistic systems. VanPatten's (1993) model of SLA is presented in Figure 2.1.

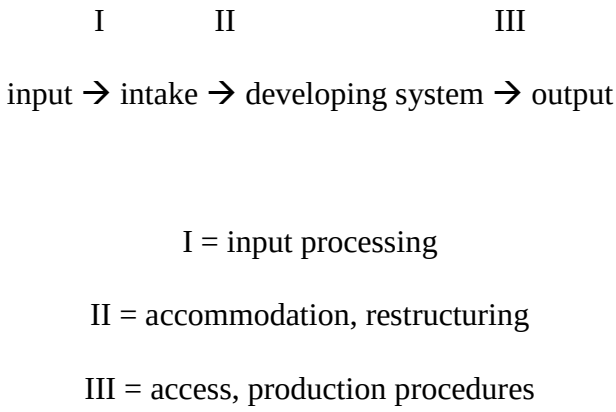

Figure 2.1. A Sketch of Basic Processes in Acquisition (from VanPatten, 1993)

Input processing is only concerned with phase I, or how input becomes intake, which is the starting point for acquisition. Because human beings are limited capacity processors (Just & Carpenter, 1992; McLaughlin, Rossman, & McLeod, 1983; Schneider & Shiffrin, 1977), only a portion of learners' input becomes intake that is available for further language processing. Gass (1988) and VanPatten (1993, 2004) posit that learners actively contribute to the selection of their input that is noticed. Gass claims that input is apperceived, or noticed, when learners are able to relate it to their prior knowledge. VanPatten, however, asserts that meaningful input is what draws learners' attention during input processing. Further, he posits that learners process meaningful input first, such as lexical items and grammatical forms that have a high communicative value. The communicative value of a grammatical form refers to the extent to which the form contributes to the overall referential meaning of a sentence or utterance (VanPatten, 1996).

A form has a high communicative value if it has inherent semantic value (it conveys some type of meaning) and lacks redundancy [+semantic value] [-redundancy] within the sentence or utterance. For example, in the sentence *Mary watched television for two hours yesterday*, the grammatical morpheme *-ed* has inherent semantic value [+semantic value] because it conveys a past tense meaning. However, the lexical item *yesterday* also conveys past tense meaning; therefore the *-ed* verb ending in this sentence is redundant [+redundant]. Removing lexical items that express the same meaning as the grammatical form can eliminate redundancy; however, a form's inherent semantic value cannot be manipulated or changed. According to VanPatten's model of input processing (1993, 1996, 2002, 2004), forms with a low communicative value can be processed, but only when learners are able to process other items in the sentence or utterance without difficulty (without draining all of their processing resources), thus leaving enough resources available to process the grammatical form with a low communicative value.

VanPatten's most recent model of input processing (2004) is founded upon two main principles and several subprinciples. VanPatten states them as follows:

> Principle 1. The Primacy of Meaning Principle. Learners process input for meaning before they process it for form.
>
> Principle 1a. The Primacy of Content Words Principle. Learners process content words in the input before anything else.
>
> Principle 1b. The Lexical Preference Principle. Learners will tend to rely on lexical items as opposed to grammatical form to get meaning when both encode the same semantic information.
>
> Principle 1c. The Preference for Nonredundancy principle. Learners are more likely to process nonredundant meaningful grammatical forms before they process redundant meaningful forms.

> Principle 1d. The Meaning-Before-Nonmeaning Principle. Learners are more likely to process meaningful grammatical forms before nonmeaningful forms irrespective of redundancy.
>
> Principle 1e. The Availability of Resources Principle. For learners to process either redundant meaningful grammatical forms or nonmeaningful forms, the processing of overall sentential meaning must not drain available processing resources.
>
> Principle 1f. The Sentence Location Principle. Learners tend to process items in sentence initial position before those in final position and those in medial position.
>
> Principle 2. The First Noun Principle. Learners tend to process the first noun or pronoun they encounter in a sentence as the subject/agent.
>
> Principle 2a. The Lexical Semantics Principle. Learners may rely on lexical semantics, where possible, instead of word order to interpret sentences.
>
> Principle 2b. The Event Probabilities Principle. Learners may rely on event probabilities, where possible, instead of word order to interpret sentences.
>
> Principle 2c. The Contextual Constraint Principle. Learners may rely less on the First Noun Principle if preceding context constrains the possible interpretation of a clause or a sentence. (2004, p. 14)

Principle 1, or the Primacy of Meaning Principle, and the first two subprinciples are based upon research on L1 and L2 acquisition, which found that both L1 and L2 learners attempt to seek out the communicative intent of their input at the expense of processing grammatical form, and that learners primarily extract meaning from content words (Færch & Kasper, 1986; Klein, 1986; Sharwood Smith, 1986; Peters, 1985; Wong Fillmore, 1976). The aforementioned research revealed that learners tend to skip over function words and inflections while parsing the communicative intent of sentences or

utterances from content words (usually in the form of lexical items). In other words, learners are pushed to extract meaning from their input, and the quickest way to do so is to focus on content words. The researchers also found that function words and inflections may be chunked, or fused to the content words with which they normally appear. Alternatively, function words and inflections may be only partially processed and then dumped from working memory when a learner's processing resources are exhausted by the task demands of processing lexical items. Furthermore, some grammatical forms may be perceived and noticed by learners, but due to constraints on working memory from processing content words, L2 learners, especially novice learners, are often unable to connect meaning to noticed grammatical forms (VanPatten, 2004). Based upon the aforementioned research regarding L2 learners' preference for extracting meaning from content words in their input at the expense of processing grammatical forms, VanPatten devised the Primacy of Meaning Principle along with subprinciples P1a and P1b. Subprinciples P1a and P1b describe L2 learners' inclination to focus on content words and lexical items while skipping over grammatical forms during input processing.

Subprinciples P1c and P1d refer to how the relative communicative value of grammatical forms affect the way that learners process them. In essence, VanPatten (2004) claims that meaningful forms that are not redundant [+semantic value] [-redundancy] are processed before meaningful forms that are redundant [+semantic value] [+redundancy]. Additionally, VanPatten asserts that meaningful forms [+semantic value] are processed before nonmeaningful forms [-semantic value], regardless of whether or not they are redundant. Research conducted by J.F. Lee (1987, 2002)

supports subprinciples P1c and P1d. J.F. Lee (1987) found that L2 learners skip over grammatical forms with a low communicative value [-semantic value] [+redundancy] during input processing, and J. F. Lee (2002) found that L2 learners are able to process novel forms when they have a high communicative value [+semantic value] [-redundancy], even when they have not been presented formally through instruction.

Subprinciple P1e is based upon research by Blau (1990), Hatch (1983) and Long (1985), who found that when learners' comprehension of input increases, their acquisition also increases. Subprinciple P1e reflects this finding by stating that when learners are able to process the overall meaning of a sentence or utterance with little or no cost to attention, then there is an increased likelihood that they will be able to process either redundant meaningful forms [+semantic value] [+redundancy] or nonmeaningful forms [-semantic value]. VanPatten (2004) asserts that certain factors may influence the amount of processing resources that are available to learners; these include proficiency level and familiarity of lexical items in the input string. If L2 learners are already familiar with the lexical items in their input and they can be easily accessed during comprehension, they will have more processing resources available for redundant and nonmeaningful grammatical forms (VanPatten, 2004).

Subprinciple P1f is based on research by Barcroft and VanPatten (1997) and Klein (1986), who found that elements that are in the initial position of sentences or utterances are more salient for learners than elements that are in sentence medial or sentence final positions. VanPatten (2004) claims that grammatical forms that are in the sentence initial position are more likely to be processed before items that are in the

sentence medial and sentence final positions because learners' processing resources are not yet exhausted at the beginning of an input string. Further, VanPatten (2004) asserts that items in sentence final position are processed more readily by learners than items in the sentence medial position because when learners reach the middle of the string of input, their processing resources have already been exhausted by processing items in sentence initial position. However, when learners reach the end of an input string, they are inclined to redirect their attention to processing the input string, and some attentional resources may become freed up to process items in the sentence final position (VanPatten, 2004). Thus, items in the sentence medial position have the least chance of being processed by learners. He qualifies this assertion by stating that the length of the sentence or utterance is likely to influence learners' processing ability, with lengthy sentences or utterances being more difficult to process than shorter ones, especially for novice L2 learners.

While the Primacy of Meaning Principle and its subprinciples refer to aspects of second language morphology, Principle 2, or the First Noun Principle, and its subprinciples refer to the interpretation of second language syntax. The First Noun Principle describes how many L2 learners whose first language is SVO (subject-verb-object) or SOV (subject-object-verb) often interpret the first word or noun that they encounter in a sentence or utterance in the L2 as the subject. VanPatten (1993, 2004) claims that this tendency delays L2 learners' acquisition of causatives, case markings, and passives. Research by Ervin-Tripp (1974), J.F. Lee (1987), LoCoco (1987) and VanPatten (1984) appears to support this claim. Ervin-Tripp found that L2 learners of

French whose L1 was English (an SVO language) confused the first noun in the French passive structure as the agent rather than the patient even though English and French passive constructions have the same word order. Both J.F. Lee (1987) and VanPatten (1984) found that L2 learners of Spanish whose L1 was English commonly confused the object of the sentence or utterance as the subject when the subject pronoun was omitted, which is a common occurrence with Spanish and other pro-drop languages. LoCoco's research indicates that L2 learners of German whose L1 was English ignored case markings and interpreted the first noun as the subject of the sentence when it was marked as the object even after they had been formally taught case markings in class.

Although the First Noun Principle does not account for learners whose L1 is OVS (object-verb-subject), VanPatten (2004) asserts that the majority of world languages are either SOV or SVO languages, where the canonical order is subject-before-object. Therefore, he claims that the tendency is for most L2 learners to interpret the first noun that they encounter as the subject of the sentence or utterance. Further, he suggests that the default parameter for syntax from the perspective of Universal Grammar (UG) may be SVO, but he cautions that research needs to be conducted with L1 and L2 learners of OVS languages before this claim could be supported.

Subprinciples P2a, P2b, and P2c refer to how the First Noun principle may be constrained by other factors. Subprinciple P2a describes how lexico-semantic information can weaken the First Noun principle, namely by assisting L2 learners with the correct interpretation of pronouns, object pronouns, and/or case markings. For example, in the English passive construction *the ball was kicked by the boy*, rather than

interpret the first noun *the ball* as the subject or agent of the sentence, L2 learners of English will be assisted by the lexical semantics of the verb *to kick*, which requires that the agent of the verb be an animate being. However, in the sentence *the boy was kicked by the horse*, L2 learners of English are likely to misinterpret *the boy* as the subject or agent of the sentence because both boys and horses are animate and capable of kicking (VanPatten, 2004). According to subprinciple P2a, since there is a lack of lexical semantics to constrain the agency of the verb in the previous example, L2 learners would tend to process the first noun that they encounter as the subject or agent of the sentence.

Subprinciples P2b and P2c take into account L2 learners' real world knowledge as well as contextual cues as they interpret sentences and utterances in the TL. VanPatten (2004) describes the event probabilities in subprinciple P2b as "the likelihood of one noun being the subject/agent as opposed to the other" (p. 16). For example, in the sentence *the ant was stepped on by the girl*, L2 learners' real world knowledge of the size of ants and girls will assist them with the correct interpretation of the aforementioned example regardless of the First Noun Principle. Subprinciple P2c is similar to subprinciple P2b; however, the former refers to elements in the preceding context that constrain the possible interpretation of sentences or utterances while the latter refers to L2 learners' existing real world knowledge that assists them with the correct interpretation of sentences or utterances.

VanPatten (2004) asserts that the principles may interact or combine to delay learners' acquisition of the TL, and some principles may take precedence over others. Research by VanPatten (1984) indicates that L2 learners of Spanish usually skip over

nonredundant object markers that occur at the beginning of sentences, which causes them to misinterpret the object pronoun as the subject of the sentence. For example, in the Spanish sentence *A Paco ve María* or *María sees Paco*, the Sentence Location Principle does not assist L2 learners of Spanish with the correct interpretation of the sentence even though the object marker *a* occurs at the sentence initial position, which clearly indicates that Paco is the object and not the subject of the sentence (VanPatten, 2004). Rather, VanPatten (1984) found that Spanish language learners whose L1 is English skip over and fail to process the object marker *a* because the First Noun Principle incorrectly drives them to process *Paco*, the first noun that they encounter, as the subject of the sentence. Based on this finding, VanPatten (2004) suggests that the First Noun Principle, is stronger than P1f, the Sentence Location Principle.

Although VanPatten (2004) claims that more than one principle in his model of input processing can operate at the same time and that some principles are more powerful than others; thus far, there is scant research to support these claims. More research studies are needed that specifically examine if and how the principles interact, and/or which ones are more powerful than others. At this time it is not possible to make any definitive assertions regarding the interaction and relative power of the principles in VanPatten's model.

While VanPatten's model of input processing (1993, 1996, 2002, 2004) appears to describe how L2 learners initially process their input, several scholars have questioned the basic assumptions of the model (DeKeyser, Salaberry, Robinson, & Harrington, 2002). VanPatten's model of input processing has been criticized because it is does not

take into account current models of sentence processing (parsing). Although VanPatten maintains that his model of input processing is not a psycholinguistic model of sentence processing, Harrington (2004) and DeKeyser, Salaberry, Robinson, and Harrington (2002) assert that any model of input processing should be consistent with what is presently known about sentence processing. According to Harrington (2001), sentence processing research attempts to understand learners' internal cognitive processes as they comprehend and/or produce sentences in real time. The fields of artificial intelligence, psycholinguistics, and computational linguistics conduct research on sentence processing in an attempt to understand how various sources of linguistic and extralinguistic knowledge interact to yield meaning in real time (Clifton, Frazier, & Rayner, 1994). There are three cognitive mechanisms that are responsible for sentence processing: algorithms, heuristics, and representations (Harrington, 2001). Algorithms are IF-THEN production rules that are responsible for making meaning out of linguistic input, and heuristics are principles that constrain how algorithms function (Caron, 1992; Harrington 2001). Harrington (2001) defines representations as "the linguistic and extralinguistic knowledge structures in the mind of the learner" (p. 99). The principles in VanPatten's model of input processing do not correspond with algorithms, heuristics, and/or representations as they are traditionally used to describe sentence processing mechanisms. However, sentence processing research almost exclusively focuses on how mature individuals parse input in their L1. VanPatten contends that L1 parsing models are not helpful for L2 learners because unlike L1 speakers, they do not have intact parsers. VanPatten (2004) also asserts that "comprehension and processing for natives

cannot and is not the same process as that for beginning non-natives who must not only comprehend but also come to discover linguistic data in what they comprehend" (p. 21). Further, he makes no claim that his model of input processing is a model of sentence processing; rather, he states that the model is a description of the strategies that L2 learners use as they attempt to comprehend TL input in real time. In other words, VanPatten is not concerned with how the L2 parser develops; rather, he is more concerned with identifying the faulty processing strategies in which L2 learners tend to engage. The goal of PI is to help learners avoid faulty input processing strategies and move toward more favorable ones.

Processing Instruction

PI is a focus on form instructional technique that is based upon VanPatten's model of input processing (1993, 1996, 2002, 2004), which entails a set of principles that describe the processing strategies that L2 learners use to make meaning out of their TL input. In his model, VanPatten describes how L2 learners engage in the initial processing of TL input, which he refers to as making form-meaning connections. The goal of PI is to change or manipulate the way that learners initially perceive and process TL input, and it is a completely input-based approach to FL instruction. PI is in direct contrast to traditional instruction, which attempts to facilitate acquisition by focusing on the manipulation of learners' output (VanPatten & Cadierno, 1993b). Figures 2.2a and 2.2b present a visual depiction of these two contrasting instructional methods.

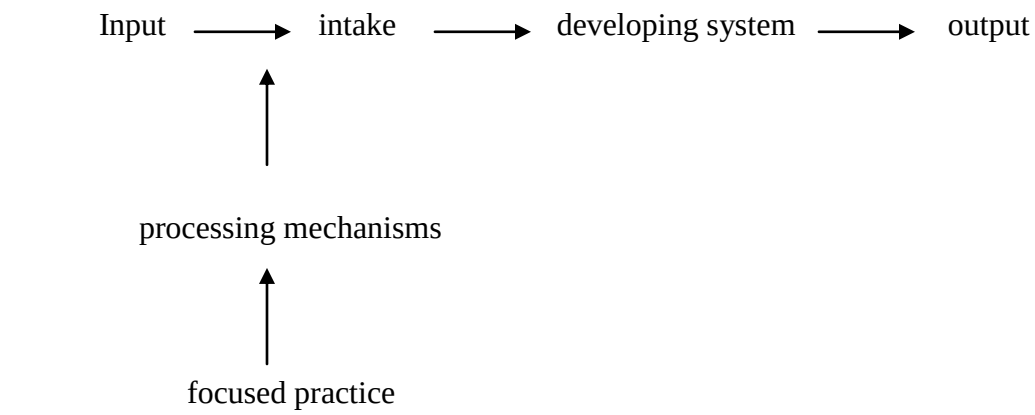

Figure 2.2a. Processing Instruction in Foreign Language Teaching (from VanPatten & Cadierno, 1993b)

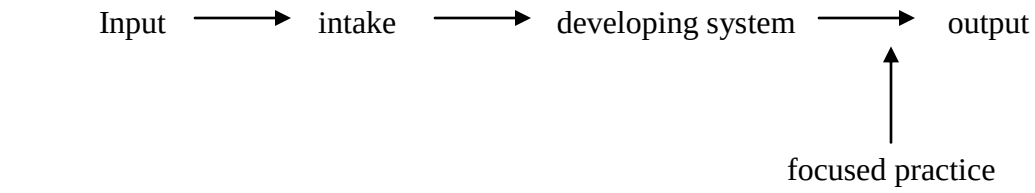

Figure 2.2b. Traditional Explicit Grammar Instruction in Foreign Language Teaching (from VanPatten & Cadierno, 1993b)

According to VanPatten's model of input processing (1993, 1996, 2002, 2004), L2 learners are driven to extract meaning from their input at the expense of processing grammatical form (the Primacy of Meaning principle), and L2 learners often misinterpret their input based upon the order of words in sentences and/or utterances (the First Noun Principle). Due to these tendencies, L2 learners will often engage in inefficient and/or faulty processing of their TL input. PI was developed to push learners away from flawed processing strategies in favor of more optimal ones (Wong, 2004). The first step in PI is to examine learners' errors in order to identify their flawed processing strategies. Once identified, instructors can then alert their students to the processing problem and provide information about correct input processing strategies. The final step in PI is to create structured input tasks and activities, which encourage learners to abandon their faulty strategies in favor of correct input processing strategies.

There are three characteristics of PI: (a) explicit instruction on the targeted grammatical form or structure, (b) information about processing strategies that may be causing delays in acquisition, and (c) structured input tasks and activities. Although explanation of TL forms is a component of PI, it may not be a critical feature. Research by VanPatten and Oikkenon (1996) isolated the components of PI and found that grammatical explanation is not a necessary feature of PI. In contrast, Farley (2004) found that the provision of an explicit explanation of grammar is a key component of PI, especially when the targeted grammatical form is complex. The explicit grammar explanation in PI is different from traditional and other types of instruction because it is not paradigmatic. With PI, grammar is presented with a focus on only one form at a time

in order to facilitate noticing and to avoid overloading learners' processing capacity. Traditional instruction typically presents the full paradigm of a grammatical form or structure on the same day, while PI breaks up paradigms into smaller chunks.

A unique feature of PI is the focus on learners' processing problems. PI begins with determining which processing problems learners are likely to experience given the targeted form or structure that is being taught. After the provision of an explicit explanation of the grammar point, learners are provided with specific information about the faulty processing strategies that they are likely to engage in and that may hinder their acquisition of the TL form.

After receiving information about processing strategies, students are given structured input activities. Although somewhat complex to design, structured input activities are intended to push learners away from faulty processing strategies and move them towards more efficient ones. Structured input is an input enhancement technique that elevates the communicative value of a linguistic form by eliminating any lexical redundancies in the input and by simplifying the input surrounding the targeted structure. Structured input is an enhancement technique that increases the likelihood that L2 learners will notice the form's semantic value and make the necessary form-meaning connection. Further, structured input activities provide learners with multiple opportunities to make correct form-meaning mappings, which according to VanPatten (1996) increases the likelihood that acquisition will take place. There are two types of structured input activities: referential and affective. With referential activities, students are required to interpret the targeted grammatical form (or realize the meaning a specific

feature encodes) in order to answer questions correctly. Conversely, affective structured input activities focus more on using the targeted grammatical forms in meaningful L2 communication. With these activities, learners complete tasks that help them to become "actively involved" with their input in order to increase the likelihood that they will process the targeted forms. This involvement can include a variety of activities such as matching, answering yes/no, or checking off items on a list. It has been argued, however, that learners may not notice the relevant grammatical form during affective structured input activities because the focus in on meaning rather than on form. Hwu (2004) has criticized affective structured input activities because learners do not typically have to notice or comprehend the targeted form in order to understand the communicative intent of each sentence. Thus, Hwu advocates using some type of input enhancement to help learners notice targeted grammatical forms in structured input activities where meaning can be extracted from other elements in the sentence.

It is important to note that learners never produce the grammatical form during either type of structured input activity (referential or affective), as both types are input-based. J. F. Lee and VanPatten (1995, 2003) proposed six specific guidelines for developing structured input activities, which will be discussed further in Chapter 3. A criticism of structured input activities is that most practitioners are unfamiliar with VanPatten's model of input processing (1993, 1996, 2002, 2004) and the faulty input processing strategies in which L2 learners are likely to engage. Further, structured input activities have specific and somewhat complicated guidelines that must be followed in order to create them accurately. Although they may be highly effective, structured input

activities are not yet currently widely employed in practice due to aforementioned limitations.

Empirical Studies on Processing Instruction

The first study on PI was conducted by VanPatten and Cadierno (1993a), and they investigated P2, or the First Noun Principle, which states that L2 learners tend to process the first noun or pronoun that they encounter in a sentence as the subject or agent of the sentence. VanPatten and Cadierno (1993a) examined this principle with 80 L2 learners of Spanish who were in their second year of university-level language study. The targeted grammatical form was object pronouns and syntax (word order) in Spanish. Since Spanish is a pro-drop language, in sentences containing object pronouns, they are often the first word. When object pronouns appear at the sentence initial position, L2 learners of Spanish often tend to process them as the subject of the sentence. This faulty processing strategy often leads to a misunderstanding of the meaning of the sentence. For example, the Spanish sentence *Lo besó María* is often interpreted *He kissed María* rather than *María kissed him* (the correct interpretation).

VanPatten and Cadierno (1993a) compared PI with traditional instruction for the acquisition of object pronouns in Spanish. They also included a control group that received no instruction. Traditional instruction was operationalized as an explicit grammar explanation of the targeted grammatical form followed by mechanical, then meaningful, then open-ended communicative activities. Of note, in traditional instruction, the full paradigm of direct object pronouns were presented to the learners at one time, and following this initial grammar presentation/explanation of the novel forms,

the learners were required to produce them immediately in speech and in writing. The researchers used activities from the students' Spanish textbook, workbook, and lab manual as the basis for the traditional instruction materials.

PI consisted of an explicit grammar explanation, information on processing strategies, and structured input activities. The grammar explanation in PI differed from traditional instruction in two important ways: (a) participants received grammar instruction that broke up the full paradigm of direct object pronouns into two parts, and (b) participants received information on processing strategies that helped them to differentiate subject and object pronouns. By providing training on processing strategies, the researchers attempted to circumvent the First Noun Strategy, which states that L2 learners will process the first noun that they encounter in a sentence or an utterance as the subject or agent. Thus, participants were trained to interpret subject and object pronouns correctly before receiving any structured input activities. All of the activities in the PI materials were input-based, and at no time did any of the participants in the PI group produce any of the targeted grammatical forms.

Both instructional treatments were delivered via pencil-and-paper instructional activity packets that were completed over a period of two class sessions. The participants' regular classroom teachers were removed during the study period, and one of the researchers, Cadierno, taught both experimental groups. Participants completed all of the study-related materials in their classrooms and did not have any homework during the study period. VanPatten and Cadierno (1993a) balanced both experimental treatment packages for the total number of activities, percentage of aural versus written activities,

percentage of whole-class versus paired activities, number of tokens (number of input sentences containing the targeted forms interpreted by the PI group versus number of sentences containing the targeted forms produced by the traditional instruction group). Also, the researchers adjusted the vocabulary in both treatment packets so that they contained roughly the same vocabulary items, which consisted of high frequency words that were already familiar to participants from previous Spanish language coursework. Finally, the researchers also checked the vocabulary items in the assessment tasks against the vocabulary items in both instructional treatment packets in order to ensure that there was no vocabulary bias for either of the two treatment groups.

VanPatten and Cadierno (1993a) employed an experimental design with a true control group that received no instruction on object pronouns in Spanish. The 80 participants were given pre- and posttests that included interpretation and production tasks. The pre- and posttest scores on each task were submitted to two repeated measures Analyses of Variance (ANOVAs), which revealed a between-subjects effect for instruction on each task type. Post-hoc tests revealed that for the production task, the test scores for PI and traditional instruction were not significantly different from each other, but both of these groups scored significantly higher than the control group. Additionally, the post hoc tests revealed that for the interpretation task, the PI group made significant gains, but the traditional instruction group and the control group did not. VanPatten and Cadierno (1993a) claim that these results indicate that PI is superior to traditional instruction because although participants in the PI group never produced the targeted forms during the instructional treatments, they scored equally as well as those

participants who did. Further, participants in the PI group scored significantly higher than both the traditional instruction group and the control group on the interpretation task. Therefore, PI was found to be effective for assisting learners in interpreting object pronouns and word order correctly in Spanish. When both types of tasks are taken into consideration (interpretation and production), the results of this study indicate that PI is superior to traditional instruction and to no instruction.

VanPatten and Cadierno (1993b) replicated their study with the same grammatical form (object pronouns) and 49 second year university-level learners of Spanish. They employed the same research design, instructional treatments, procedures, and assessment tasks as VanPatten and Cadierno (1993a); however, their results were slightly different in the 1993b study. Similar to VanPatten and Cadierno (1993a) the researchers found that PI was superior to traditional instruction and to the control group for interpretation task measures. However, the results of the production task measures were less apparent. A repeated measures ANOVA on production task scores revealed a significant between-subjects effect for type of instruction, a main effect for time, and an interaction effect between type of instruction and time. Post-hoc Sheffé tests revealed that the main effect for type of instruction was due to one contrast: traditional instruction outperformed control (no instruction). The researchers point out, however, that the post-hoc tests also revealed that there were no significant differences between PI and traditional instruction, nor were there any significant differences between PI and control on production task measures. VanPatten and Cadierno (1993b) state, "In short, traditional instruction was

not superior to processing instruction on the production task, and on the second and third posttests, the raw mean scores between these two groups was roughly the same" (p. 52).

With the results of both studies taken together (VanPatten & Cadierno, 1993a, 1993b), the researchers claim that PI is superior to traditional instruction and to no instruction. VanPatten and Cadierno (1993a) suggest that PI has a beneficial effect on participants' developing linguistic systems because they are able to access and use their new knowledge for L2 production, even though they never actually produced the targeted forms during their instructional treatment. They also claim that traditional instruction did not affect learners' developing linguistic systems because these participants only made gains on production tasks and not on interpretation tasks (VanPatten & Cadierno, 1993a, 1993b). VanPatten and Cadierno (1993b) assert that the results of their study are consistent with Krashen's (1982) learning versus acquisition distinction, which posits that although linguistic rules can be learned, they do not help learners use or produce language during real time communication. In other words, languages cannot be learned, they can only be acquired through exposure to input, and acquisition is an unconscious process. The researchers in the present study claim that PI results in acquisition of the targeted form while traditional instruction leads only to form learning and not to acquisition. VanPatten and Cadierno (1993a) state:

> [T]raditional grammar presentation and practice do not feed into the developing system directly but instead result in a different knowledge system. Krashen (1982) has suggested that learners may develop two systems – an acquired competence and a learned competence – and has claimed that traditional instruction results in learned competence, but only by accessing comprehensible input can the acquired system build up.

These bold claims regarding PI's impact on L2 learners' linguistic development, however, have been heavily criticized in the literature as not being falsifiable (Morgan-Short & Wood Bowden, 2006; Salaberry, 1997; DeKeyser, Salaberry, Robinson, & Harrington, 2002). Morgan-Short and Wood Bowden (2006) suggest that both PI and traditional instruction may have resulted in the same type of knowledge, but with different strengths, amounts, or degrees. They also state that it is impossible to claim that input alone was responsible for the learning gains demonstrated by PI participants' pre- and posttest scores because they received explicit instruction and feedback addition to structured input. Therefore, given the research design of VanPatten and Cadierno (1993a), it is impossible to determine which component facilitated acquisition. Of note, in subsequent studies that investigated PI, VanPatten made no such claims regarding how PI and traditional instruction relate to Krashen's (1982) learning versus acquisition distinction.

Subsequent studies that compared PI and traditional instruction include Cadierno (1995) who investigated PI and Spanish preterit tense morphology. She employed an experimental research design that paralleled VanPatten and Cadierno (1993a, 1993b), with two treatment groups (PI and traditional instruction) and a true control group that received no instruction. Her participants were third semester undergraduate students of Spanish. Cadierno addressed Principle 1b, or the Lexical Preference principle, in VanPatten's model of input processing (1993, 1996, 2002, 2004). This principle states that learners will rely on lexical items instead of grammatical form to derive meaning from a sentence or an utterance when both encode the same semantic information. In

order to circumvent this faulty processing strategy, Cadierno raised the communicative value of the preterit in the PI participant's input by eliminating any lexical redundancies (specifically temporal adverbs). Thus, the PI activities that she created forced participants to attend to and process tense markers for the preterit, which are usually nonsalient for learners. For example, she elimated words such as *ayer* or *yesterday* and *la semana pasada* or *last week* in order to compel learners to examine the preterit tense inflectional morphemes to interpret the time reference of each sentence (past or present). This distinction is particularly difficult in Spanish because the first person singular inflectional morpheme for the present tense is an unaccented *-o*, and the third person singular inflectional morpheme for the preterit tense for verbs ending in *–ar* (the most common type of verb in Spanish) is an accented *-ó*. For example, in Spanish I speak is rendered *hablo* while he spoke is rendered *habló*. It is only an acoustic stress that distinguishes these two verb forms in speech, and a written accent mark that distinguishes them in writing, which is often problematic for novice L2 learners of Spanish.

The traditional instruction materials contained a combination of mechanical, meaningful, and communicative (open-ended) activities where the participants were required to produce output in the TL immediately following a grammar explanation. As with the previous two studies that examined PI (VanPatten & Cadierno 1993a, 1993b), participants never once produced the targeted form during the PI treatment.

The research design, treatment procedures, and assessment tasks in Cadierno (1995) paralleled those of VanPatten and Cadierno (1993a, 1993b). In order to analyze the interpretation and the production assessment tasks scores on the pre- and posttests,

Cadierno employed a repeated measures ANOVA with type of instruction as the between-subjects factor and time as the within-subjects variable. The ANOVA revealed a significant between-subjects effect for type of instruction, a significant main effect for time of testing, and a significant interaction effect between type of Instruction and time. Post hoc Sheffé tests revealed that PI was superior to TI and to control on the interpretation task for all posttests. A repeated measures ANOVA was also performed on production test scores with type of instruction serving as the between-subjects variable and time serving as the with-subjects variables. The results of the ANOVA revealed a significant between-subjects effect for instruction, a significant main effect for time, and a significant interaction effect between type of instruction and time. Post hoc Sheffé tests revealed that PI and traditional instruction were superior to no instruction, and that there was no significant difference between PI and traditional instruction on the production task scores. These results corroborated the findings of VanPatten and Cadierno (1993a, 1993b) even though Cadierno (1995) investigated a different grammatical form.

Similar to VanPatten and Cadierno (1993a, 1993b), Cadierno (1995) also claims that PI feeds into learners' developing linguistic systems and results in acquisition of the targeted grammatical form while traditional instruction only results in form learning, which is not useful during real time communication in the TL. As mentioned previously, this assertion has been heavily criticized by several SLA scholars (Morgan-Short & Wood Bowden, 2006; Salaberry, 1997; DeKeyser, Salaberry, Robinson, & Harrington, 2002) as not being falsifiable. Another criticism of Cadierno's study is that all of the PI materials were meaningful, while only some of the traditional instruction materials were

meaningful. About half of the traditional instruction materials were mechanical, where participants only had to attend to form in order to answers questions correctly. It may be that the significant differences found between the treatment groups was due to the meaningful tasks that were present in the PI materials versus the mechanical tasks that were present in the traditional instruction materials. Cadierno (1995) asserts, however, that traditional instruction , as it was operationalized in her study (mechanical, followed by meaningful, followed by open-ended activities), "is a direct reflection of what is commonly presented in Spanish textbooks" (p. 190). Therefore, it would not have been possible to compare PI with traditional instruction without including mechanical activities. Further, it is also unclear which components of PI (explicit grammar explanation, information on processing strategies, or structured input) may have been responsible for participants' gains on the production and interpretation tasks from pre- to posttests since the researcher did not isolate these components. Given that VanPatten and Cadierno (1993a, 1993b) employed the same research design as Cadierno (1995), these same criticisms apply to the previous studies as well.

The previous three PI studies reviewed (VanPatten & Cadierno, 1993a, 1993b; Cadierno, 1995) had findings that lend weight to the claim that PI is superior to traditional instruction for interpretation tasks and that PI is equal to traditional instruction for production tasks. The finding that participants in PI groups performed as well as participants in traditional instruction groups on production tasks is remarkable, especially given that PI participants never once produced any of the targeted grammatical forms during instructional treatments. Conversely, traditional instruction participants produced

targeted forms immediately following an initial explanation of grammar, and they continued to produce targeted forms both orally and in writing throughout the instructional treatments. The production tasks in these studies (VanPatten & Cadierno, 1993a, 1993b; Cadierno, 1995), however, were limited and only comprised sentence-level tasks.

In order to determine if PI facilitates learners' L2 production during more communicative tasks, VanPatten & Sanz (1995) investigated the acquisition of syntax and word order (the same target form as VanPatten & Cadierno, 1993a, 1993b) on discourse-level production tasks with undergraduate learners of Spanish in their second year of language study. The researchers used the same instructional treatment and testing materials as VanPatten and Cadierno (1993a, 1993b), which they expanded upon for their study. VanPatten and Sanz created two additional production tasks to measure participants' communicative performance: (a) a video narration task, and (b) a structured question-answer interview. Each production task had an oral and a written version. Thus, there were six assessment tasks in total; three production tasks will two versions each. The video narration task and the question-answer task were designed to be "less controlled" than the sentence-level production tasks that were used in past PI studies. In other words, participants were encouraged to produce the targeted forms in order to communicate a message in the TL without an unnatural repetition of object pronouns. Of note, VanPatten and Sanz included oral production tasks on their posttests. Past PI studies only measured participants' written production. Also, the researchers did not compare PI with traditional instruction; rather, they only compared a PI group and a

control group that received no instruction. Given that VanPatten and Sanz were only interested in parricipants' production, the interpretation task served as a screening instrument in their study. On the pretest, participants who scored higher than 60% were excluded from the study. In addition, participants who did not show a gain from pre- to posttest on the interpretation task were not included in the study. VanPatten and Sanz (1995) attempted to examine only the production of those participants who benefited from PI as measured by the interpretation task. As the researchers were examining the effects of PI on output, they wanted to determine if learners who benefited from PI on an interpretation task (where no output was required) were also able to benefit on communicative tasks where both oral and written output was required.

The researchers submitted each production task to separate repeated measures ANOVAs. The PI group demonstrated significant gains from pre- to posttests on the sentence-level completion task and on the video narration task in the written mode; however, they only made slight gains on the question-answer task in the written mode. For the oral mode, the PI group performed had significant improvements on the sentence-level task across time; however, they made no significant gains on the video narration task in the oral mode. The control group made no significant gains from pre- to posttests on any of the production tasks in either mode. These results indicate that PI is beneficial for production in the oral and written modes when the assessment tasks are less structured and more communicative in nature. VanPatten and Sanz also point out that sentence-level tasks in the written mode are easier for beginning and intermediate-level language

learners than open-ended communicative tasks in the oral mode. As expected, PI participants made the greatest gains on sentence-level tasks in the written mode.

A criticism of VanPatten and Sanz (1995) is that they did not report the total number of participants who benefited from the PI treatment as measured by the interpretation task. Participants in the study were required to show a gain on this measure following the instructional treatment (from pre- to posttest) in order to participate in the three production assessment tasks. The researchers state that "after background screening, participation in all phases of the study, and performance at 60% or below on the pretest, the final pool consisted of 44 subjects: 27 in the processing group and 17 in the control group" p. 104. Since the researchers failed to report the total number of participants in their initial pool, it is unclear how many participants improved on the interpretation task.

Further, the number of participants assigned to each group was not equal, with the participants in the PI group outnumbering the participants in the control group by 63%. It is typically easier to detect group differences, if they exist, when cell sizes are larger. The control group in VanPatten and Sanz'(1995) study was quite small (only 17), yet the researchers employed univariate statistical tests (ANOVAs) where larger groups are often recommended in order for the test to have sufficient statistical power to detect group differences if they exist. In addition, the researchers threw out the data on the question-answer task. They stated that the data it yielded was problematic because participants tended to repeat direct objects rather than replace them in the sentence with direct object pronouns. VanPatten and Sanz (1995) also stated that "the gains were slight" from pre-

to posttests for the PI group on this measure (p. 107). Although the gains may have been insignificant for the PI group on this measure, it is still important to report the data even when it does not match the researchers' a priori hypotheses. In addition, although VanPatten and Sanz threw out the data on one of the production assessment tasks, they still claimed that:

> [S]ubjects receiving processing instruction made gains on all tasks in the written mode and on *two of the three tasks* in the oral mode. *Only on the oral video narration task* did the analysis *fail to yield a significant difference* between pre- and posttest performance. (p. 111)

This assertion appears to be incorrect and overly strong as the results were not significant for the oral video narration task and the data was thrown out for the question-answer task. In other words, the only task that yielded significant differences in the oral mode was the sentence-level production task. Thus, while reporting the results of this study, researcher bias may have been at play, especially given that the developer of PI was one of the principle investigators.

VanPatten and Oikkenon (1996) investigated the components of PI to determine which one was responsible for the beneficial effect it has on learners' interpretation and production of targeted grammatical forms. The instructional materials and assessment tasks used in VanPatten and Oikkenon were taken from VanPatten and Cadierno (1993a, 1993b), and their study examined the same targeted form, Spanish direct object pronouns and syntax. The 59 participants were second year high school students of Spanish whose L1 was English. In their study, VanPatten and Oikkenon isolated explicit instruction and structured input by dividing participants into three treatment groups as follows: (a) a

group that received full PI, (b) a group that received explicit grammar explanation only, and (c) a group that received structured input only. Information on processing strategies, another component of PI, does not appear to be a variable in this study. Participants in the explicit explanation group read over the grammar explanation as the instructor reviewed it. The grammar explanation was followed by TL examples. Participants in this group were permitted to ask questions or request clarifications as needed. Although information on processing strategies would constitute explicit information, the research report does not specifically state that information on processing strategies was included in the grammar explanation for the explicit instruction group. Further, these participants did not complete any instructional activities that focused on the targeted grammatical form following their grammar lesson. Conversely, participants in the structured input group only completed referential and structured input activities and did not receive any type of grammar explanation during their treatment. The instructor indicated whether participants' responses were correct or incorrect, but provided no further explanation to them. If participants asked about the targeted forms, the instructor stated that they would "see if they had gotten it" by the end of the week. Further, the instructor never directed participants' attention to the targeted form or informed them of any grammar rules while they completed their instructional treatment activities. Participants in the PI group received an explicit explanation of grammar, information on processing strategies, and structured input activities.

The posttest, which consisted of an interpretation task and a sentence-level production task, was administered one day after the instructional treatments were

completed. Pre- and posttest scores were submitted to two repeated measures ANOVAs, one for the interpretation task scores and one for the production task scores. The ANOVA on the interpretation task scores revealed an interaction effect between type of instruction and time, a main effect for type of instruction, and a main effect for time. Post-hoc tests revealed that both the PI group and the structured input only group scored significantly higher from pre- to posttest on the interpretation task. For the production task, the repeated measures ANOVA revealed a main effect for type of instruction and a main effect for time, but there was no interaction effect. Post-hoc tests revealed that although all groups improved across time on the sentence-level production task, only the PI group and the structured input group made significant gains. Therefore, the results reveal that an explicit grammar explanation alone was not beneficial for either production or interpretation tasks.

Based on these results, VanPatten and Oikkenon (1996) concluded that "it is the actual structured input itself and the form-meaning connections being made during input processing that are responsible for the observed effect in the present as well as the previous studies" (p. 126). The researchers also assert that the explicit explanation component of PI may be superfluous, and subsequent research on the components of PI (Benati, 2004a, 2004b; Sanz & Morgan-Short, 2004; Wong, 2004) appear to support this claim. However, Farley (2004) found that explicit instruction may be a necessary component of PI when the targeted grammatical form is complex, such as the Spanish subjunctive. Interestingly, Fernández (2008) examined the components of PI with two targeted grammatical forms, the subjunctive in nominal clauses following expressions of

doubt and object pronouns in Spanish. She found that explicit information is helpful for the subjunctive (a complex form) but not for object pronouns (a more transparent grammatical form). Thus, the research results are mixed regarding the efficacy of the explicit information component (grammar explanation and information on processing strategies) of PI. It appears that explicit information alone is not beneficial, but it may be necessary to combine structured input activities with explicit information when the targeted grammatical form is complex.

The results of VanPatten and Oikkenon, however, may have been distorted due to two factors for which the researchers did not control: (a) time on task, and (b) feedback offered during the treatment. The three groups (explicit explanation only, structured input only, and full PI) varied considerably in the length of their treatments. The explicit explanation group received games and activities unrelated to the targeted grammatical form following their treatment because the grammar explanation did not take as much time as completing structured input activities or as full PI (explicit information and structured input activities). It may be that the amount of time spent on task (e.g. working with the targeted grammatical forms) influenced the findings of this study. Further, participants in the PI group and the structured input group were told if their answers were correct or incorrect. According to DeKeyser, Salaberry, Robinson, and Harrington (2002), this type of information helps learners figure out the rule system. Thus, the feedback provided to participants was an extraneous variable. Conversely, the group that received explicit information only did not have the opportunity to make mistakes and to receive feedback on their errors, which is a design flaw that was pointed out by Sanz

(2004). Future research on PI should attempt to control for time spent on task during instructional treatments. Also, future studies should attempt to equalize the feedback (amount and type) that is given to each group

In an attempt to extend PI research to a semantic-aspectual feature of language, Cheng (1995) compared PI to traditional instruction for the acquisition of the Spanish copulas *ser* and *estar* with adjectives and past participles, an area of complex grammar that typically causes difficulties for L2 learners of Spanish. VanPatten (1985, 1987) found the following acquisition order for the Spanish copulas *ser* and *estar*, with stages III-V taking place over a lengthy period of time when Spanish is learned in a foreign language context:

> Stage I: Absence of copula in learner speech.
> Stage II: Selection of *ser* to perform most copula functions.
> Stage III: Appearance of *estar* with progressive.
> Stage IV: Appearance of *estar* with locatives.
> Stage V: Appearance of *estar* with adjectives of condition.

Cheng's (1995) study targeted *ser* and *estar* with adjectives, where both verbs are often permissible depending upon whether or not the speaker intends a durative or a punctual aspect. The Spanish copulas *ser* and *estar* are redundant markers of aspect when they occur with adjectives, and they have no inherent semantic value by themselves [-semantic value] [+ redundant]. Thus, the targeted form that Cheng examined had a low communicative value. Past PI studies (VanPatten & Cadierno 1993a, 1993b; Cadierno 1995) targeted morphosyntax, specifically, direct object pronouns and word order in Spanish. Object pronouns have a high communicative value in Spanish because they

have inherent semantic value (they convey meaning) and they lack redundancy [+semantic value] [-redundancy].

Cheng (1995) investigated whether L2 learners of Spanish would be able to link the use of the copular verbs with the meaning of specific adjectives. Learners needed to recognize the aspect conveyed in each sentence or utterance (durative or punctual) in order to chose the correct copula (*ser* or *estar*) in Spanish. A durative aspect is represented by *ser*. For example, the sentence *María es guapa* or *María is good-looking* transmits a durative aspect because María's physical good looks are viewed as permanent or inherent by the speaker. However, the sentence *María está guapa* or *María is looking good today* transmits a punctual aspect, meaning that María's appearance is more good-looking than usual today (e.g., she is dressed up for a special occasion). In her study, Cheng targeted the distinctions in meaning that occur when *ser* or *estar* is embedded in contexts with adjectives that express either punctual or durative aspects. Thus, her study explored whether the benefits of PI extent to grammatical features other than morphosytax.

The participants in Cheng's (1993) study consisted of 105 undergraduate students of Spanish in their second year of language study. Similar to previous PI studies, Cheng administered a pretest and used a 60% cutoff score for participation in the study. Also similar to past PI studies, Cheng devised two instructional treatment packages, one for the PI group and one for the traditional instruction group. Participants completed the instructional treatment packages, which were balanced for vocabulary items, activity type, number of tokens, etc., over a period of two days. The control group received no

instruction. Assessment tasks included an interpretation task, a sentence-level production task, and a guided composition task, which Cheng included since she was interested in examining L2 learners' use of the Spanish copulas. The guided composition task was not a feature of past PI studies, and it comprised a series of four drawings with key adjectives and vocabulary items beside them. Participants were asked to narrate a story based on the drawings, an activity that forced them to choose between the two Spanish copulas to correctly convey the meaning expressed in each drawing. The assessment tasks were given at three intervals: (a) as a pretest two weeks before the study took place, (b) as an immediate posttest after the instructional treatments were completed, and (c) as a delayed posttest three weeks after the treatments were completed.

Cheng (1995) submitted the pre- and posttest scores for the interpretation tasks to a repeated measures ANOVA, with type of instruction as the between-subjects variable and time as the within-subjects variable. The ANOVA revealed significant main effects for type of instruction and time. Post-hoc tests revealed the PI group performed significantly better on Posttest 1 than the control group. Interestingly, the post-hoc tests also revealed that the PI group had a significant decrease in scores on Posttest 2 compared to Posttest 1. In addition, the PI group did not perform better than the control group on Posttest 2. However, the traditional instruction group performed significantly better than the control group on Posttest 2. This was an unexpected finding given that past PI studies (VanPatten & Cadierno, 1993a; 1993b; Cadierno, 1995) did not find an effect for traditional instruction for sentence interpretation tasks.

For the two production tasks, both ANOVAs revealed significant main effects for type of instruction and time, and a significant interaction effect between instruction and time. For the sentence-level production task, post-hoc tests revealed that the PI group outperformed the control group on Posttest 1. On Posttest 2 (the delayed posttest), both the PI group and the traditional instruction group performed significantly better than the control group. For the composition task, both the PI group and the traditional instruction group performed significantly better than the control group on both posttests. For the assessment tasks that measured production, the results of Cheng's (1995) study are consistent with other studies that examined PI (Cadierno, 1995; VanPatten & Cadierno 1993a, 1993b; VanPatten & Sanz, 1995). These results support the assertion that PI facilitates L2 production, even though participants never produced the targeted forms during PI lessons or activities.

Cheng's (1995) results regarding interpretation, however, do not support the findings of VanPatten and Cadierno (1993a, 199b); namely, that PI facilitates interpretation of targeted grammatical forms but that traditional instruction does not. In Cheng's study, for Posttest 2 only participants in the traditional instruction group outperformed the control group on the interpretation task. Since the data did not support Cheng's expectations, she reanalyzed the data, only examining the test items that targeted the verb *estar*. Cheng posited that beginning L2 learners of Spanish overgeneralize the use of *ser* early on in the acquisition process (at Stage II according to VanPatten's (1985, 1987) proposed acquisition order for the Spanish copulas *ser* and *estar*). Thus, Cheng claimed that since beginning-level learners of Spanish use *ser* as a default copula, *estar* is

the problematic verb form for learners and only this data should be examined. When she reanalyzed the data, she found that for the interpretation task the PI group performed significantly better than the control group on Posttest 1; however, on Posttest 2 there were no significant differences between the three groups (PI, traditional instruction, and control). For the sentence-level production task, both the PI group and the traditional instruction group performed significantly better than the control group. However, on Posttest 2 only the PI group performed better than the control group. For the composition task, both the PI group and the traditional instruction group performed better than the control group on Posttest 1. There were no significant differences between the three groups on Postttest 2. The results of Posttest 1 with the *estar* only data were identical to those of past PI studies. However, the results of Posttest 2 for both the interpretation task and the composition task appear to indicate that the effects of instruction (for both PI and traditional instruction) were not retained three weeks after the instructional treatments took place, as there were no statistically significant differences between groups on these measures on the delayed posttest.

Cheng's (1995) results with the *estar* only data are questionable as researchers typically do not discard half of their data set and reanalyze the remainder when their results do not support their a priori hypotheses. By doing so, a bias on the part of the researcher in favor of PI is made apparent, which calls into question the internal validity of the study. Further, based on the results of her study, Cheng (1995) claims that PI is more beneficial than traditional instruction. She states, "PI appears more effective in helping students make correct form-meaning mappings and in restructuring their mental

representation of target forms" (p. 317). This assertion does not appear to be supported by the results of either data set, *ser* and *estar* or *estar* only, as both PI and traditional instruction groups were similar in their performance on all posttests according to the data that Cheng reported. Of note, Cheng was a student of VanPatten at the time of her 1995 (dissertation) study. Subsequently, she published the results of her dissertation study in 2002 with a focus exclusively on the *estar* data. In her subsequent publication, Cheng (2002) did not make such strong assertions regarding the benefits PI. Although it is important to examine grammatical forms other than morphosyntactic features in order to determine if PI has an effect on these, researchers that investigate PI need to exercise caution when making broad generalizations about its efficacy. More research is needed on PI, especially on features other than morphology and syntax. In addition, studies need to be conducted from a wider base of researchers in the field. Thus far, most PI studies have been conducted by VanPatten, his colleagues, and/or his students. In order to ensure that experimenter bias is not at play, researchers that are not connected to the developer of the instructional method and the theoretical model upon which it is founded need to investigate PI.

Authentic versus flawed structured input activities. Although subsequent research on PI (Benati, 2001; Cadierno, 1995; Cheng, 2002; Farley 2001a; Marsden, 2006; Qin, 2008; VanPatten & Sanz, 1995; VanPatten & Wong, 2004) has supported the claims made by VanPatten and Cadierno (1993a, 1993b), several researchers have refuted their findings. Among them are L. Allen (2000), Collentine (1998b), DeKeyser and Sokalski (1996), Erlam (2003), Nagata (1998), and Salaberry (1997). Dekeyser and

Sokalski examined two grammatical forms, direct object pronouns and the conditional among first and second year undergraduate students of Spanish. They had three groups, an input processing group, an output processing group, and a control group that only received a ten-minute grammar explanation. The researchers attempted to control for explicit information by providing all groups, including the control group, with the same grammar explanation. Rather than use the same referential and affective structured input activities as VanPatten and Cadierno (1993a, 1993b) for the instructional treatments, DeKeyser and Sokalski developed their own structured input activities. For the assessment tasks, they measured text comprehension rather than interpretation (grammar comprehension), and the production tasks consisted of a fill-in-the-blank task and a translation task. DeKeyser and Sokalski found that for direct object pronouns in Spanish, the input processing group performed significantly better than the control group, but for both production tasks, only the output processing group performed significantly better than the control group. For the Spanish conditional, they found that only the output processing group outperformed the control group on the comprehension task, a result that is contrary to all past PI studies reviewed in this chapter. For both production tasks, they found that the input processing and output processing groups performed significantly better than the control group. DeKeyser and Sokalski claim that their findings refute those of VanPatten and Cadierno (1993a, 1993b). Further, they assert that L2 production and comprehension skills are learned separately.

A major criticism of DeKeyser and Sokalski (1996) is that their treatment activities were not true structured input activities because they failed to follow the

guidelines for the development of these activities set forth by J.F. Lee and VanPatten (1995, 2003). Guideline two specifies that meaning, or the communicative intent of sentences and utterances, should be the central focus of structured input activities. Thus, learners should not be able to complete structured input activities without comprehending both the referential meaning of targeted grammatical forms and the propositional content of the input that they receive. In other words, all structured input activities are meaningful even though they are a type of focus on form instructional technique. Wong (2004) reviewed the structured input activities that were used in DeKeyser and Sokalski's study and found that guideline two was violated because participants did not have to process targeted forms correctly in order to extract meaning from their input. Further, Wong (2004) claims that the structured input activities that were designed by DeKeyser and Sokalski were not PI because they required participants to focus on form and not on meaning in order to complete them. In addition, DeKeyser and Sokalski did not measure participants' interpretation of targeted forms. Studies in the PI strand typically measure participants' interpretation of targeted forms because a major goal of PI is to help learners make correct form-meaning connections. The only way to assess this process is to examine whether participants are able to identify the referential meaning realized by a specific grammatical feature.

Text comprehension, conversely, refers to whether learners understand the propositional content of an input text. Learners do not necessarily have to comprehend the meaning of targeted grammatical forms in order to understand the message of an input text (R. Ellis, 1995). J.F. Lee and VanPatten (1995, 2003) claim that the two

constructs (message comprehension and grammar comprehension) overlap. However, there has been scant research to support this claim (J.F. Lee & Rodríguez, 1997). More research studies are needed that examine both text comprehension and input processing. DeKeyser and Sokalski only measured participants' comprehension of the propositional content of the input texts, which does not assess whether learners are able to make correct form-meaning relationships (input processing). Therefore, their results are not comparable to studies that assessed participants' interpretation of targeted grammatical forms (Benati, 2001, 2004a, 2004b, 2005; Cadierno, 1995; Cheng, 1995, 2002; Collentine, 1998a; Farley, 2001a, 2001b, 2004; VanPatten & Cadierno 1993a, 1993b; VanPatten & Sanz, 1995; VanPatten & Wong, 2004). Other researchers (Erlam, 2003; Nagata, 1998; Salaberry, 1997) had similar findings to DeKeyser and Sokalski; however, these studies also measured text comprehension as opposed to interpretation of targeted forms, and their instructional treatments were considerably different from those in the PI strand of research since they contained flawed structured input activities. Thus, although L. Allen (2000), DeKeyser and Sokalski (1996), Erlam (2003), Nagata (1998), and Salaberry (1997) claim that PI is ineffective based on the findings of their research studies, their results are not directly comparable to those in the PI strand of research.

Collentine (1998b) compared processing instruction with traditional (output-based) grammar instruction for the acquisition of the Spanish subjunctive in adjectival clauses when the referent is unknown. Collentine divided 54 second semester undergraduate students of Spanish who had no prior instruction on the subjunctive into three groups: a PI group, a traditional instruction group, and a control group. He

operationalized traditional instruction with activities that moved from mechanical to open-ended and that required the production of output. Collentine developed an instrument that contained an interpretation task and a production task to measure participants' learning gains on the targeted form. He found that both experimental groups (PI and traditional instruction) performed significantly better than the control group on both types of task (interpretation and production), but that neither experimental group performed significantly better than the other. In other words, Collentine found that both PI and traditional (output-based) instruction were beneficial for learning the subjunctive in adjectival clauses in Spanish.

His operationalization of PI and his structured input activities, however, were heavily criticized by Farley (2002) and VanPatten (2002) for not being authentic. Farley (2002) criticized Collentine (1998b) for failing to provide PI participants with information on processing strategies, which is a key component of PI. Farley claimed that the PI participants in Collentine's study did not receive any instruction on input processing strategies or how to overcome faulty input processing of the subjunctive. Farley (2002) also criticized Collentine's structured input activities because they did not appear to be linked to any of the principles in VanPatten's model of input processing (1993, 1996, 2002, 2004). In addition, VanPatten (2002) also criticized Collentine's structured input activities because they were "too heavy" to be beneficial for learners with no prior experience with the targeted grammatical form. In order to determine if PI is superior to traditional instruction for the acquisition of the subjunctive in adjectival clauses in Spanish, future research studies would need to carefully follow the guidelines

set forth by J.F. Lee and VanPatten (1995, 2003) for the operationalization of PI and for the creation of structured input activities.

L. Allen (2000) also asserts that the findings of her study are contrary to VanPatten and Cadierno (1993a, 1993b), and she refutes the efficacy of PI. She investigated the French causative with the verb *faire*, a structure that causes errors in interpretation and syntax for L2 learners of French whose L1 is English. With this structure, the object of the verb following *faire* must be placed postverbally, which usually occurs at the end of sentences or utterances and is marked by the preposition *à* in French. L2 learners of French tend to interpret the first noun that they encounter as the subject of the verb following *faire.* Thus, the processing problem that learners encounter with the French causative is very similar to language learners' faulty processing of direct object pronouns in Spanish (the targeted form in VanPatten & Cadierno, 1993a, 1993b), as learners incorrectly rely on the First Noun strategy in both instances.

The participants in L. Allen's (2000) study included 179 fourth semester high school students of French who had no prior exposure to the targeted grammatical form. She divided her participants into three groups as follows: (a) a group that received PI, (b) a group that received traditional instruction, and (c) a control group that received no instruction. She used an interpretation task that was similar to past PI studies and a sentence production task to measure participants' gains from across time. L. Allen found that both PI and traditional instruction were superior to the control group for the interpretation task, but she found that the traditional instruction group was superior to the PI group for the sentence production task. She concluded that traditional instruction is

more effective than PI, and that the results of VanPatten and Cadierno (1993a, 1993b) do not obtain with the French causative structure.

The PI treatment materials that L. Allen (2000) developed were heavily criticized by VanPatten and Wong (2004) for the following reasons: (a) no processing problem or strategy was identified for the participants, (b) the structured input activities did not require participants to interpret the targeted grammatical form correctly in order to extract meaning, (c) during the explicit instruction phase of the study, the traditional instruction group received practice activities that required them to process strings of input containing the targeted form while the PI group never received any practice producing the targeted form during their instructional treatment, and (d) event probabilities helped participants select the correct answers to the structured input activities. A major problem identified by VanPatten and Wong was L. Allen's failure to adhere to the guidelines in the creation of the structured input activities that she employed in her study. These activities were flawed because participants could select the correct answer simply by matching the names in the answer choices to the names in the input sentences. For example, L. Allen (2000) provided a number of questions similar to the following:

> 1. Tom fait faire les valises à Marc.
> a. Tom packs the bag b. Tom gets Marc to pack the bags. (p. 83)

In the previous example, the correct answer to each item is evident because each input sentence mentions two people; however, one response mentions two people and the other response mentions only one person. Thus, participants could choose correct responses simply by matching the number of people in the response to the number of people in the

input sentence. Authentic structured input activities would require participants to interpret the French causative correctly in order to select the correct response. The following is an example of how L. Allen's (2000) instructional treatment activity could have been transformed into an authentic structured input activity for the French causative:

1. Jean fait laver la voiture à Marc.
a. Marc gets Jean to wash the car. b. Jean gets Marc to wash the car.

In the previous example, French language learners would be forced to attend to the agency of the verb following *faire* in order to interpret the sentence correctly. Thus, with a slight modification, L. Allen's (2000) treatment activity could have been converted into an authentic structured input activity.

VanPatten and Wong (2004) replicated L. Allen (2000); however, they adjusted L. Allen's flawed structured input activities. The participants in VanPatten and Wong (2004) comprised 77 fourth semester French students from two universities who had no prior instruction on the French causative. Participants were divided into three groups, a PI group, a traditional instruction group, and a control group that received no instruction. Except for the corrections made to the flawed structured input activities and assessment task items, VanPatten and Wong attempted to replicate L. Allen (2000) as closely as possible.

The results of VanPatten and Wong's (2004) study were dissimilar to L. Allen's (2000). For the interpretation task, the PI group outperformed the traditional instruction group, and the traditional instruction group outperformed the control group. On the production task, the PI group performed equally as well as the traditional instruction

group, and both of these treatment groups outperformed the control group. These results more closely resemble those of VanPatten and Cadierno (1993a, 1993b) and support VanPatten and Wong's assertions that the guidelines for creating structured input activities must be closely adhered to if researchers intend to compare PI to other instructional methods. When flawed structured input activities are employed, researchers are not examining authentic PI; rather, they are only comparing input- and output-based instruction. Therefore, any claims that researchers make regarding the efficacy (or lack thereof) of PI are not supportable when the instructional treatment materials contain flawed structured input activities.

Processing instruction and meaningful output-based instruction. A problem that occurs when comparing PI with traditional instruction is the all of the tasks and activities in PI are meaningful, while only some of the tasks and activities in traditional instruction are meaningful. For example, language learners can answer the questions in the mechanical drill activities of traditional instruction without comprehending their meaning. However, all PI activities focus learners' attention on both form and meaning simultaneously. In order to address the question of whether the differing amounts of attention to meaning in the treatment materials (traditional instruction versus PI) are responsible for the finding that PI is superior to traditional instruction, Farley (2001a) compared PI with output-based instruction that was completely meaningful. In other words, the output-based instruction in Farley's study did not contain any mechanical drill activities where participants could focus only and form and still supply the correct answer. Farley also matched output-based instruction to PI on the explicit explanation

component by providing information on processing strategies and grammar instruction that was nonparadigmatic to the participants who produced output. He named this type of instruction meaning-based output instruction (MOI). The only difference between PI and MOI was the type of practice mode, with PI using input-based practice activities and MOI using output-based practice activities. The participants in Farley's study included 29 undergraduate students of Spanish in their fourth semester of language study. The targeted form was the Spanish subjunctive in nominal clauses after expressions of doubt. Participants were assigned to either the PI group or the MOI group (there was no control group). As with past PI studies, Farley's instruments included an interpretation task and a sentence-level production task. Although Farley controlled for the meaningfulness of the treatment activities, he still found that PI was superior to MOI for the interpretation task, and that PI was equal to MOI for the production task. These results mirror the findings of other PI studies that compared PI to traditional instruction (Benati, 2001, 2005; Cadierno, 1995; VanPatten & Cadierno, 1993a, 1993b; VanPatten & Wong, 2004) It appears that the relative difference in meaningful activities between PI and traditional instruction is not responsible for the finding that PI is superior to traditional instruction. A criticism of Farley's study, though is that the sample was quite small, only 29 participants.

Benati (2005) compared PI, MOI, and traditional instruction with 77 secondary students of English as a second language (ESL). His targeted form was the simple past tense in English, and his assessments included an interpretation task and a sentence-level production task. Benati found that PI was superior to both MOI and traditional

instruction for the interpretation task, and that there were no significant differences between PI, MOI, and traditional instruction on the sentence-level production task. Farley (2001a) also compared PI with MOI, and Benati's results appear to support Farley's findings.

Farley (2001b) replicated Farley (2001a) with the same targeted form and with similar instructional treatments and assessment tasks. Farley (2001b) had a larger sample of participants (50 fourth semester undergraduate students of Spanish as opposed to 29), and there were ten instructional activities in each treatment packet rather than eight. Interestingly, his results differed from Farley (2001a). He found that there was no significant difference between PI and MOI on either the interpretation task or the sentence-level production task. Farley (2001b) speculated that the different results between his two studies might have been due to the participants having more practice in Farley (2001b), since they had ten rather than eight instructional activities. Also, the feedback that was given to the MOI groups in both studies resulted in incidental input for the MOI participants because the teacher solicited answers to the treatment activities until the correct answer was given. Therefore, by having ten activities rather than eight, participants in the MOI group in Farley (2001b) likely received more incidental input of the targeted form than participants in Farley (2001a). Another factor that may have influenced participants' test scores is that participants in Farley (2001b) were on an accelerated track of Spanish language studies, while the participants in Farley (2001a) were on a regular track. However, the greater language ability of the participants in Farley (2001b) should not have affected the two treatment groups differentially (with the

MOI group benefiting more than the PI group). It appears that the differential amount of feedback given in Farley's (2001a, 2001b) studies may have accounted for the different results, as MOI participants in Farley (2001b) likely received more incidental input than MOI participants in Farley (2001a).

Another factor that may have caused Farley's (2001b) results to differ from other studies that compared PI with output-based instruction (Benati, 2001, 2005; Cadierno, 1995; Farley, 2001a; VanPatten & Cadierno, 1993a, 1993b; VanPatten & Wong, 2004) is the targeted form that he examined. Farley (2004) speculated that PI was not as beneficial for the subjunctive due to its linguistic complexity. He examined the subjunctive in nominal clauses following expressions of doubt, uncertainty, or denial. In natural speech, this form is always redundant and has little inherent semantic value. Farley manipulated PI participants' input so that they would have to match matrix clauses that contained expressions of doubt and denial with subordinate clauses that contained subjunctive forms. It was not possible for the PI participants to rely on the subjunctive form alone to extract meaning from sentences as these forms rely on matrix clause verbs to express doubt or denial. For example, in the sentence *Dudamos que los estudiantes hagan la tarea todas las noches* which is rendered *We doubt that the students do their homework every night*, the main clause verb is necessary to express doubt because the subordinate clause verb carries no semantic meaning when stripped of the matrix clause. The subordinate clause *hagan la tarea* contains the subjunctive verb form *hagan*, but this form by itself does not express doubt or denial. Thus, Farley's (2001a, 2001b) targeted form has a low communicative value and does not lend itself well to PI. Subprinciples

P1c and P1d in VanPatten's model of input processing (1993, 1996, 2002, 2004) state that meaningful forms that are not redundant [+semantic value] [-redundancy] will be processed before nonmeaningful forms that are redundant [-semantic value] [+redundancy] and that meaningful forms are processed before nonmeaningful forms regardless of redundancy. Pereira (1996) and Woodson (1997) also examined PI with the subjunctive in nominal clauses and found results similar to Farley (2001b). Since the structured input activities in PI are intended to elevate a form's communicative value, forms that are meaningless may not benefit from PI. The only study that examined a subjunctive form that was meaningful was Collentine (1998b), and his study was criticized for not using authentic structured input activities and for not providing PI participants with information on processing strategies. Therefore, more research studies are needed that examine meaningful subjunctive forms and that maintain stricter treatment fidelity to PI, especially with respect to the development of structured input activities.

Similar to Farley (2001a, 2001b) Morgan-Short and Wood Bowden (2006) compared PI and MOI to a control group that received instruction on the targeted form and spent an equal amount of time on task as the two experimental groups for the acquisition of object pronouns in Spanish. Their sample consisted of 45 first semester undergraduate students of Spanish. The researchers attempted to control for all variables other than practice mode by utilizing computer-based instructional treatments. They operationalized PI by adapting the paper-and-pencil instructional treatment packet that was used in VanPatten and Cadierno (1993a, 199b) for computer-based delivery using

Authorware 5. The MOI and PI groups were both given referential and affective activities; however, only the MOI group was required to produce output while completing these activities. The control group was given reading activities containing the targeted form followed by comprehension questions on the reading passages. All of the treatment materials contained the same number of targeted forms, and time spent on task was equal for all three groups. Morgan-Short and Wood Bowden found that there was no significant difference between PI and MOI on the interpretation test (both groups outperformed the control group); however, only the MOI group performed significantly better than the control group on the production task. These results are contradictory to Farley (2001a) and Benati (2005), but they are similar to Farley (2001b).

With classroom-based studies such as Farley (2001a, 2001b) and Benati (2005), when participants in the MOI groups answered questions orally, their output served as incidental input for their classmates. Similarly, when instructors checked answers to activities with MOI participants aloud in class, more incidental input was provided to these participants. Thus, when an MOI participant made a mistake on an activity item, other MOI participants would hear the targeted forms as input when the correct answer was provided by the teacher or by another student. Consequently, the output that was produced by MOI participants and the feedback that was given to these students during the classroom-based instructional treatments may have provided a significant amount of incidental input for all of the MOI participants in the aforementioned studies. It is important to note that for the studies that compared PI with MOI (Benati, 2005; Farley, 2001a, 2001b), MOI participants were only intended to receive output-based practice.

Morgan-Short and Wood Bowden (2006) asserted that their computer-based study was superior to the past classroom-based studies because feedback was delivered only to individual participants who made mistakes rather than to the entire treatment group. However, MOI participants who made mistakes still received feedback that contained the targeted grammatical form (hence the MOI participants in their study still received incidental input containing the targeted forms). In addition, as Morgan-Short and Wood Bowden did not track participants' responses or the feedback that they received, they were unable to report the number of MOI participants that received incidental input in the form of feedback, or the number of times that participants received feedback (incidental input) during their instructional treatments. It appears that the amount and type of feedback given to participants was an extraneous variable that may have exerted some influence on the findings in Morgan-Short and Wood Bowden's study. In summary, the MOI groups in the aforementioned studies had an advantage over the PI groups because the MOI participants received incidental input containing the targeted forms during their instructional treatments while the PI groups did not receive any output-based practice.

Processing instruction and type of feedback. Sanz (2004) asserts that feedback has largely been an uncontrolled variable in PI research, which is also a shortcoming in other research studies that have examined the effects of explicit instruction in SLA (Alanen, 1995; de Graaff, 1997; N. Ellis, 1993; Robinson, 1996; Rosa & O'Neill, 1999; Spada & Lightbown, 1993; L. White, 1991). Sanz (2004) examined the effects of explicit and implicit feedback with PI on the acquisition of object pronouns in Spanish with 28 first or second year undergraduate students of Spanish. Although participants varied in

their level of language study, all of them scored below 60% on the pretest. Participants in the explicit feedback group received feedback that was immediate and individualized (it was only provided to participants who made mistakes). Explicit feedback was operationalized as feedback that contained explicit information on the nature of the error (e.g., incorrect strategy use) and information on TL rules. Individualized feedback was possible since the instructional treatments were designed for computer-based delivery. Implicit feedback was operationalized as a response of "OK" if the participant's response was correct and "Sorry, try again" if a participant's response was incorrect. Thus, participants in the implicit condition were provided with feedback that informed them whether their answers were correct or incorrect. Interestingly, Sanz did not find any significant differences between the explicit and the implicit feedback groups, and both groups performed significantly better across time on interpretation and production tasks. Sanz posits that the structured input activities provided to the participants in both groups prompted them to make correct form-meaning connections, which she suggests is a more important component of PI than type of feedback offered. The results of this study imply that future PI studies only need to provide participants with implicit feedback, as explicit feedback did not result in improved performance on interpretation and production tasks. A drawback of Sanz' study is that the sample size was small (only 28 participants). Future research should attempt to examine feedback type with a larger number of participants. Another criticism of Sanz's study is that she did not isolate the components of PI (explicit explanation of grammar, information on processing strategies, and

structured input activities); therefore, her claim that participants' improved performance across time was due to the structured input component is not supported by her findings.

Summary of Findings and Implications for Future Research

A review of the research reveals that most PI studies have been undertaken within a small research community that is limited to VanPatten, his students, and his colleagues. Researchers that are not a part of this community (L. Allen, 2000; Collentine, 1998b; DeKeyser & Sokalski 1996; Erlam, 2003; Nagata, 1998; Salaberry, 1997) have been criticized for not maintaining treatment fidelity to PI and for using flawed structured input activities. Further, several studies (DeKeyser & Sokalski, 1996; Erlam, 2003; Nagata, 1998; Salaberry, 1997) also used assessment tasks that did not measure participants' input processing of targeted grammatical forms; rather, these studies examined participants' comprehension of the propositional content of the input text, which is a different construct. Therefore, due the aforementioned limitations, most research studies that are independent from VanPatten and his colleagues are not directly comparable to the PI strand of research. More research studies are needed on PI from a wider base of researchers, but special attention needs to be paid to the development of structured input activities and to the type of assessment tasks that are used. The present study took these points into consideration in designing all structured input activities and assessment tasks. In addition, the researcher received permission to use two structured input activities for the subjunctive in adjectival clauses that were developed by Farley (2002), who is a former student and a current colleague of VanPatten. All other structured input activities that were employed in the present study were based on the

format that was provided by Farley. Regarding the assessment tasks, past studies only measured either interpretation or comprehension; however, the present study examined how the instructional treatments may have affected both constructs, and a correlational analysis was performed to determine if there was a relationship between the two.

Despite a relatively small research base, the results of studies that have operationalized PI and structured input activities appropriately and that have examined targeted grammatical forms that are meaningful (Benati, 2001, 2005; Cadierno, 1995; VanPatten & Cadierno, 1993a, 1993b; VanPatten & Wong, 2004) have yielded notable results regarding the efficacy of PI when it is compared to traditional and other types of output-based instruction. Namely, the aforementioned studies have found that PI is superior to traditional instruction for learners' ability to interpret targeted forms, and that PI is equal to traditional instruction for learners' ability to produce targeted forms, which is remarkable given that PI participants in the aforementioned studies never produced any targeted forms during their instructional treatments.

Studies that isolated the components of PI have yielded more mixed results; however, every study that examined an explicit grammar explanation alone (Benati, 2004a, 2001; Sanz & Morgan-Short, 2004; VanPatten & Oikkenon, 1996; Wong, 2004) found that it was not beneficial for either production or interpretation tasks, and participants that only received an explicit explanation of grammar did not perform any differently than participants in control groups. VanPatten and Oikkenon claim that structured input is responsible for the beneficial effect of PI, and the results of four subsequent studies support this claim (Benati, 2004a, 2004b; Sanz & Morgan-Short,

2004; Wong, 2004). However, two studies that compared the effects of PI and structured input activities on the acquisition of the subjunctive in nominal clauses following expressions of doubt (Farley, 2004b; Fernandez, 2008) found that the explicit explanation component is beneficial when it is combined with structured input activities. In other words, Farley (2004b) and Fernandez (2008) found that full PI is superior to structured input activities alone when the targeted form is complex. The targeted form in their studies, however, had a low communicative value, which may have exerted some influence on the results. The present study examined a subjunctive form with a high communicative value to determine if structured input activities alone are as effective as PI when the targeted form is more amenable to PI [-redundancy] [+semantic value]. Given that all studies that examined the explicit grammar explanation component of PI in isolation did not find a beneficial effect for it, and that if included it would be impossible to equalize the treatments for feedback and time on task, the explicit grammar explanation component of PI was not examined in isolation in the present study.

A review of the studies that compared PI to meaningful output-based instruction (Benati, 2005; Farley, 2001a, 2001b) revealed that the feedback that was provided to the output-based groups and to the PI groups was not equal, with the output-based groups receiving the targeted form as incidental input when teachers or classmates provided correct answers to the treatment activities. Even the meaningful output-based study that was computer-based (Morgan-Short & Wood Bowden, 2006) provided the correct targeted forms to participants following their answers to oral activities. The present study only provided implicit feedback to all participants. In other words, participants in all

treatment groups were only told if their answers were correct or incorrect. A problem, however, did arise with feedback for the traditional instruction activity that required oral output. In order not to provide incidental input to these participants, the feedback that participants in the traditional instruction group received was delayed rather than immediate for a single activity that consisted of five items. For the single oral output activity, participants made a voice recording of their answers using an audio drop box that stored their recordings on an external site. The researcher accessed the site, listened to the recordings, and sent participants an email message stating whether their answers were correct or incorrect. The researcher made every effort to provide feedback to participants on the same day that they completed the oral activity. Due to the prohibitive costs of designing and implementing voice recognition software for the present study, supplying delayed feedback on a single oral output activity was the only way to avoid providing the targeted form as incidental input to the traditional instruction participants and to equalize the type of feedback that was given to all treatment groups. Further, in an effort to help the participants in the traditional instruction group receive some type of immediate feedback for the five items on the oral output activity, they were asked to reflect upon their own answers and check *true* if they believed that an oral response was correct and *false* if they felt that an oral response was incorrect.

Thus far, no study found on PI has examined how participants react to authentic input containing the targeted forms following their instructional treatments. All of the PI studies that were reviewed in this chapter used structured input, or input that was manipulated to elevate the communicative value of the targeted form, in their treatment

materials and assessment tasks. For example, in Farley's studies on the subjunctive in nominal clauses (2001a, 2001b), he placed the subjunctive forms in the sentence initial position in his activities in order to circumvent the Sentence Location Principle, which states that items in the sentence medial position (where the subjunctive is normally located) are processed last. This may have helped learners perceive the subjunctive forms during treatment activities, but it is unlikely that learners will ever encounter the subjunctive in nominal clauses following expressions of doubt in the sentence initial position in authentic input.

Collentine (2004) called for research studies that examine how participants respond to authentic input once the PI treatment has concluded. He states,

> [W]e do not know if learners respond to forms constituting the targeted grammatical phenomenon in normal input conditions once they have left the processing instruction laboratory….delayed posttests only reveal whether learners processing mechanisms remain altered as a result of the processing instruction intervention; delayed posttests do not reveal whether the learners' developing system is responding differently to authentic input. This should be a key challenge for researchers in the future. (Collentine, 2004, p. 179)

In an attempt to answer Collentine's (2004) call and to extend the scope of PI research, the present study examined whether exposure to any of the instructional treatments (processing instruction with visual input enhancement, processing instruction without visual input enhancement, structured input with visual input enhancement, structured input without visual input enhancement, and traditional instruction) altered the way learners noticed and processed targeted forms that were embedded in an authentic

input passage that participants received subsequent to completing their instructional treatments.

Finally, the present study investigated PI with distance Spanish language learners, which is a different population of students from past studies (all past PI studies used classroom-based learners). The studies that were computer-based (Morgan-Short & Wood Bowden, 2006; Sanz & Morgan-Short, 2004; Sanz, 2004) examined classroom-based FL learners in a computer lab. Since PI and structured input activities are input-based instructional techniques, they are suitable for online language learning where teachers have greater control over the linguistic input that students receive. Also, with distance language learning, students have fewer opportunities to produce the TL and to interact with their teacher and/or their peers in the TL. By examining distance language learners, it was possible to determine if PI was able to influence learners' production of targeted forms despite the drawback of having no interaction with or feedback from a teacher during their instructional treatments.

Input Enhancement

Another the foci of the present study was textual/visual input enhancement. Past studies that examined visual input enhancement (VIE) have typically operationalized VIE as typographical enhancements, which are achieved through formatting techniques such as bolding, highlighting, capitalizing, and/or changing the font style or size. The literature on the efficacy of VIE has been largely mixed, with some studies demonstrating a positive effect for VIE (Doughty, 1988, 1991; Jordenais, Ota, Stauffer, Boyson & Doughty, 1995; Shook, 1994; Williams, 1998; Wong 2002), some finding only a minimal

effect (Alanen, 1995; Izumi, 2002; Robinson, 1997; J. White, 1998), and still others demonstrating no beneficial effect for VIE (Leow, 1997; 2001; Leow et al., 2003; Jourdenais, 1998; Overstreet, 1998, Wong, 2003).

Empirical Studies on Input Enhancement

Shook's (1994) experimental design study found that VIE was facilitative for learning present perfect forms in Spanish. He investigated the benefit of VIE with present perfect and relative pronoun forms among 125 first and second year undergraduate students of Spanish. Shook's study had two experimental groups and one control group as follows: (1) an experimental group that received input texts with VIE with explicit instructions to pay attention to enhanced forms, (2) an experimental group that received input texts with VIE without any such instructions, and (3) a control group that received input texts without VIE. Shook found that there was no significant difference between the experimental group that was instructed to pay attention to the enhanced forms and the experimental group that was not instructed to do so. Thus, telling the learners what to pay attention to did not affect the learning outcome measures in this study. Shook did find, however, that the experimental groups that received VIE performed significantly better than the control group on production and recognition tests. He also found that participants did not perform as well on tests that measured relative pronoun usage compared to tests that measured present perfect usage in Spanish. The researcher suggests that the present perfect forms were easier for students to notice because they have a higher communicative value than the relative pronoun forms. In other words, the referential meaning of the present perfect forms (temporal reference)

assisted learners with text comprehension. Conversely, the relative pronoun forms did not need to be processed by learners because they did not contribute to the overall meaning of the input texts. Thus, relative pronouns (a grammatical feature with a low communicative value) did not benefit from the presence of VIE, but present perfect forms (a grammatical feature with a higher communicative value) did benefit from the presence of VIE. Shook's results indicate that the facilitative effects of VIE may be form specific. Wong's (2003) results support Shook's findings. Wong found that VIE was ineffective, even when combined with simplified input, for the acquisition of a form with a low communicative value (past participle agreement in relative clauses in French).

Shook's (1994) study had some limitations, he did not attempt to measure whether VIE increases learners' noticing of targeted forms; rather, he only measured acquisition of targeted forms through production and recognition tests. Another limitation of Shook's study is that participants were only exposed to input materials containing VIE for a very short period of time (under one hour).

Wong (2002) found that VIE was beneficial in her investigation of input enhancement with sentential versus discourse-level input. The researcher theorized that beginning-level foreign language learners would benefit more from VIE that was embedded in shorter sentence-level input passages. Previous studies that examined VIE tended to embed input enhancement in longer discourse-level passages, which may have caused comprehension difficulties for novice language learners. The targeted form was preposition usage in French. Her participants comprised beginning-level undergraduate students of French. Participants were divided into four groups. Two groups received

sentence-level input and two groups received discourse-level input (one group in each level received input containing VIE).

Wong's (2002) found that the two groups that received VIE outperformed the two groups that did not on the posttreatment assessment tasks. However, she also found that the groups that received sentential-level input performed better than all other groups (whether they received input containing VIE or not). Thus, VIE was found to be beneficial for the acquisition of prepositions with beginning-level French language learners, but not as beneficial as receiving sentence-level input. Some drawbacks of this study were that Wong did not measure any noticing that may have resulted from the presence of VIE, and like Shook (1994), her participants were only exposed to visually enhanced texts for under one hour.

Even though the main purpose of VIE is to draw learners' attention to targeted grammatical forms, only four studies have attempted to measure the noticing of targeted forms that takes place as a result of the presence of VIE (Alanen, 1995; Izumi, 2002; Leow, 2001; Leow et al., 2003). The majority of studies conducted thus far have typically only focused on the acquisition of targeted forms. Perhaps this is because noticing is a very difficult construct to operationalize and measure in SLA research. Two studies, Leow (2001) and Leow et al., (2003) examined the effect that VIE had on both noticing and comprehension of targeted forms. Interestingly, these studies found that the presence of VIE did not have a beneficial effect on either noticing or comprehension.

In Leow (2001), the targeted linguistic forms were the present perfect and the present subjunctive in Spanish. The 72 participants were beginning-level undergraduate

students of Spanish. Participants were divided into two groups (one experimental group and one control group). The experimental group received input texts with VIE and the control group received the same input texts without VIE. Leow measured noticing through the use of think-aloud protocols. His results revealed that there was no significant difference in the amount of noticing that took place between the two groups as measured by the think-aloud protocols. Thus, he concluded that VIE does not have a facilitative effect on noticing. However, think-aloud protocols, while capturing students' noticing in real time, have their limitations. It has been recognized that thinking aloud while trying to complete a task may interfere with task completion and language processing (Izumi, 2002, Johnson, 2001). Of note, Leow only examined the amount of noticing (the number of instances that the target forms were mentioned while participants thought aloud) and not the depth of noticing by assessing participants' level of awareness. Similarly, his comprehension tests did not reveal any significant differences between the experimental and control groups. Thus, Leow concluded that VIE does not increase noticing of target forms or assist learners with text comprehension.

Overstreet's (1998) study found that the presence of VIE might actually impede L2 learners' comprehension of TL input. The researcher targeted the preterit and imperfect forms in Spanish, and his participants included 50 intermediate-level undergraduate students of Spanish. He investigated VIE in combination with texts that were either familiar or unfamiliar to learners. Overstreet's study had four groups as follows: (a) VIE with a familiar text, (b) VIE with an unfamiliar text, (c) no enhancements with a familiar text, and (d) no enhancements with an unfamiliar text. On

the posttest assessment measures for the preterit and imperfect forms, Overstreet found no significant differences between the groups that received VIE and the groups that did not. Further, text familiarity did not appear to facilitate the acquisition of targeted forms (as measured by the posttests). Surprisingly, Overstreet found that the two groups that received VIE performed significantly less well on comprehension tests than the two groups that did not receive VIE. The researcher suggests that the presence of VIE prompted the learners to focus on form at the expense of meaning. Recent research by S. Lee (2007) on the acquisition of the passive voice in English by Korean ESL students supports Overstreet's findings regarding VIE's potential negative effect on text comprehension. S. Lee found that VIE was able to attract participants' attention, but their ability to comprehend meaning was negatively affected. Overstreet's findings regarding comprehension, however, may be due to participants' unfamiliarity with the targeted grammatical forms. The preterit and imperfect forms were completely new to the L2 learners in Overstreet's study. Past tense morphology in Spanish is fairly complex because verbs in the past tense often change meaning depending upon the context of the surrounding sentences or utterances.

Some additional limitations of Overstreet's (1998) study include the following: (a) the researcher did not investigate participants' noticing of the target forms due to the presence of VIE, and (b) participants were only exposed to input materials for under one hour. Of note, while the participants in Overstreet's study had an input passage that was relatively short (210 words), the participants in S. Lee's (2007) study were exposed to a lengthy passage containing over 1,200 words. Thus far, Overstreet (1998) and S. Lee

(2007) are the only researchers to have found that VIE has a negative on text comprehension. It appears that text length is not responsible for this finding.

Very few studies have examined VIE in combination with another pedagogical device. Alanen (1995) examined VIE in combination with the provision of metalinguistic rules. Her study investigated VIE with 36 students who were learning Finnish as a foreign language and whose L1 was English. The researcher examined participants' noticing and production of inflectional morphemes using an artificial language that was based on Finnish. Alanen divided her participants into four groups as follows: (a) a group that was given the metalinguistic rules for the morphemes followed by input texts with VIE, (b) a group that was given the metalinguistic rules for the morphemes without any input texts, (c) a group that was given input texts with VIE without any metalinguistic rules, and (d) a control group that was given input texts without VIE and without any metalinguistic rules. Noticing was measured by think-aloud protocols and production was measured by production tasks.

Alanen (1995) found that participants who received input texts with VIE had significantly more noticing of the inflectional morphemes than those who did not receive VIE. Also, the groups that read input texts with VIE performed significantly better on production tasks than the control group that read input texts without VIE. However, the group that received only the metalinguistic rules performed significantly better on production tasks than the group that only received texts with VIE. Thus, VIE was more facilitative for increasing noticing of targeted forms than the provision of metalinguistic rules. However, metalinguistic rules were more beneficial than VIE when participants

were required to use the targeted forms for production. Alanen's study, however, had some limitations. The number of participants was relatively small (36), and they were only exposed to the treatment materials for less than one hour. J. White (1998) had findings that were similar to Alanen's. She found that VIE alone or VIE followed by input flooding is not sufficient for learners to acquire targeted forms (possessive determiners in English by L1 speakers of French). J. White also asserts that VIE is effective for increasing noticing, but once targeted forms are noticed, learners are uncertain about their relevance. This would indicate that some other pedagogical technique in addition to VIE would be needed for learners to acquire the targeted grammatical forms.

In an attempt to determine if VIE has a beneficial effect on FL grammar learning, S. Lee and Huang (2008) performed a metaanalysis on twelve published studies (Alanen, 1995; Doughty, 1991; Izumi, 2002; Jourdenais et al., 1995; S. Lee, 2007; Leow, 1997; Leow, 2001; Leow et al., 2003; Overstreet, 1998; Shook, 1994; J. White, 1998; Wong, 2003) and four unpublished studies (Ha, 2005; Jourdenais, 1998; Kubota, 2000; Overstreet, 2002). The following criteria were employed for inclusion in the metaanalysis: (a) a study had to have an experimental or a quasi-experimental design with participants who were L2 or FL learners, (b) a study had to examine the effects of VIE on a posttest reading task, (c) a control or comparison group had to be included in the study's design, (d) a study had to be published in a peer refereed journal or book chapter, or be an unpublished doctoral dissertation, (e) a study had to report enough data (descriptive statistics) for the effect size to be computed, (f) a study had to be written in

English, and (g) a study had to take place between 1981, when Sharwood Smith first proposed input enhancement as a pedagogical technique, and 2007. All of the studies included in the metaanalysis operationalized VIE with simple typographical enhancements. The most commonly used techniques were bolding, underling, or a combination of the two. One study, Alanen (1995), used italicization as the method of input enhancement and Doughty (1991) used color. By examining and combining the effect sizes of all of the studies included in the metaanalysis, S. Lee and Huang found that VIE had a very small positive effect on grammar learning, (d = .22), and a small but negative effect for text comprehension (d = -0.26).

Of note, while all of the studies examined by S. Lee and Huang (2008) measured participants' grammar learning, only nine measured participants' comprehension of the propositional content of the input passages that contained visual enhancements of the targeted forms. It is difficult to draw any definitive conclusions regarding a negative effect for VIE on text comprehension when not all of the studies in the metaanalysis examined this construct. S. Lee and Huang assert that the small effect sizes found in their analysis reflects the conflicting results that the aforementioned studies reported regarding the benefits of VIE for grammar learning. They recommend that more research needs to be conducted on VIE from a wider base of researchers in the field before any definitive claims regarding VIE's efficacy, or lack thereof, can be made.

Computer-Based Visual Input Enhancement

The main goal of VIE is to increase the visual salience of targeted grammatical forms in order to increase the likelihood that learners will notice them. Thus, the purpose

of employing visual input enhancement techniques is to draw learners' attention to grammatical forms that are present in their TL input. As the present study will examine VIE with distance FL learners, it is possible that simple typographical enhancements are no longer able to attract learners' attention in web based multimedia environments. Since M. Allen (2003) claims that learners ignore stimuli that they perceive as uninteresting in computer-based media, the present study proposes to operationalize VIE with word animation, or the animation of targeted verb forms through movement and the selective use of color. Rieber (1990) asserts that moving symbols or characters draw learners' attention in computer-based media and "offer contrast to a static background increasing the figure's prominence" (p. 77). Since motion is an attention-drawing device in computer-based media, it is an ideal candidate for VIE in the present study.

Neurologically, the motion-perception system is powerful and less susceptible to disruption than higher cognitive domains such as language, attention, and memory (Jagaroo & Wilkinson, 2008). Further, the Stimulus Movement Effect (Nealis, Harlow, & Suomi, 1977) states that the perceptual system automatically directs attention to motion changes due to a built in bias. Thus VIE that utilizes motion should be a powerful technique for automatically drawing L2 learners' attention to targeted forms. According to Nealis, Harlow, and Suomi (1977), "stimuli that exhibit novelty, sudden changes in properties or position, and so forth will automatically elicit attention" (p. 162). Similarly, a study on flash animation (Hong, Thong, & Tam, 2004) found that flash attracts learners' attention and facilitates the location of flashing targeted items on screen displays that are tightly packed. The researchers caution, however, that they found no

evidence that flashing increases learners' ability to recall the flashed item and that flashing may decrease the recall of other static items on the screen. To overcome this potential negative effect for flash and other types of animation, Sutcliffe and Namoune (2007) suggest that animations should be used sequentially rather than concurrently. Further, they posit that a sequential presentation of animation is preferable as concurrent animations compete with one another and distract learners' attention.

Thus far, no SLA studies found have attempted to operationalize VIE through word animation. However, research in the area of instructional design supports the use of animation to successfully attract learners' attention in computer-based media (Baek & Layne, 1988; Park & Hopkins, 1993; Rieber, 1990). Collentine (1998a), a prominent SLA researcher, advocates the use of structured input and other input enhancement techniques in computer-assisted language learning (CALL) tasks, which he claims are particularly effective in web based environments because targeted structures can be made "physically salient" through visual and/or acoustic enhancement (p. 8). Further, learners are more prone to attend to targeted structures if they have stimulus novelty, which according to Cowan (1995) can be achieved any number of ways with multimedia tools such as graphics, sound, video, and animations. In the present study, VIE through animation of targeted verb forms will provide stimulus novelty, and it will present learners with two layers of information. Lehrer (1993) asserts that computer-based tools are superior to text-based tools for learning because computers are able to provide learners with multiple layers of data at one time. However, designers of CALL applications and web based materials need to be careful not to overwhelm learners with

too many stimuli at once in order not to overload their processing capabilities. Effective applications employ the principle of selective fidelity, which posits that the only stimuli that should be provided to learners are those that will assist them in forming hypotheses about new knowledge structures, or those that will assist them with modifying hypotheses about existing knowledge structures (Andrews, Caroll, & Bell, 1995). In the present study, the VIE treatment groups will receive input that combines an image layer (the animation) with a text layer, and it is expected that these two layers of information will not overwhelm learners' processing capabilities. Finally, Hwu (2004) asserts that CALL designers need to constantly search for new techniques to improve different areas of learning. The present study plans does so by updating VIE for multimedia and web based learning environments.

Summary of Findings and Implications for Future Research

It is presently unclear whether VIE is able to facilitate noticing, acquisition, or both as only a limited number of studies have investigated VIE. A careful review of the relevant literature yielded very mixed results, and two studies (S. Lee, 2007; Overstreet, 1998) suggest that VIE may impede learners' comprehension of input texts. The research indicates that VIE is more beneficial with sentence-level input (Wong, 2002) and may be form specific (Shook, 1994), with grammatical forms with a low communicative value receiving little benefit from the presence of VIE. Additionally, VIE may need to be combined with other input enhancement techniques in order for targeted forms to be acquired. More research is needed on VIE, especially studies that measure both noticing and acquisition of targeted forms and studies that combine VIE with other pedagogical

techniques. The present study took these points into consideration and used sentential-level input in all of the treatment materials. Also, the targeted grammatical form is the only subjunctive form with a high communicative value, which should have increased the facilitative effect of VIE. Further, in the present study VIE was combined with structured input activities to increase the likelihood that participants would make correct form-meaning mappings once the targeted forms were noticed. From the low effect size found by S. Lee and Huang (2008), it appears the typographical enhancements have little effect on grammar learning. The present study updated VIE for the web by animating targeted verb forms to attract participants' attention as they read input sentences online. The animated subjunctive forms grew larger and smaller over a period of seven seconds, after which time they reverted back to the size of the other words in the input sentences. In addition, the animated words also employed the selective use of color to draw attention to subjunctive verb endings, which tend to elude Spanish language learners' perception (J.F. Lee, 1987; J.F. Lee & Rodríguez, 1997). J. White (1998) suggests that VIE should be combined with another instructional technique because she claims that VIE only facilitates noticing and not learning of targeted forms, and the results of Izumi's (2002) study support this claim. The purpose of VIE in the present study was to attract the learners' attention to a targeted grammatical form that is difficult for Spanish language learners to notice due to its placement in the medial position of sentences. Once noticed, the structured input activities in which the animations were embedded were designed to assist learners with correct input processing. The research reviewed in this section indicates that movement is a powerful tool to attract learners' attention in computer-based

media (Baek & Layne, 1988; Jagaroo & Wilkinson, 2008; Nealis, Harlow, & Suomi, 1977; Park & Hopkins, 1993; Rieber, 1990), but flash animation and movement can detract attention from static items on the screen and potentially overwhelm learners if the animations are concurrent (Sutcliffe & Namoune, 2007). Therefore, the present study delivered animations sequentially to avoid these potential negative effects.

Output and Language Learning

The present study examined traditional instruction as a comparison group. Under the traditional instruction paradigm, a heavy emphasis is placed on output practice in the TL. A key difference between the experimental groups (processing instruction with visual input enhancement, processing instruction without visual input enhancement, structured input with visual input enhancement, and structured input without visual input enhancement) and the comparison group (traditional instruction) in the present study is the type of instruction that was delivered. The experimental groups received instruction that was input-based while the comparison group received instruction that was output-based. Past studies that compared PI with traditional instruction as it was operationalized in the present study (Benati, 2001; Cadierno, 1995, Cheng, 1995, 2002; VanPatten & Cadierno, 1993a, 1993b, VanPatten & Wong, 2004) found that PI was superior to traditional instruction for interpretation tasks and that PI was equal to traditional instruction for production tasks. VanPatten (2004) claims that the superiority of PI over traditional instruction is due, in part, to the nature of input and output processing in SLA. A prerequisite for PI is the provision of comprehensible input (Krashen, 1982) to the learner, or input that is just beyond the learner's current interlanguage ability. Further, he

asserts that input is the single most important factor for SLA, with all theories of SLA relying on input, in some way, to explain acquisition. VanPatten's model of input processing (1993, 1996, 2002, 2004) posits that language acquisition occurs when learners take in and store pairs of form-meaning relationships, and structured input activities are designed to help learners with this process. Further, VanPatten (1993, 1996, 2002, 2004) claims that structured input is able to directly affect learners' developing linguistic systems if accommodation and restructuring occur. Conversely, when learners produce output, they are only retrieving information that is already a part of their implicit linguistic systems. VanPatten (2004) also asserts that output is not a direct path to acquisition and that the main role for the production of output is to develop fluency and accuracy in the L2.

Swain (1985, 1993, 1995, 1998), however, asserts that the production of output may also affect learners' developing linguistic systems. She claims that comprehensible input, although necessary for SLA to take place, is not sufficient for learners to fully develop native-like L2 proficiency. Swain (1985) found that long-term French immersion students in Canada were able to develop high levels of listening and reading comprehension, but they failed to attain native-like production in speaking and writing skills, even after many years of instruction in the L2. Swain attributed these findings to the nature of the immersion education classes that the students received. Immersion students were exposed to large amounts of comprehensible input during subject matter instruction in the L2; however, they were not required to produce much linguistic output during their French immersion classes. In addition, Swain found that teachers tended not

to correct students' grammatical mistakes if they were able to get their message across in the L2.

Based on her findings, Swain (1985) asserts that teachers need to push L2 learners to produce TL output (in speech and in writing) in order to assist them in developing grammatical accuracy. She claims that by producing output, learners are forced to shift to a deeper level of language processing (syntactic rather than semantic), which does not occur with the provision of comprehensible input alone. Swain's (1985) Output Hypothesis states that the act of producing language (in speech or writing), under certain circumstances, contributes to the process of L2 learning. Swain (1993, 1995, 1998; Swain & Lapkin, 1995) extended the Output Hypothesis and identified three functions that output serves in SLA: (a) the hypothesis-testing function, (b) the metalinguistic function, and (c) the noticing / triggering function. The first function describes the process by which the production of output prompts L2 learners to test out their theories regarding how the TL works. The second function is presumed to raise L2 learner's awareness of TL rules and other metalinguistic information. The third function states that the production of output serves as an internal priming device for learners to notice the formal features of the language in their subsequent TL input. The noticing function of output is consistent with Schmidt's Noticing Hypothesis (Schmidt, 1990, 1993, 1995; Schmidt & Frota, 1986), which states that L2 learners must first notice target language forms in order for input to be converted into intake for learning. Schmidt (1990, 1993, 1995; Schmidt & Frota, 1986) claims that in order for SLA to take place, learners need to "notice the gap," or the mismatch between the correct TL form and the learners' own

production. Swain and Lapkin (1995) assert that the production of output compels learners to notice a "hole" in their L2 knowledge. The "hole" refers to TL information that learners do not know or TL information that they cannot remember in order to communicate a message. Therefore, when learners attempt to produce output, they notice what is missing in their IL knowledge, which prompts them to pay closer attention to their subsequent L2 input for the relevant forms and structures.

A criticism of the Output Hypothesis is that there has been little empirical evidence to support it. Swain's Output hypothesis (Swain 1993, 1995, 1998; Swain & Lapkin, 1995) was quickly accepted without being supported empirically because it resonated with teachers' intuitions about the language learning process. A handful of studies have examined the Output Hypothesis, and qualitative (Swain & Lapkin, 1995; Swain, 1998) and quantitative research studies (Izumi, 2002; Izumi & Bigelow 2000; Izumi, Bigelow, Fujiwara & Fearnow, 1999) lend some support to the assertion that the production of output may prompt L2 learners to engage in mental processes that affect SLA.

Empirical Studies Examining the Output Hypothesis

Swain and Lapkin (1995) investigated the role of output on the acquisition process. The purpose of their study was to determine if adolescent learners of French whose L1 was English would be able to notice their linguistic gaps while producing the L2. If the learners become aware of their linguistic gaps, the researchers attempted to ascertain what types of internal cognitive processes were triggered by noticing them. They were especially interested to determine if any type of grammatical or syntactic

analysis was employed by the students while attempting to fill in the gaps in their L2 knowledge. The study consisted of 18 French immersion students in grade 8. The students were individually (with a researcher present) asked to write a composition in the L2 on a topic that they had previously covered in class. The students were asked to think aloud in either French or English while they composed in French. The output of the two most proficient and the two least proficient students were analyzed for language-related episodes. A language-related episode was defined as "any segment of the protocol in which a learner either spoke about a language problem he/she encountered while writing and solved it either correctly or incorrectly; or simply solved it …without having explicitly identified it as a problem (p. 378)." The researchers found that adolescent learners do become aware of gaps in their L2 knowledge as they produce it. Further, when learners become aware of the gaps, they engage in the type of thought processes that may facilitate SLA (Selinker 1972; Corder 1981; McLaughlin 1987; Larsen-Freeman & Long 1991). The two students with the highest proficiency engaged in over twice as much grammatical analysis during production when compared to the two students with the lowest proficiency. Swain & Lapkin assert that although grammatical analysis is not necessary for comprehension, it is essential for accurate L2 production. Their findings resonate with other researchers (Hulstijn & Hulstijn, 1984; Hawkins & Trowell, 1992) who suggest that conscious knowledge of rules leads to greater L2 accuracy. While Swain and Lapin provide evidence for the importance of output in L2 learning, they do not state that output is the only source of SLA, and they do not discount the necessity of comprehensible input in L2 classrooms. However, they do posit that output prompts L2

learners to notice their linguistic deficiencies. Once linguistic gaps are noticed, learners are able to search their internal knowledge for the L2 forms and structures that are needed to solve their linguistic problems. Swain & Lapkin suggest that language acquisition may take place while learners attempt to fill in the gaps in their L2 knowledge, and that knowledge of L2 grammar facilitates the language learning process.

Swain (1998) investigated the metalinguistic function of the Output Hypothesis. Her mixed methods study investigated two research questions as follows: (a) Does the modeling of meta-talk by teachers influence students' use of meta-talk? (b) Is there a relationship between meta-talk and SLA? Her study defined meta-talk as the language that learners use "to reflect on language use." Swain asserts that meta-talk has important implications for SLA because students gain a deeper awareness of the forms and rules of the L2 when they use meta-talk for cognitive purposes. The participants consisted of 48 secondary students from two French immersion classrooms. The two classes comprised the two treatment groups. The metalinguistic group (M) received modeling by their teacher and the researcher on how to deploy meta-talk when they noticed a gap or a hole in their interlanguage. The comparison group (C) received no such modeling. Four dictogloss activities were given to the two groups. The first three were used for modeling and practice, and the fourth was audio taped for analysis in the study. The fourth dictogloss focused on the *passé compose* and the *imparfait* in French. The students received a mini grammar lesson by the researcher prior to the treatment, and the M group received modeling of meta-talk following the grammar lesson. A dictogloss passage was read twice, the first time the students were asked to listen only, and the second time they

were asked to take notes for the subsequent reconstruction of the story. Students worked in dyads to reconstruct the passage, and their conversations were audio taped and analyzed for language related episodes (LREs). The average number of LREs by the M group was 14.8 while the C group only averaged 5.8 LREs. Since the M group demonstrated over twice as much meta-talk as the C group, the researcher concluded that the modeling of meta-talk by the teacher resulted in increased meta-talk by the students.

To analyze whether meta-talk facilitates SLA, the LREs were divided into 4 categories as follows: (a) problem solved correctly, (b) problem not solved, (c) problem solved incorrectly, and (d) other. The researcher found that on average 79% of students' responses (from both groups) fell into the first category. Students were given a posttest to assess their knowledge of the targeted grammatical forms. The researcher matched participants' meta-talk to items on the posttest. She found that when students reached a correct conclusion, there was a strong tendency to perform accurately on the relevant posttest item. Also, if students inaccurately constructed knowledge, they had a strong tendency to respond inaccurately on the relevant posttest item, which demonstrates that meta-talk influences language learning. Based on her findings, Swain (1998) asserts that meta-talk (or the metalinguistic function of output) facilitates SLA. A criticism of the study is that the researcher counted LREs where the participants did not use the metalinguistic terminology that was demonstrated by the teacher. Therefore, what is considered to be meta-talk employed by the students in this study is highly subjective. Further it is unclear if the meta-talk that was modeled by the teacher, the meta-talk that

was executed by the students, or a combination of the two, was responsible for learners' abilities to answer grammatical items correctly on the posttest.

Two quantitative studies attempted to test the noticing function of Swain's Output Hypothesis: Izumi, Bigelow, Fujiwara, and Fearnow (1999) and Izumi (2002). Izumi et al. (1999) compared the noticing function of output to exposure to TL input. Their targeted form was the hypothetical conditional in English among 22 undergraduate ESL students with various L1 backgrounds. The researchers divided the participants into two groups, and experimental group (EG) and a control group (CG), with 11 participants in each group. The EG participants were asked to read a text and underline any forms that they would need to reconstruct the text. After reading the passage, they were asked to reconstruct the text from memory. This activity was repeated a second time with the same input passage. The CG followed the same protocol as the EG, except that they were asked to answer true/false comprehension questions rather than reconstruct the story. A week after the first treatment, a posttest was administered to both groups to measure the uptake of the targeted forms. The second treatment consisted of the same targeted form as the first (the hypothetical conditional), but the protocol was different. The EG group was asked to write an essay on a specific topic that elicited the targeted form, followed by a reading activity that contained the targeted form. They were also asked to underline the key words that were necessary to comprehend the reading passage. Following the reading (input) activity, the participants were instructed to rewrite their essays. The CG was also asked to write an essay, but on an unrelated topic. After completing their essays, CG participants were also given an input activity that was followed by true/false

comprehension questions. The researchers did not find greater amounts of noticing between the CG and EG groups based on participants' underline scores. Also, during the first treatment both groups greatly increased their noticing of the targeted form after the second exposure to the input passage. Izumi et al. did find, however, that the EG demonstrated a significant increase in their ability to accurately produce the targeted forms during the second treatment. Their findings, however, were not able to support the claim that the production of output promotes noticing of targeted grammatical forms in subsequent input. Their study, however, was flawed because both groups were exposed to the relevant input numerous times, which resulted in the learning of the targeted form by both the control group (CG) and the experimental group (EG) due to repeated exposure.

Izumi and Bigelow (2000) did a follow-up analysis of Izumi et al., and they found that the priming caused by the comprehension questions and the input flood that both groups received diminished any differences between the CG and the EG. Further, the targeted form, the English hypothetical conditional did not prove to be perceptually salient for the participants. The researchers suggest that failure to notice the [+perfect] and [+past participle] form in input, or to produce it in output, does not hinder communication. Hence, the functional expendability of the targeted form coupled with its formal complexity resulted in diminished noticing by both groups (CG and EG).

Izumi (2002) investigated whether "pushed" output (an internal attention-drawing device) and visual input enhancement (an external attention-drawing device) promote the noticing and subsequent learning of targeted grammatical forms (relative clauses in

English). Izumi compared the noticing function of output with visual input enhancement of texts through typographical formatting techniques. There were four treatment groups and a control group as follows: (a) +Output +Enhanced Input, (b) +Output -Enhanced Input, (c) -Output +Enhanced Input, (d) -Output -Enhanced Input, and (e) a control group that received no instruction. The participants were 47 undergraduate ESL learners from two institutions. Participants in all groups were instructed to read a text, and the +Output participants were asked to reconstruct the text while the -Output participants were asked to answer multiple-choice extension questions about the text. All groups were asked to take notes while reading the L2 input passage on the information that they thought was necessary to either reconstruct (+Output groups) or to comprehend (-Output groups) the text. The targeted grammatical forms were embedded in the L2 reading passage. Izumi measured noticing by tallying the number of targeted forms that appeared in participants' notes, and he measured learning by examining participants' scores on pre- and posttests. After analyzing the note-scores, Izumi was not able to support the claim that the production of output promotes greater noticing of relevant forms in subsequent input. However, by examining the +Output participants' uptake of the targeted form during the text reconstruction phase, it was revealed that the production of output does lead to increased noticing of targeted forms. Conversely, Izumi found that VIE was very effective for increasing participants' noticing of targeted forms as measured by note-scores; however, the presence of VIE did not result in greater learning gains as measured by pre- to posttest scores. Based on these results, Izumi concluded that the production of output leads to a deeper level of language processing, which results in greater learning of

the targeted forms than exposure to visually enhanced input. A criticism of Izumi's study is that the targeted form (relativization in English) was too complex to benefit from VIE. Also, Izumi failed to measure participants' level of awareness, or depth of noticing, which may have been a better indicator of noticing than note-scores.

Summary of Findings and Implications for Future Research

An examination of the previous studies on the Output Hypothesis (Swain & Lapkin, 1995; Swain, 1998; Izumi, Bigelow, Fujiwara, and Fearnow, 1999; Izumi, 2002) support the premise that the production of output influences learners' mental processes and that output may play a direct role in the acquisition process. If producing output encourages learners to process language more deeply, as the previous studies indicate, then participants who receive traditional instruction should perform equally as well as participants who receive PI and structured input activities on interpretation and production tasks in the present study. Further, the studies reviewed in this section also indicate that the production of output appears to prime learners to notice targeted forms in subsequent TL input. Following the instructional treatments in the present study, participants were exposed to an authentic input text that was embedded with 15 instances of the subjunctive in adjectival clauses. Thus, the production of subjunctive verb forms by the traditional instruction group should have helped learners to notice the targeted verb forms that were embedded in the subsequent authentic input passage.

Past studies (Izumi et al., 1999; Izumi, 2002) were not able to support the noticing function of the Output Hypothesis by examining learners' note-scores or underline scores; rather, Izumi (2002) examined participants' text reconstruction scores in order to

partially support the noticing function of the Output Hypothesis. Note-scores and underline scores alone do not present a clear picture of learners' noticing, as they only measure the amount of noticing that takes place and not whether learners notice targeted forms with a high, medium, or low level of awareness. Leow (2000) asserts that level of awareness plays a critical role in form learning. The present study takes this point into consideration and in addition to measuring the amount of noticing that took place, learners' level of awareness was also assessed.

Distance Foreign Language Learners

The present study investigates language learning with distance learners who take courses that deliver instruction according to the traditional distance learning paradigm. Under the traditional paradigm, the emphasis is on independent learning and self-instruction though interaction with the course materials. Thus, the emphasis is on the course materials rather than on the teacher for the provision of instruction. Under the traditional paradigm, the course materials support the learner and the self-instruction process in order to maximize learner autonomy (C. White, 2003). The teacher provides feedback and answers questions, but there are limited opportunities for interaction between the teacher and the student, especially in online classes that have a high volume of students.

The learning site for distance language learners is typically the home or workplace, and learners must create or alter their environment so that it is conducive to learning (Gibson, 1998). Distance language learners must organize and structure their physical study space in order to optimize learning, and Gibson (1998) notes that others

within the distance learner's environment may contribute either positively or negatively to the learning experience. Further, distance language learners tend to have a greater number of life roles such as that of worker, spouse, and/or parent, and typically have a wider range of professional, personal, community, and family responsibilities compared to full-time students who attend classes on campus (C. White, 2003).

In order to achieve success in a distance language learning environment, Harrell (1998) identifies seven learner attributes that help learners meet the challenges of learning a language at a distance. They are as follows:

> The ability to meet deadlines, and to develop effective time management
>
> The ability to make the psychological adjustment to learning at home
>
> Self-management skills to organize one's life efficiently and effectively
>
> Motivation and discipline
>
> The ability to manage the loneliness of distance language learning
>
> The ability to self-monitor for personal control over the learning process
>
> The ability to assume personal responsibility for learning (Harrell, 1998, p. 180).

The attributes listed above lead to learner independence or autonomy, which is particularly important in traditional distance language learning paradigms. However, not all learners are able to cope with the demands that the traditional paradigm places on them. In addition, distance language learners often enter an online course with a high level of motivation, but motivation tends to decline as factors such as competing commitments, social isolation, absence of the structuring aspects of face-to-face classes,

and difficulty adjusting to learning in a web based environment exert their influence (C. White, 2003). Thus, the ability to maintain motivation is an important factor for successful distance language learning. Harris (1995) found that learners who were able to match course features with their own self-supporting strategies were able to create for themselves "study-nurturing" environments that were similar to the environments that teachers create for students in face-to-face language classes. Similarly, C. White (1999) found that distance language learners ranked motivation and confidence in one's ability to cope with distance learning as the two most important factors for success as a distance language learner

Thus, the present study took into account the importance of developing high quality web based materials that are suitable for courses that follow the traditional distance learning paradigm (where learning takes place as a result of interaction with the materials rather than from interaction with the teacher). The web based materials that were created for the present study provided learners with directions that were clear and with screen designs that were uncluttered to help maximize self-instruction though interaction with the materials. In addition, the experimental schedule of the present study took into account the numerous life roles and wide range of personal and professional responsibilities that distance language learners typically have, and the experimental schedule allowed as much flexibility as possible for completion of the study-related activities.

The Spanish Subjunctive as a Complex Grammatical Feature

Modality is a semantic notion that determines the conditions and contexts in which a proposition is judged (Montrul, 2004). Propositions are evaluated according to whether they are possible, impossible, contingently true or false, or necessary. In Spanish, modality can be expressed through grammatical devices such as the future and conditional tenses and modal verbs. In the following sentences, modality is expressed in Spanish through the future perfect and the conditional tenses respectively:

> Marcos todavía no ha llegado. *Habrá perdido* su vuelo.
> Marcos hasn't arrived yet. He will have missed his flight.
>
> Dijo que *llegaría* a las seis.
> He said that he would arrive at six.

Modality can also be expressed through grammatical mood in Spanish. Although modality is a feature of every language, expressing modality by means of grammatical mood is not (Montrul, 2004). In the following sentence, modality is marked with the present subjunctive mood in Spanish:

> Dudo que (él) *venga* esta noche.
> I doubt that he will come tonight.

The choice of indicative or subjunctive in Spanish is signaled by syntactic and semantic factors (Montrul, 2004) such as the expression of doubt in the matrix clause verb in the previous example. In Spanish the subjunctive mood includes present, past, and future forms.

Intermediate-level Spanish language learners often have difficulty expressing grammatical mood, even after they have had a considerable amount of instruction on it

(Terrell, Baycroft, & Perrone, 1987). In order to master the Spanish subjunctive, Collentine (1995, 2000, 2003) posits that learners must develop both morphological and syntactic abilities. In other words, learners must be able to produce the indicative and the subjunctive correctly in obligatory contexts, and they must also be able to produce complex sentences that contain both matrix and subordinate clauses. Terrell and Hooper (1974) and Takagaki (1984) assert that the indicative appears in all syntactic environments, but that the subjunctive tends to appear only in subordinate clauses. An examination of Pienemann's (1998) Processability Theory reveals that the ability to form main and subordinate clauses is a late acquired feature across languages. Processability Theory identifies production procedures and their sequence of development by L2 learners. Pienemann (1998, p. 9) proposes five hierarchical procedures that underpin Processability Theory, which are presented in Table 2.1.

Pienemann claims that each of the aforementioned procedures is acquired independently, but that the procedures are acquired in a fixed order, with the acquisition of one procedure preceding the next. For example, learners must be able to access and produce words (procedure 1) before lexical categorization (procedure 2) can take place. Thus, knowledge of words is a necessary, and logical, prerequisite for categorizing grammatical characteristics such as number, person, and gender. Note that the subordinate clause procedure is the last feature to be acquired in this model. According to Pienemann (1998), L2 learners must acquire procedures 1-4 before they are ready to produce syntax with main and subordinate clauses, which is necessary for using the subjunctive in Spanish.

Table 2.1

Pienemann's Hierarchy of Processing Procedures and Structural Outcomes

Processing procedure	Structural outcome
1. Word / lemma access	"words"
2. Category procedure	lexical morphemes
3. Phrasal procedure	phrasal information exchange
4. S-procedure	inter-phrasal information exchange
5. Subordinate clause procedure	main and subordinate clause

Similarly, Collentine (1995) posits that one of the primary reasons that L2 learners have difficulty with the subjunctive is their inability to form complex syntax. Other problematic factors include the linguistic complexities of denoting abstract concepts such as unreal or hypothetical events and states (Collentine, 2003) and the difficulty that learners have in noticing the subjunctive morphological inflections because of their similarity to indicative morphological inflections. J.F. Lee (1987) and J.F. Lee and Rodríguez (1997) found that the subjunctive inflections for the present tense tend to elude L2 Spanish learners' detection.

The targeted form in the present study is the present subjunctive in adjectival clauses when the referent is uncertain, unknown, or hypothetical to the speaker. Blake (1985) describes the subjunctive in adjectival clauses as choices that are made based on the following semantic criteria: [+/- Existential Status of the Referent]. For example, in

the sentence *Busco un hombre que sepa programar computadoras* or *I'm looking for a man who knows how to program computers.* The speaker of the sentence uses the subjunctive in the subordinate (adjectival clause) to mark the referent as existential or unknown. In the previous example, if the verb in the subordinate clause were conjugated in the present indicative mood, *Busco al hombre que sabe programar computadoras* or *I'm looking for the man who knows how to program computers,* then it would be understood that the referent is not existential in Spanish (e.g. the speaker of the sentence knows the man who can program computers). Note that this distinction (an existential referent) does not change the morphology of the verb in English as is does in Spanish, which is more precise in expressing [+/-Existential] in adjectival clauses. The subordinate clause verb *knows* remains in the simple present tense in both of the previous examples in English. Since this language function (expressing an existential referent through grammatical mood) does not exist in English, learners of Spanish whose L1 is English tend to mark verbs that require subjunctive morphology with indicative morphology, which is evidence of the L1 transfer phenomena (Terrell, Baycroft, & Perrone, 1987).

Further, when the TL has structural, functional, or semantic elements that are not present in learners' native language, such as marking existential referents with grammatical mood, it is expected that learners will have difficulty mastering those elements (Stockwell, Bowen, & Martin, 1965). Although the subjunctive exists in English, it is not common. L2 learners of Spanish whose L1 is English have limited L1 models with which to hypothesize about its use in Spanish (Collentine, 2003). In

addition, Mejias-Bikandi (1994) asserts that learners must also understand the pragmatic context of utterances in order to grasp the characterization of mood distribution in Spanish, which is a further complication.

Farley (2004) posits that Spanish language learners have problems with the subjunctive due to their use of faulty processing strategies, which can be explained by VanPatten's model of input processing (1993, 1996, 2002, 2004). He asserts that L2 learners of Spanish whose L1 is English have difficulty with the subjunctive in nominal clauses due the Lexical Preference Principle and the Sentence Location Principle. The Lexical Preference Principle states that learners will rely on lexical items rather than on grammatical form to extract meaning when both encode the same semantic information. When the subjunctive occurs in noun clauses following expressions of doubt or denial, the semantic meaning of the subjunctive form is redundant. In the sentence *Dudo que (ella) comprenda el problema* or *I doubt that she understands the problem*, doubt is expressed in the matrix clause by the lexical item *dudo* or *I doubt*. Thus, L2 learners of Spanish tend to overlook the subjunctive form in the noun clause, which also expresses doubt, because they are able to extract meaning from a lexical item in the matrix clause. With the subjunctive in adjectival clauses, however, this problem does not occur because the subjunctive morphology is typically the only element of the sentence or utterance that expresses an unknown or hypothetical referent. In the sentence *Quiero un trabajo que pague bien* or *I want a job that pays well*, the subjunctive form *pague* is the only element in the sentence that expresses an existential referent. However, language learners may still tend to focus on main clause verbs and other elements in sentences such as

vocabulary items due to the Primacy of Meaning Principle, which states that learners process their input for meaning before they process it for form. In other words, novice L2 learners are likely to focus on content words rather than on verb forms such as the subjunctive in order to extract meaning from their input.

Farley (2001a, 2001b, 2004) also asserts that the Sentence Location Principle poses problems for the acquisition of the subjunctive because subjunctive forms typically occur in subordinate clauses, which places them in the sentence medial position. The Sentence Location Principle states that learners first process items in the sentence initial position, followed by items in the sentence final position, and items that occur in the sentence medial position are processed last. Therefore, items that occur in the middle of sentences, like the subjunctive in subordinate clauses, are processed last by learners. Since subjunctive inflections are already difficult for learners to notice (J.F. Lee, 1987; J.F. Lee & Rodríguez, 1997), their placement in the middle of sentences makes it even less likely that they will be detected by L2 learners of Spanish.

In summary, Spanish language learners have difficulty acquiring the subjunctive in adjectival clauses for the following reasons: (a) the linguistic complexities of the subjunctive (e.g. expressing hypothetical, uncertain, or unknown referents), (b) the lack of English subjunctive models for L2 learners of Spanish whose L1 is English, (c) the syntactic complexity involved with the subjunctive and the late acquisition of the subordinate clause procedure by L2 learners, (d) the lack of perceptual salience of subjunctive morphology, and (e) learners' use of faulty input processing strategies. Due to the aforementioned problems, the Spanish subjunctive is a complex feature for

language learners to acquire. It is useful to investigate complex language features when comparing the effects of various types of instruction because if learners are able acquire a complex form with a particular instructional technique, then the technique should also be beneficial for the acquisition of simple grammatical forms as well.

Chapter 3

Method

Introduction

This chapter provides a description of the procedures that were used to examine the effects of five web based instructional treatments (processing instruction with visual input enhancement, processing instruction without visual input enhancement, structured input with visual input enhancement, structured input without visual input enhancement, and traditional instruction) for the acquisition of the subjunctive in adjectival clauses by intermediate-level distance learners of Spanish. The following research questions were addressed within the context of the present study:

1. Is there a differential performance between treatment groups for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by interpretation tasks over time?
2. Is there a differential performance between treatment groups for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by production tasks over time?
3. Is there a differential performance between treatment groups in participants' ability to notice targeted forms in subsequent authentic input as measured by note-scores and awareness scores?

4. Following the instructional treatments, is there a differential performance between treatment groups in participants' ability to comprehend the referential meaning of the targeted grammatical form (input processing) and the message of the authentic input text in which it is embedded as measured by grammar comprehension and text comprehension scores?
5. What is the relationship between text comprehension and input processing when learners encounter the targeted grammatical form in subsequent authentic input?

This chapter describes the research design, sample, and population, and it also provides a detailed description of the materials, instruments, and measures that were employed the present study. In addition, a description of the data collection procedures and a comprehensive description of the statistical tests that were used to answer the research questions are provided.

Research Design

The study employed an experimental design; more specifically, it utilized a pretest-posttest control group design. Although the present study did not have random selection from the population, there was random assignment to groups, which controlled for extraneous variables such as gender, SES, and age. There were four treatment groups and a comparison group as follows: processing instruction with visual input enhancement (+PI +VIE), processing instruction without visual input enhancement (+PI -VIE), structured input with visual input enhancement (+SI +VIE), structured input without visual input enhancement (+SI –VIE) and traditional instruction (TI). The

dependent measures investigated were interpretation test scores (with measurement at Pretest, Posttest 1, and Posttest 2), production test scores (with measurement at Pretest, Posttest 1, and Posttest 2), as well as noticing, awareness, and comprehension test scores.

As the participants in the control group received an alternate treatment rather than no treatment, it was referred to as a comparison group in the present study. According to Gall, Gall, and Borg (2007),

> [T]he pretest-posttest control group design effectively controls for eight threats to internal validity originally identified by Campbell and Stanley: history, maturation, testing, instrumentation, statistical regression, differential selection, experimental mortality, and selection-maturation interaction. (p. 405)

Further, by providing an equal but different treatment to the control group, the additional four threats to internal validity identified by Campbell and Stanley (1963), namely, compensatory rivalry by the control group, experimental treatment diffusion, resentful demoralization of the control group, and experimental treatment diffusion, were controlled (Gall, Gall, & Borg, 2007). Thus, the research design of the present study controlled for the potential threats to the internal validity of an experiment that were identified by Campbell and Stanley.

In addition, since participants in the study needed to learn the targeted grammatical form in order to pass the final exams in their Spanish courses, it would not have been ethical to exclude some participants from any instruction on the targeted form by having a true control group. The four experimental groups were compared with traditional instruction as it is currently employed in participants' distance Spanish language classes via Vista Higher Learning's *En Línea* (online) Spanish language course

materials. A full description of the operationalization of traditional instruction with examples is provided in the Instructional Materials section of this chapter. Figure 3.1 provides a visual depiction of the research design that was employed in the present study.

Instruments / Measures			One Between-Subjects Factor				
			(+PI +VIE)	(+PI -VIE)	(+SI +VIE)	(-SI -VIE)	(TI)
Repeated Measures Within-Subjects Factors	Interpretation	Pretest					
		Posttest 1					
		Posttest 2					
Repeated Measures Within-Subjects Factors	Production	Pretest					
		Posttest 1					
		Posttest 2					
Noticing Measure (Authentic Input Text)		Note-Scores					
Awareness Measure (Posttreatment Questionnaire)		Awareness Scores					
Comprehension Test		Text / Grammar Comprehension Scores					

Figure 3.1. Research Design

Ecological validity was addressed by providing an explicit description of the experimental treatments. In addition, participants were not informed about the nature or expected outcomes of the experiment in order to prevent the Hawthorne effect. Further, there would not have been an experimenter or teacher effect because all of the treatments

were delivered online. Additionally, the pretest was not expected to react with the experimental treatments since participants had no previous knowledge of the use of the subjunctive in adjectival clauses prior to the experiment. Rather, the pretest served as a screening device to remove participants who already had a basic understanding of how the targeted grammatical form functions in Spanish. Similarly, the measurement of the dependent variable (pre- and posttests) was not a threat to ecological validity because it incorporated two types of subtests, a Production Subtest and an Interpretation Subtest. The experimental groups had practice with activities that were similar to the activities on the Interpretation Subtest during their instructional treatments, and the comparison group had practice with activities that were similar to the activities on the Production Subtest during their instructional treatments.

In the present study, population validity, or the generalizability of the study, was limited to undergraduate second semester students of Spanish in the southeast who take 80-100% of their language coursework online. It is not possible to generalize the findings of the present study to all online Spanish language learners in the United States because the researcher was limited to an experimentally accessible population.

Population and Sample

The target population consists of undergraduate students in a southeastern urban/suburban university setting who take Spanish language classes that deliver all of the course content online. The sample for the present study consisted of students enrolled in two intermediate-level Spanish II distance courses at a large urban university in the southeast, and students enrolled in one intermediate-level Spanish II online course at a

small suburban satellite university in the southeast. Sample participants varied in their level of undergraduate studies from freshmen to seniors, as students in most undergraduate majors are typically free to complete their foreign language requirement at any point during their course of studies. The large urban university typically enrolls up to 125 students per semester in the Spanish II online course while the small satellite university enrolls only 25 students per semester in the Spanish II online course. All students in these online courses during spring and summer semesters of 2009 were invited to participate in the study. Although 190 students signed the informed consent form and enrolled in the research study, the final sample consisted of 92 students. Forty-four of the initial volunteers were excluded because they scored 60% or higher on the Interpretation Subtest and/or the Production Subtest of the Subjunctive Knowledge Test that was delivered as a pretest, suggesting that these students already had prior knowledge of the targeted grammatical form. Fifty-two students were excluded because they failed to complete the study. Two students were excluded because Spanish was spoken in their homes. Table 3.1 provides a breakdown of student participants by class.

In order to ensure that high- and low-achieving students were evenly distributed between the groups, these students were identified by their test average in their Spanish class, and they were assigned to a treatment group using a stratified random assignment procedure. Low achievers were considered to be students whose test score averages were lower than 50 on a 100-point scale. A total of 34 participants were identified as low achievers from the three classes as follows: 16 from Class One, 15 from Class Two, and 2 from Class Three. Of these, 7 low-achieving participants were randomly assigned to

Table 3.1

Number of Student Participants by Class

Class	University Type	Semester	Initial Class size	Sample Participants	Final Sample Participants
1	Large urban	Spring 2009	125	87	46
2	Large urban	Summer 2009	125	90	41
3	Small suburban	Summer 2009	25	13	5
	Totals:		275	190	92

each of the following groups: structured input without visual input enhancement, processing instruction with visual input enhancement, structured input with visual input enhancement and traditional instruction. Six low-achieving students were assigned to the processing instruction without visual input enhancement group. However, two low-achieving students did not complete the study (one participant in the structured input with visual input enhancement group dropped out of the study and one participant in the processing instruction with visual input enhancement group dropped the course before completing the study). Thus, the final breakdown of the 32 low-achieving participants that completed the study was as follows: processing instruction without visual input enhancement (n = 6), structured input without visual input enhancement (n = 7), processing instruction with visual input enhancement (n = 6), structured input with visual input enhancement (n = 6), traditional instruction (n = 7).

High-achieving students were also identified in by their Spanish class test average, however; only two participants who were identified as high achievers opted to participate in the study. High achievers were students whose test score average was higher than 90 on a 100-point scale in their Spanish class. One high-achieving student was randomly assigned to the structured input without visual input enhancement group, and the other high-achieving student was randomly assigned to the traditional instruction group.

The number and percent of participants in the final sample assigned to the four experimental groups and to the comparison group are reported in Table 3.2.

Table 3.2

Number and Percent of Final Sample Assigned to Instructional Groups

Instructional Group	Participants	
	Number	Percent
+PI -VIE	19	20.65
+PI +VIE	18	19.57
+SI -VIE	19	20.65
+SI +VIE	18	19.57
+TI	18	19.57
Total	92	100.00

In order to have appropriate statistical power to perform multivariate and univariate inferential statistical operations, Stevens (2002) recommends that cell sizes for a repeated measures multivariate approach be at least (a + 10) where a is the number of levels for repeated measures. Similarly, Cohen (1992) recommends that cell sizes be at least 16 when using ANOVA (with five groups) in order to detect a large effect size with statistical power set at .80 and alpha set at .05. Thus, the total N necessary for appropriate statistical power in the present study is 80. In a limited meta-analysis of three studies that examined PI (Cadierno, 1995; VanPatten & Cadierno, 1993; VanPatten & Wong, 2003), Collentine (2004) found a large effect size for PI (about six standard deviations). Thus, a total of 92 participants in the present study was considered to be adequate to detect an effect for the treatments if one existed.

Instruments and Measures

The following instruments and measures were employed in the present study: (a) a Pretreatment Questionnaire, (b) a Subjunctive Knowledge Test with an Interpretation Subtest and a Production Subtest, (c) a Comprehension Test, (d) Note-sheets, (e) an Authentic Input Text, and (f) a Posttreatment Questionnaire.

Pretreatment Questionnaire

The Pretreatment Questionnaire contained three parts: demographic information, Spanish language learning experience, and computer experience. The demographic information portion was designed to obtain specific background information from participants, including their age, gender, and native language. In addition to the demographic information, the questionnaire also asked participants if they speak Spanish

or another language at least half of the time at home, and if they have daily contact with Spanish outside of class. Participants who indicated that they spoke Spanish at home or had extensive contact with Spanish outside of class were excluded from the study. Participants were also asked the number of years/semesters that they studied Spanish in high school or college.

In addition to the previous information, participants were also asked to give their opinions regarding using computers and the Internet to learn Spanish. Participants were asked to rate their own computer skills and the ease of using Blackboard Courseware Management System, and they were also asked why they chose to learn a language online. Finally, participants were asked if they would take another language class online. The Pretreatment Questionnaire is available in Appendix B.

Subjunctive Knowledge Test

A Subjunctive Knowledge Test, which was comprised of an Interpretation Subtest and a Production Subtest, was created for this study. The Subjunctive Knowledge Test had three forms (A, B, and C), which were delivered as a pretest and two posttests in the present study. Figure 3.2 provides a visual display of the four constructs measured on the Subjunctive Knowledge Test.

A split block design was used to control for test order: Class 1 received test A as the pretest followed by tests B and C as posttests, while Class 2 received test C as the pretest, followed by tests A and B as the posttests, and Class 3 received test C as the pretest followed by tests B and A as the posttests. As with most previous studies that examined PI, there was a 60% cut off for the pretest (Cadierno, 1995; Cheng, 1995;

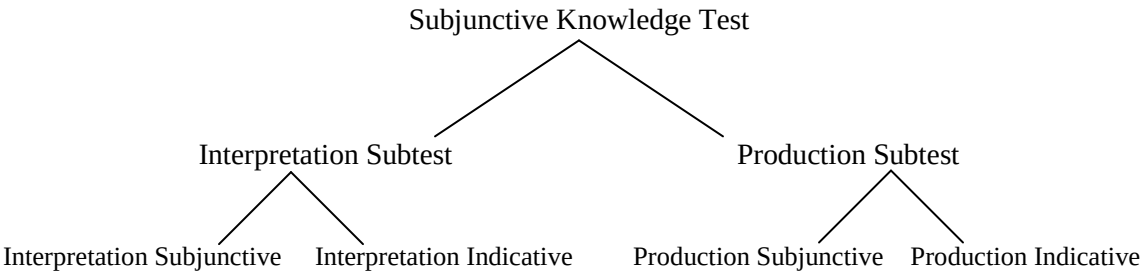

Figure 3.2. Constructs Measured on the Subjunctive Knowledge Test

VanPatten & Cadierno, 1993a, 1993b; VanPatten & Sanz; 1995; VanPatten & Oikkenon, 1996). If participants scored 60% or higher on either subtest, they demonstrated that they already possessed a basic understanding of the targeted grammatical form, and they were excluded from the present study. Forms A, B, and C of the Subjunctive Knowledge Test are presented in Appendix C.

Interpretation subtest. The Interpretation Subtest was created for this study and was designed to measure participants' comprehension of a specific grammatical feature (the subjunctive in adjectival clauses is Spanish) and the referential meaning that this grammatical form encodes. Thus, the Interpretation Subtest is not a traditional comprehension test where learners are tested on whether or not they understand the propositional content of the message that they hear or read, as learners do not necessarily have to attend to or comprehend grammatical features in order to interpret messages correctly (R. Ellis, 1995). Rather, the Interpretation Subtest measures learners' comprehension of L2 grammar.

The Interpretation Subtest consisted of two parts, an aural component and a written component with ten items each. The aural component comprised a series of 10 utterances in Spanish where all of the verbs in the main clauses were in the present

indicative, but the verbs in the adjectival clauses that followed were either in the present indicative or in the present subjunctive. Participants had to indicate if the adjectival clause referred to an antecedent that was certain and/or known, or to an antecedent that was uncertain and/or unknown by selecting the correct response in Spanish. If participants interpreted the subjunctive correctly, they selected a response indicating that the referent was uncertain or unknown. Similarly, if participants interpreted the indicative correctly, they selected a response indicating that the referent was certain or known to the speaker. The following is an example of a question from the aural component of the Interpretation Subtest with an English translation (the English translation was not provided to participants). Response B is correct.

> Participants heard: Quiero ir a un restaurante que sirva comida francesa.
> *I want to go to a restaurant that serves French cuisine.*
>
> Participants selected one of the following responses:
>
> A. Sí. The sentence refers to a person, place, or thing that clearly exists or is known.
>
> B. No. The sentence refers to a person, place, or thing that either does not exist or whose existence is unknown.

In the previous example, participants had to correctly interpret the meaning of the verb *sirva* in Spanish, which is conjugated in the present subjunctive in the aural input sentence, in order to answer the question correctly. The subjunctive verb form in this example connotes a referent that is unknown or hypothetical to the speaker. The aural input component of the Interpretation Subtest contained 7 items that required interpretation of the subjunctive and 3 items that required interpretation of the indicative.

Similar to the aural component of the Interpretation Subtest, the written component also consisted of 10 items. Participants were provided with 10 written adjectival clauses in Spanish that contained either a subjunctive or an indicative verb form. Participants had to determine which main clause was appropriate given the adjectival clause that was provided. If the verb in the adjectival clause was in the subjunctive, then participants had to select a main clause that expressed uncertainty or indefiniteness. Conversely, if the verb in the adjectival clause was in the indicative, then participants had to select a main clause that expressed certainty or definiteness. Thus, participants had to interpret the referential meaning of the verb form in each adjectival clause in order to answer the questions correctly. The following is an example of a question from the written component of the Interpretation Subtest with an English translation (the English translation was not provided to participants on the Interpretation Test). Response A is correct.

> . . . hable español.
> . . . *speaks Spanish*.
>
> A. Mi madre no habla inglés, por eso busco un novio que . . .
> *My mother doesn't speak English, that's why I'm looking for a boyfriend that . . .*
>
> B. Mi madre no habla inglés y tengo un novio que . . .
> *My mother doesn't speak English and I have a boyfriend that . . .*

In the previous example participants had to correctly interpret that the verb *hable* in Spanish (which is conjugated in the present subjunctive) connotes a referent that is unknown or hypothetical to the speaker. The written input contained 8 items that

required interpretation of the subjunctive and 2 items that required interpretation of the indicative.

Each correct answer on the Interpretation Subtest was worth one point, with a maximum total score of 15 for interpreting the subjunctive and a score of 5 for interpreting the indicative when the aural and written components of the test were combined. For the interpretation of the subjunctive, a score of 11-15 was considered high, a score of 6-10 was considered average, and a score of 5 or below was considered low. High scores were interpreted to indicate that the participants were able to correctly interpret the subjunctive in adjectival clauses in Spanish. Medium scores were interpreted to indicate that participants were partially able to correctly interpret the subjunctive in adjectival clauses in Spanish. Low scores were interpreted to indicate that participants were unable to correctly interpret the subjunctive in adjectival clauses in Spanish.

For the interpretation of the indicative, a score of 4-5 was considered high and was interpreted to indicate that participants were able to correctly interpret the indicative in adjectival clauses in Spanish without overgeneralizing the subjunctive forms. A score of 2-3 was considered average and was interpreted to indicate that participants were partially able to correctly interpret the indicative in adjectival clauses in Spanish without overgeneralizing the subjunctive forms. A score of 0-1 was considered low and was interpreted to indicate that participants were not able to correctly interpret the indicative in adjectival clauses in Spanish and may have overgeneralized the subjunctive forms.

Each of the three versions of the Interpretation Subtest had an identical format; however, the individual test items varied slightly. All three versions of the Interpretation Subtest were balanced for number and use of subjunctive verb forms, with each test containing an equal number of verbs in the indicative and in the subjunctive as well as an equal number of regular and irregular verbs in Spanish. In addition, the lexical items used in all three versions of the Interpretation Subtest contained high-frequency lexical items that participants had already been exposed to during previous Spanish language coursework.

The Interpretation Subtest was delivered to participants online, and the test was timed to ensure that participants did not have time to consult outside resources such as their textbooks or the Internet. During piloting with the 18 advanced-level students in their fourth or fifth semester of Spanish language study who were already familiar with the test content, it was established that participants would need between 10 to 15 minutes to complete the Interpretation Subtest. Once the tests were completed online, they were printed by the researcher. The Interpretation Subtest was graded by the computer and checked by the researcher to ensure that there were no mistakes.

Finally, in designing the Interpretation Subtest, R. Ellis' (1995) principles for the creation of interpretation tasks were followed, which are listed below:

1. Learners should be required to process the target structure, not to produce it
2. An interpretation activity consists of a stimulus to which learners must make some kind of response

3. The stimulus can take the form of spoken or written input

4. The response can take various forms (e.g., indicate true-false, check a box, select the correct picture, draw a diagram, perform an action) but in each case the response will be either completely nonverbal or minimally verbal (p. 98).

Production subtest. The Production Subtest was created for this study and was designed to measure how well participants were able to accurately produce subjunctive verb forms in adjectival clauses in Spanish when there was a non-referential antecedent. The Production Subtest also measured whether participants overgeneralized subjunctive forms when the antecedent was certain or known, which required the production of indicative verb forms. There were a total of 20 items on the Production Subtest, and there were three components as follows:

1. Fill-in-the-blank Sentence Completions (5 items)
2. Mini-dialogue Sentence Completions (10 items)
3. Dehydrated sentences (5 items)

For the fill-in-the-blank and the mini-dialogue sentence completions, participants had to write the correct subjunctive or indicative verb form. The items in the fill-in-the-blank component of the Production Subtest were discrete point questions, which are typically easier for novice language learners to answer than test items that are part of a connected discourse in the target language. The following is an example of an item from the fill-in-the-blank component of the Production Subtest with an English translation (the English translation was not provided to participants).

> Busco a alguién que _____ (querer) compartir un apartamento conmigo.

I'm looking for someone who _____ (wants) to share an apartment with me.

*The correct answer is *quiera*, which is conjugated in the present subjunctive because the referent is unknown to the speaker of the sentence.

The test items in the mini-dialogue component of the Production Subtest were designed to be slightly more difficult for participants because these items were contextualized in short dialogues between two Spanish-speakers, which more closely resembles how learners would encounter the targeted grammatical forms in authentic input. The following is an example of a test item from the mini-dialogue component of the Production Subtest with an English translation (the English translation was not provided to participants).

Juan: ¿Hay un banco por aquí que 1. _____ (estar) abierto?

Is there a bank around here that _____ (to be) open?

Paco: No, no hay ningún banco aquí que 2._____ (abrir) a las seis de la mañana.

No, there isn't a single bank here that _____ (to open) before six in the morning.

*The correct answer to number one is *esté* because the referent is unknown to the speaker, and the correct answer for number two is *abra* because negative expressions that are followed by an adjectival clause in Spanish always take the subjunctive.

For the dehydrated sentences component of the Production Subtest, participants had to take elements of sentences that were devoid of most function words and that only

contained infinitive verb forms to create complete sentences in Spanish. Participants had to decide if verbs in the main and subordinate clauses required conjugations in the present subjunctive or in the present indicative. Below is an example of an item from the dehydrated sentences component of the Production Subtest with an English translation (the English translation was not provided to participants).

> Write a complete sentence in Spanish describing your ideal house and life. Use the elements that are provided to construct each sentence.
>
> Yo / buscar/ casa/ que / tener / ocho dormitorios
>
> I / to look for / house / that / to have / eight bedrooms

All 5 items in this component of the Production Subtest required the subjunctive in the adjectival clause because the referent (the ideal house, job, or life) was always hypothetical. Participants were not given instructions to use any particular tense or mood in Spanish; thus, the dehydrated sentences component of the Production Subtest measured whether or not participants were able to recognize the need to use the subjunctive to express a hypothetical antecedent, and if they were able to produce the appropriate subjunctive form in order to do so.

Each correct answer on the Production Subtest was worth one point, with a maximum total score of 15 for producing the subjunctive and 5 for producing the indicative when the three components of the test were combined. If the answer contained misspellings or a lack of agreement in person or number but the participant made an effort to produce the correct indicative or subjunctive verb ending, or if the participant produced a vowel switch or stem change toward the subjunctive form, then .5 was

awarded, which was in keeping with past studies in the PI strand. For the dehydrated sentences component of the Production Subtest, only the verb in the subordinate clause was assessed according to the rubric described above, and all other elements of the sentence that participants produced such as the main clause verb and vocabulary items were not scored.

For measuring the production of the subjunctive, a score of 11-15 was considered high, a score of 6-10 was considered average, and a score of 5 or below was considered low. High scores were interpreted to indicate that the participants were able to correctly produce the subjunctive in adjectival clauses in Spanish. Medium scores were interpreted to indicate that participants are partially able to correctly produce the subjunctive in adjectival clauses in Spanish. Low scores were interpreted to indicate that participants were unable to correctly produce the subjunctive in adjectival clauses in Spanish.

The highest total score for measuring the production of the indicative was 5. A score of 4-5 was considered high and was interpreted o indicated that participants were able to correctly produce the indicative in adjectival clauses in Spanish without overgeneralizing the subjunctive forms. A score of 3 was considered average and was interpreted to indicate that participants were partially able to correctly produce the indicative in adjectival clauses in Spanish without overgeneralizing the subjunctive forms. A score of 0-2 was considered low and was interpreted to indicate that participants were not able to correctly produce the indicative in adjectival clauses in Spanish and may have overgeneralized the subjunctive forms.

Each of the three versions of the Production Subtest had an identical format; however, the individual test items varied slightly. All three versions of the Production Subtest were balanced for number and use of subjunctive verb forms, with each test containing an equal number of verbs in the indicative and in the subjunctive, as well as an equal number of regular and irregular verbs in Spanish. In addition, the lexical items used in all three versions of the Production Subtest contained high-frequency lexical items that participants had already been exposed to during previous Spanish language coursework.

The Production Subtest was delivered to participants online, and the test was timed to ensure that participants did not have time to consult outside resources such as their textbooks or the Internet. During piloting with the 18 advanced-level students in their fourth or fifth semester of Spanish language study who were already familiar with the test content, it was established that participants would need between 10 to 15 minutes to complete the Production Subtest. Once the tests were completed online, they were printed by the researcher. The Production Subtest was scored by two raters, who were provided with an answer key and a grading rubric for each test. Interrater reliability was computed, weighted Kappa = 0.97.

Comprehension Test

The Comprehension Test was created for this study, and it was designed to measure two constructs: (a) text comprehension, which refers to comprehension of the propositional content of the input passage, and (b) grammar comprehension, which refers to comprehension of the referential meaning of the targeted verb forms. The

Comprehension Test comprised the following two components: (a) the text comprehension component and (b) the grammar comprehension component.

The text comprehension component of the Comprehension Test contained five multiple-choice items that were passage dependent and that tested both the main ideas and the details of the passage. The following is an example of an item from the text comprehension component of the Comprehension Test:

> When the author of the ad states, "QUE ACEPTEN MASCOTAS ES IMPRESCINDIBLE PARA MÍ." What must be allowed?
>
> a. children b. pets c. collectibles

The maximum score on the text comprehension portion of the Comprehension Test was 5. A score of 4-5 was considered high, and it was interpreted to indicate that participants understood the propositional content of the authentic input passage. A score of 3 was considered average, and it was interpreted to indicate that participants were partially able to comprehend the propositional content of the input passage. A score of 0-2 was considered low, and it was interpreted to indicate that participants did not understand enough of the propositional content of the authentic input passage to extract an accurate message.

The grammar comprehension component of the Comprehension Test comprised 2 multiple-choice and 2 short answer questions. The multiple-choice questions measured whether participants were able to determine the grammatical mood of the conjugated verb (present subjunctive or present indicative), and the short answer questions determined whether or not participants comprehended the referential meaning of the subjunctive

forms (an unknown or hypothetical antecedent). The following is an example of a multiple-choice and short answer test item from the grammar comprehension component of the Comprehension Test:

> In the following except from a Spanish want ad: "*Busco una casa . . . que esté en buen estado*." The author of the ad says that he or she is looking for a house that is in good condition. What form of the verb *estar* is used?
>
> a. present indicative b. present subjunctive
>
> Why does the author of the ad use this form of the verb *estar*? In other words, what meaning does this form of the verb *estar* express when conjugated this way? _____

Each multiple-choice answer was worth one point, and each short answer question was worth two points. The maximum score on the grammar comprehension component of the Comprehension Test was 6. A score of 5-6 was considered high and was interpreted to indicate that participants comprehended the referential meaning of the targeted verb forms. A score of 3-4 was considered average and was interpreted to indicate that participants were partially able to comprehend the referential meaning of the targeted verb forms. A score of 0-2 was considered low and was interpreted to indicate that participants did not comprehend the referential meaning of the targeted verb forms.

The Comprehension Test was delivered via Blackboard, and it was timed to ensure that participants only had enough time to read and answer each question without seeking assistance from their texts, notes, others, or the web. Further, each item was delivered one at a time, and participants were prohibited from backtracking on this exam. The Comprehension Test was piloted with 18 advanced Spanish language students in their fourth or fifth semester of language study, and it was determined that students who

already know the subjunctive would need 10-15 minutes to complete the Comprehension Test. Once completed online, the multiple-choice items were scored by the computer and checked for accuracy by the researcher. After participants completed their Comprehension Tests online, they were then printed by the researcher and the short answer items were scored by two raters. The raters were provided with an answer key and a grading rubric. Interrater reliability was computed, Kappa = 0.92.

Wolf's (1993) guidelines were followed for the creation of the Comprehension Test in the present study. Wolf (1993) performed a comprehensive review of the literature on language comprehension testing and devised the following guidelines for the formulation of individual comprehension test items:

1. That all items be passage dependent
2. That items test information from different levels of the passage, that is, main ideas as well as details
3. That all distracters be plausible
4. That items paraphrase information in the passage so that learners cannot match words and phrases from the item to the passage
5. That test takers not be allowed to refer to the passage while performing the comprehension tasks, thereby discouraging surface reading of the passage (p. 327).

All of the guidelines listed above where adhered to except for item number five. The Comprehension Test contained excerpts from an authentic input passage as a reference to assist participants with answering questions that were related to specific targeted subjunctive verb forms in context. However, as recommended by Wolf, the participants

were not able to refer back to the entire input passage when completing the Comprehension Test. The Comprehension Test is available in Appendix D.

Validity and Reliability of the Tests

The tests that were created for the present study (the Interpretation Subtest, the Production Subtest, and the Reading Comprehension Test) were checked for reliability and validity. To ensure that interpretations of the test scores were valid, evidence from the test content, evidence from the response process, and evidence from the internal structure of each test was collected as described below.

Evidence of test content. A panel of foreign language teaching experts who are native-speakers of Spanish and whose university teaching experience ranged from three to twenty-five years examined the three tests that were employed in the present study to determine if each test's content measured the construct that it was intended to measure. The experts were given objective statements for the instructional treatments, and they logically analyzed whether the tests were consistent with the instructional objectives of the treatments in the present study. In addition, they also examined the individual test items to evaluate whether the items measured what they were purported to measure. All three experts agreed that the content of each test as well as the individual test items measured what they were designed to measure (interpretation, production, or comprehension of the subjunctive in adjectival clauses in Spanish). The experts also found that the tests were consistent with the instructional objectives of the treatments and that they were appropriate for the level of the learner (second semester students of Spanish).

Response process. Evidence from the response process was collected through think-aloud protocols. A small group of three undergraduate students in their fourth or fifth semester of Spanish language study were asked to think-aloud while taking the tests that were created for the present study (Interpretation Subtest, Production Subtest, Comprehension Test). The fourth and fifth semester students were already familiar with the targeted grammatical form and had no problems responding correctly to the test items. Participants were audio-recorded as they thought aloud, and their statements were transcribed and examined for reflections on the verbs in the adjectival clauses and their referential meaning.

For the Interpretation Subtest, participants reflected on the subjunctive verb forms and their referential meaning in order to answer the questions correctly, as was expected. For example, one student reflected on the verb *incluir* and paid particular attention to the verb ending in order to determine if the verb was in the subjunctive or in the indicative mood, which told him whether the antecedent was certain / known, or uncertain / unknown to the speaker of the sentence:

> Number one is *incluya viajes a paises extranjeros* . . . um and the choices are . . . *tengo un trabajo que* or *busco un trabajo que* and incluir is an *–ir* verb but it's here in the subjunctive form *incluya* so I would use *busco un trabajo que* because it is unknown if it exists.

It is clear from the previous example that the student reflected on the subjunctive verb form in the adjectival clause and the referential meaning that it encodes in order to answer the question correctly.

Another student demonstrated a similar pattern for the interpretation of the indicative. For example,

> *Busco a una mujer que vende bocadillos* . . . the rule is that if the person is looking for something but doesn't know if it exists the subjunctive is used. . . . if you are looking for a woman who sells sandwiches but don't know if she exists . . . the subjunctive is used . . . um . . . it is not used if you know there is a vendor around but you just have to find her…here the verb is *vende* which is in the present {indicative} so I would choose *sí* . . . the person exists.

In the previous example, the student demonstrated that she understood the grammatical rule for using the subjunctive and the indicative in adjectival clauses. Further, she also reflected on the mood of the verb in the adjectival clause (in this case the verb was in the indicative) in order to interpret the sentence correctly.

Similarly, for the Production Subtest, participants reflected on the formation of the subjunctive verb forms and where they were needed in order to answer the test items correctly. The following is an example of a participant reflecting on why he needed to produce a subjunctive verb form to answer the question correctly:

> *Busco una persona que querer compartir un apartamento conmigo* . . . mmm . . . so the verb would be . . . mmm I would say *quiera* because *querer* is an *–er* verb and it needs to be in the subjunctive because they don't know if that person exists.

The student above showed the same type of reflective thought process when determining whether the verb in the adjectival clause should be produced in the indicative:

> *Hay un apartamento en mi barrio que tener dos dormitorios*, this person knows that it's there so indicative... *tiene*.

Thus, the think-aloud data that were collected while participants took the Interpretation and Production Subtests support the claim that these tests measure the interpretation and production of the subjunctive and/or indicative in adjectival clauses in Spanish.

For the Comprehension Test, participants reflected on specific vocabulary items to answer the text comprehension questions, as shown by a participant's response in the following example:

> *No esté alejado* de la ciudad. . . . mmm . . . I don't know what the word *alejado* means . . . but is says without water problems or without trash problems . . . so I'm guessing the correct answer is far from the city.

However, in order to answer grammar comprehension questions, participants reflected on verbs in the adjectival clause, as was expected. For example:

> Why does the author of the ad says *busco un apartamento que esté en buen estado* . . . why is the verb *estar* conjugated this way, in other words, what meaning does it express . . . well . . . it expresses that they are looking for a house . . . and it expresses that they don't know if the house exists . . . so that's why it's in the subjunctive.

The participant in the previous example reflected on the verb *esté,* which is conjugated in the present subjunctive, and its referential meaning in order to answer the question correctly.

Thus, the evidence from the response process that was collected while participants thought aloud as they took the Comprehension Test supports the claim that this test measures both text comprehension and grammar comprehension.

Internal structure. Evidence from the internal structure of the Interpretation and Production Subtests and the Comprehension Test was collected during the piloting, which took place with 18 advanced Spanish language learners in their fourth or fifth semester of

language study and with 13 intermediate-level Spanish language learners at the end of their second semester of language study. During piloting, the participants took all three versions of the Interpretation Subtest and the Production Subtest as well as the Comprehension Test, which only had one version. To ensure that test items measuring the same construct hung well together, item-to-total correlations were calculated for each construct that these tests measured. For the Interpretation Subtest, item-to-total correlations were checked for items that were intended to measure interpretation of the subjunctive and items that were intended to measure interpretation of the indicative. Similarly, for the Production Subtest, item-to-total correlations were checked for items that were intended to measure production of the subjunctive and items that were intended to measure production of the indicative. Finally, for the Comprehension Test, item-to-total correlations were checked for items that were designed to measure text comprehension and items that were designed to measure grammar comprehension.

After the first round of piloting with the advanced Spanish language students, two items on the Interpretation Subtest that measured interpretation of the indicative and two items on the Production Subtest that measured production of the subjunctive were removed because their item-to-total correlations were significantly lower than the other items that measured these same constructs. These items were reworded and/or problematic vocabulary items were removed and replaced. Similarly, the wording was changed on two items that measured grammar comprehension on the Comprehension Test after the first round of piloting. During the second round of piloting, which included the 13 intermediate-level students at the end of their second semester of language study,

the test items measuring each construct hung well together as revealed by the item-to-total correlations for each test. After the second round of piloting, the item-to-total correlation for each test item was examined by the researcher, and no single item was found to be significantly lower than the other test items measuring the same construct for any of the tests that were created for the present study.

Reliability evidence. In order to determine if all three forms of the Interpretation Subtest were equivalent, forms A, B, and C of the Interpretation Subtest were piloted with 18 advanced Spanish language learners in their fourth or fifth semester of language study and with 13 intermediate Spanish language learners at the end of their second semester of language study. Scores from the three administrations of the Interpretation Subtest were correlated to yield a coefficient of equivalence. All of the correlation coefficients that were computed reflected a strong positive relationship between the three versions of the Interpretation Subtest. The correlation between tests A and B was $r = .78$, $p < .0001$, the correlation between tests A and C was $r = .78$, $p < .0001$, and the correlation between tests B and C was $r = .95$, $p < .0001$. The correlation between tests B and C may have been higher due to a practice effect. In other words, participants may have become familiar with the instructions and format of tests B and C through exposure to Test A, which was administered first. Familiarity with the format and instructions may have helped improve participants' performance on tests B and C.

Similarly, in order to establish that all three versions of the Production Subtest were equivalent, forms A, B, and C were piloted with 18 advanced Spanish language learners in their fourth or fifth semester of language study and with 13 intermediate

Spanish language learners at the end of their second semester of language study. Scores from the three administrations of the Production Subtest were correlated to yield a coefficient of equivalence. All of the correlation coefficients that were computed reflected a strong positive relationship between the three versions of the Production Subtest. The correlation between tests A and B was $r = .81$, $p < .0001$, the correlation between tests A and C was $r = .89$, $p < .0001$, and the correlation between tests B and C was $r = .90$, $p < .0001$. Means and standard deviations of scores on the three forms of the Interpretation and Production Subtests are reported in Table 3.3. An examination of Table 3.3 reveals that all of the mean scores on the three forms of the respective tests were similar, which provides support for equivalence of the three forms.

In order to provide evidence of the reliability of the Comprehension Test, the test was administered on two separate occasions to the same individuals, an intact class of 18 advanced students of Spanish in their fourth or fifth semester of language study and an intact class of 16 intermediate students of Spanish at the end of their second semester of language study. There was a wait time of two days between the two administrations of the Comprehension Test. Participants were instructed not to ask questions or look up information on the targeted grammatical form or its use between the test administrations.

The means and standard deviations for both administrations of the Comprehension Test are reported in Table 3.4. The correlation between scores from the two administrations was calculated to yield a stability estimate of reliability (test-retest reliability), which was $r = .86$, $p < .0001$ for text comprehension, and $r = .93$, $p < .0001$ for grammar comprehension. An examination of Table 3.4 reveals that the

Comprehension Test yielded scores with similar means and standard deviations, which provides evidence for the test-retest reliability of the Comprehension Test.

Table 3.3

Means and Standard Deviations of Scores on Three Forms of the Interpretation and Production Subtests

Form of Test	Mean	*SD*
Interpretation Subtest Form A	17.42	3.24
Interpretation Subtest Form B	17.58	3.33
Interpretation Subtest Form C	17.55	3.37
Production Subtest Form A	17.06	3.86
Production Subtest Form B	17.10	4.13
Production Subtest Form C	16.97	3.66

Note. $N = 31$.

Internal consistency reliability. As further evidence of the reliability of the tests that were created for the present study (Interpretation Subtest, Production Subtest, and Comprehension Test), internal consistency reliability, or Cronbach's alpha, was computed for each construct that the tests were intended to measure. Estimates of internal consistency, as measured by Cronbach's alpha, all exceeded .70, which is the minimum acceptable value recommended by Nunnally (1978).

Table 3.4

Means and Standard Deviations of Scores on the Comprehension Test Across Two Times of Testing

Test component	Mean	*SD*
Text Comprehension Time 1	4.44	0.78
Text Comprehension Time 2	4.44	0.86
Grammar Comprehension Time 1	2.50	1.56
Grammar Comprehension Time 2	2.52	1.58

Note. $N = 34$.

Reliability estimates were .78, .78, and .77 for the construct interpretation of the subjunctive on the Interpretation Subtest, forms A, B, and C respectively. The reliability estimates were .86, .87, and .83 for the construct production of the subjunctive on the Production Subtest, forms A, B, and C respectively. For the construct interpretation of the indicative, reliability estimates were .88, .80, and .82 for the Interpretation Subtest, forms A, B, and C respectively. Finally, for the construct production of the indicative the reliability estimates were .72, .82, and .73 for the Production Subtest, versions A, B, and C respectively.

For the Comprehension Test, two constructs were measured: (a) text comprehension, and (b) grammar comprehension. Reliability estimates were .71 for text comprehension and .77 for grammar comprehension.

Note-Sheets

One to three days after completing their instructional treatments, participants were asked to read the Authentic Input Text. Five want ads for renting houses or apartments in Spanish-speaking countries comprised the Authentic Input Text. There were 15 instances of the subjunctive in the adjectival clause in the Authentic Input Text, with seven different subjunctive verb forms. They were as follows: *acepten, alquilen, desee, esté, sea, sean,* and *tenga*. *Tenga* is a very common verb in adjectival clauses in Spanish, and it appeared six times in the Authentic Input Text. *Esté* also commonly occurs in the adjectival clause in Spanish, and it appeared three times in the Authentic Input Text. All other subjunctive forms appeared only one or two times in the Authentic Input Text.

As participants read the text, they were asked to take notes on what they noticed and perceived to be important while reading. After each want ad, there was a text box for participants to record their observations. The directions for the activity were as follows:

> As you read this passage, please record any word or words that you feel are important for comprehending the text. Please do not write down every single word, just the vocabulary items and/or verb forms that are necessary for you to understand the text.

After participants read the passage and recorded their notes in the text boxes, their results were stored on Blackboard Courseware Management System. The researcher printed participants' Note-Sheets and counted the number of instances of subjunctive forms that were noted by each participant. A research assistant who is a native-speaker of Spanish double-checked each participant's Note-Sheet to ensure that the tally was correct.

Each instance of a subjunctive verb form that was noted was worth one point, and no points were deducted for misspellings. Thus, participants received one point for each subjunctive form that they noted. Since there were a total of 15 subjunctive verb forms embedded in the Authentic Input Text, the maximum note-score was 15. There was an increased likelihood that participants would note subjunctive forms that were flooded in the input passage (*tenga* and *esté*), rather than those that appeared only once (*dese*e and *acepten*). The Authentic Input Text reflected how the subjunctive in adjectival clauses is actually used by native-speakers of Spanish; therefore, the number of targeted verb forms that repeated themselves could not be controlled. As some participants may not have written down subjunctive forms that appeared more than once in the passage, the interpretation of participants' note-scores was adjusted to account for forms that repeated themselves in the passage. A note-score of 6-15 was considered high and was interpreted to indicate that participants noticed subjunctive verb forms in the adjectival clause. A note-score of 3-5 was considered average and was interpreted to indicate that participants were able to partially notice subjunctive verb forms in adjectival clauses. A note-score of 0-2 was considered low and was interpreted to indicate that participants failed to notice subjunctive verb forms in adjectival clauses in the Authentic Input Text. An example of a Note-Sheet is provided in Appendix E.

Authentic Input Text

In order to find authentic examples of the targeted grammatical form in its natural context as native-speakers of Spanish use it, the researcher consulted two web sites that post classified ads for free. These websites were www.MundoAnuncio.com and

www.adoos.com.mx. The researcher typed *busco una casa que* or *I'm looking for a house that* and *busco un apartamento que* or *I'm looking for an apartment that* in the search boxes of both web sites. Nine ads were retrieved from the web sites on December 10, 2008, and the researcher selected the five ads that contained the most subjunctive forms in the adjectival clause to include in the Authentic Input Text for the present study. The ads were edited for spelling errors, but not for vocabulary, content, or punctuation. For example, two of the ads were written in all capital letters by their authors. The researcher left two of the ads in all capitals as they were originally written in order to maintain their authenticity. Table 3.5 provides a frequency count of the seven different subjunctive verb forms that were present in the Authentic Input Text. The Authentic Input Text is a reflection of how learners are likely to encounter the targeted grammatical form in colloquial usage by native-speakers of Spanish. The Authentic Input Text is presented in Appendix F.

Posttreatment Questionnaire

The Posttreatment Questionnaire was designed as a retrospective measure of participants' awareness of the subjunctive in adjectival clauses in Spanish as it appears in authentic input. Participants completed the Posttreatment Questionnaire immediately after reading the Authentic Input Text and completing the Comprehension test. Participants were asked if they could articulate a particular grammatical form or structure that was present in the Authentic Input Text, and if they were able to do so they were also asked to give an example of such a form or structure in Spanish. It is important to note that participants in the structured input groups (+SI +VIE) and (+SI -VIE) did not receive

Table 3.5

Frequency Count of Subjunctive Verbs in the Authentic Input Text

Verb	Frequency
Acepten	1
Alquilen	2
Desee	1
Esté	3
Sea	1
Sean	1
Tenga	6
Total	15

any explicit grammar explanation of the targeted form; thus, the Posttreatment Questionnaire was able to detect whether these participants were able to learn metalinguistic information about the Spanish subjunctive inductively.

If a participant mentioned the presence of the subjunctive in the Authentic Input Text on the Posttreatment Questionnaire, then the participant was awarded .5. Further, if the participant was also able to provide a target language example of a subjunctive verb form that was present in the Authentic Input Text, then another .5 was awarded. Thus, if a participant expressed that he or she noticed the subjunctive mood and was able to

provide an example of it, then the participant received one point and demonstrated awareness at the level of noticing (Rosa & O'Neill, 1999; Rosa & Leow, 2004). If a participant was also able to state the morphological rule for using the subjunctive in adjectival clauses in Spanish (e.g., when the referent is unknown, uncertain, or hypothetical), then he or she demonstrated awareness at the level of understanding (Rosa & O'Neill, 1999; Rosa & Leow, 2004) and was awarded two points. The total number of points that could be earned on the Posttreatment Questionnaire was 3. A score of 0 - .5 indicated that participants had a low level of awareness of the subjunctive in adjectival clauses as it appeared in authentic input. A score of 1 was considered medium, and indicated that participants noticed the subjunctive in adjectival clauses in subsequent authentic input and were also able to provide an example of it, which was considered awareness at the level of noticing. A score of 2 - 3 was considered high, and indicated that participants understood the referential meaning that the verb encodes, which was considered awareness at the level of understanding. The Posttreatment Questionnaire was printed by the researcher and scored by two raters. Interrater reliability was computed, weighted Kappa = 0.97.

Further, the Posttreatment Questionnaire also asked participants how they felt about the instructional treatment package that they completed, and they were asked to compare the grammar instruction and materials that they received in the study with the instruction and materials that they normally receive in their online Spanish classes. Participants were asked to answer the questions as honestly as possible, and they were told that the answers they provided would be kept confidential and anonymous.

Participants were also asked what aspects of their instructional treatments were the most and least helpful for learning Spanish grammar online. The Posttreatment Questionnaire is presented in Appendix G.

Variables

The primary independent variable in the study was type of instruction, with five levels (processing instruction with visual input enhancement, processing instruction without visual input enhancement, structured input with visual input enhancement, structured input without visual input enhancement, and traditional instruction). The within-subjects variables were type of task with two levels (interpretation and production) and time with three levels (Pretest, Posttest 1, and Posttest). Interpretation and production of the subjunctive were measured by scores for interpreting and producing the subjunctive on three forms of the Subjunctive Knowledge test, which was created for the present study and delivered as a pretest and two posttests.

The following dependent variables were examined within the context of the present study: comprehension, noticing, and awareness. Comprehension was measured by text comprehension scores and grammar comprehension scores on a Comprehension Test that was created for this study. Noticing was measured by note-scores, which were scores that participants received from the notes that they took while reading an authentic input passage in Spanish that contained 15 subjunctive forms in the adjectival clause (an online measure). Awareness was measured by participants' scores on a Posttreatment Questionnaire, which assessed participants' level of awareness of the targeted

grammatical form as it appeared in authentic input that was received subsequent to the instructional treatments (an off-line measure).

Instructional Materials

Five web based instructional treatment packages were created for the present study that were delivered via Blackboard Courseware Management System. A separate web based instructional package was developed for each treatment group (processing instruction with visual input enhancement, processing instruction without visual input enhancement, structured input with visual input enhancement, structured input without visual input enhancement, and traditional instruction). Each web based package reflected a different technique for teaching the Spanish subjunctive in adjectival clauses to online language learners. All five treatment packages were balanced for vocabulary and number of activities. In addition, the number of tokens of the targeted verb forms, either produced or interpreted, was identical. The type of feedback given to the participants in each group was also equivalent. All of the groups received implicit feedback. In other words, participants were only told if their answers were correct or incorrect. Correct answers were not provided if participants answered incorrectly in order to avoid providing them with incidental input of the targeted verb forms. A full description of each instructional treatment package is provided in the following section.

Multimedia User Interface Design

The instructional treatment packages were delivered online using a combination of media (text, audio, and pictures), and all of the treatment packages were balanced for the amount of text, audio, and the number of pictures that they contained. Graphical

elements were identical in all five web based treatment packages. For example, the same colors, screen size, font style and size, navigation bars/buttons, and backgrounds were used in each treatment package. The only variation was for the groups that received visual input enhancement (a between-subjects variable in the present study). The processing instruction with visual input enhancement (+PI +VIE) group and the structured input with visual input enhancement (+SI +VIE) group received computerized visual input enhancement of the targeted verb forms, which was operationalized as word animation in the present study.

In a further attempt to balance the online instructional treatment packages and to increase their efficacy for web based delivery, all of the instructional materials that were developed for the present study followed Najjar's (1998) principles for educational multimedia user interface design. Najjar's principles, which are based upon research in the areas of computer science, graphics design, instructional design, and psychology, are as follows:

1. Use the medium that best communicates information
2. Use multimedia in a supportive, not a decorative, way
3. Present multimedia synchronously
4. Use elaborative media
5. Make the user interface interactive
6. Use educational multimedia with naïve and lower-aptitude learners
7. Present educational multimedia to motivated learners

8. To avoid developmental effects, use educational multimedia with adults and older children

9. Use multimedia to focus the learners' attention

10. Encourage learners to actively process information (pp. 311-332).

Najjar's first principle is to use the medium that best communicates information in a multimedia environment. Research in the field of instructional design indicates that text is better than sound for communicating verbal information when the information must be retained over long periods of time (Chan, Travers, & Van Mondfrans, 1965; Menne & Menne, 1972; Severin, 1967; Sewell & Moore, 1980). Thus, text rather than audio was used as the medium of delivery for the explicit information portion of the following instructional treatments: processing instruction with visual input enhancement (+PI +VIE), processing instruction without visual input enhancement (+PI –VIE), and traditional instruction (+TI). The structured input groups did not receive an explicit grammar explanation.

Further, Najjar (1998) indicates that multimedia should be used in a supportive rather than a decorative way. He also claims that multimedia tools are more effective when used synchronously. The results of several research studies indicate that pictures should be used in support of verbal information, and that pictures and illustrations are more effective than texts for helping learners to recall information (Lieberman & Culpepper, 1965; Nelson, Reed, & Walling, 1976; Paivio & Csapo, 1969, 1973). Najjar (1998) states, "adding closely related, supportive illustrations to textual or auditory

verbal information improves learning performance" (p. 313). Traditional FL teaching materials and instructional activities are typically designed to provide learners with practice activities in four skill areas: reading, writing, speaking, and listening (Omaggio-Hadley, 2000). Traditional instruction, as it was operationalized in the present study, contained two aural activities that elicited oral or written language production from participants. The aural activity that required a written response incorporated audio with illustrations to help participants comprehend the aural input.

Similarly, the experimental groups also had two activities that provided participants with aural TL input, one of which incorporated illustrations to assist participants with comprehension. The illustrations employed in each of the five instructional treatment packages were supportive of the auditory verbal content that was delivered in Spanish and should have assisted participants' comprehension of the TL input. All of the treatment packages contained five identical illustrations. Further, the illustrations and audio were presented simultaneously to help learners use dual coding (verbal and pictorial) more effectively (Clark & Paivio, 1991; Paivio, 1971, 1986, 1991). Research on dual coding theory supports the claim that information that is processed through both pictorial and verbal channels is more beneficial than information that is processed through a single channel (Barrow & Westley, 1959; Levin, Bender & Lesgold, 1976; Mayer & Anderson, 1991; Nugent, 1982; Paivio, 1975; Paivio & Csapo, 1973; Pezdek, Lehrer, & Simon, 1984; Stoneman & Brody, 1983; Wetstone & Friedlandler, 1974).

Another principle that Najjar (1998) sets forth for effective multimedia user interface design is interactivity. According to Najjar (1998), "an interactive user interface may allow learners to control, manipulate, and explore the material" (p. 315). Further, interactivity has been documented to have a beneficial effect on multimedia learning (Bosco, 1986; Fletcher, 1989, 1990; Stafford, 1990; Verano, 1987). In the present study, the participants in each instructional treatment group (processing instruction with visual input enhancement, processing instruction without visual input enhancement, structured input with visual input enhancement, structured input without visual input enhancement, and traditional instruction) were able to control the speed of their instructional activities. Participants were able to navigate both forwards and backwards through the treatment materials at their own pace. Further, the participants in all of the treatments groups received immediate feedback on their written answers (correct versus incorrect), and participants in the traditional instruction group received delayed feedback on their oral answers (correct versus incorrect). Due to the prohibitive costs of designing and implementing speech recognition software, the traditional instruction group received delayed feedback (one to three days later) for the single activity that required oral output. This single activity only contained five questions; thus, the difference in feedback type between the groups (immediate versus delayed) was minimized in the present study. Participants in the traditional instruction group recorded their answers for the oral activity using an audio drop box. A voice recorder was embedded on the web page that contained the oral activity, and participants were provided with instructions on how to use it. If they were using a desk top computer, an

external microphone was necessary; however, if participants were using a lap top computer with a built in microphone, then the audio recorder utilized the lap top's microphone and an external microphone was not necessary. The answers to the oral activity were stored on an external server, which the researcher accessed to listen to and assess participants' oral responses.

In addition to interactivity, Najjar (1998) proposes two principles for education multimedia user interface design that involve the characteristics of the learner. He asserts that educational multimedia is more effective for beginning-level learners and for learners with low prior knowledge because of its elaborative nature. Further, he posits that multimedia may help beginning-level learners because they are not sure where to focus their attention. Another characteristic of novice learners is that they often have trouble distinguishing which information is the most important. The learners in the present study did not have prior knowledge of the use of the subjunctive in adjectival clauses; therefore, they fit the ideal learner characteristics set forth by Najjar for using educational multimedia. In addition, Najjar states that learners who have intrinsic motivation appear to learn better, and he claims that certain instructional designs, such as using an informal style of speech (McConnell, 1978), can improve learners' intrinsic motivation. Najjar recommends using "personal pronouns, names of specific people, direct quotations, {and} vignettes of famous people" (p. 319). Therefore, the present study employed an informal style of speech (the subject pronoun *tú* versus *usted* in Spanish) and made references to famous people in the traditional and structured input activities (Bill Gates) in an attempt to increase learners' intrinsic motivation. An

additional advantage to the use of educational multimedia in the current study is that all participants chose to take their Spanish language coursework online, which may indicate that they are motivated to learn language through multimedia user interfaces.

Another characteristic to which Najjar refers is the age of the learner. He asserts that educational multimedia is more effective with older children and adults than with younger children because younger children process information at the perceptual rather than at the semantic level. Also, younger learners develop the ability to process auditory information before visual information (Carterette & Jones, 1967; Stevenson & Siegel, 1969), but as young learners mature, they improve in their ability to process and retain information at the semantic level (Craik & Lockhart, 1972; Craik & Tulving, 1975). To avoid these developmental effects, Najjar recommends using educational multimedia with older learners. The participants in the present study were all adults; thus, developmental effects were not a concern.

For the characteristics of the learning task, Najjar advocates directing learners' attention to the relevant information through multimedia to improve learning. This principle is consistent with Sharwood Smith's (1981, 1991) Input Enhancement hypothesis in the field of SLA. In the present study, animation of targeted verb forms was used to attract learners' attention in a web based environment. Hannifin and Peck (1988) assert that the contrast between an animated figure and a static background increases the perceptual salience of the animated object for the learner, and Rieber (1990) asserts that animation serves as an attention-gaining device through "special screen washes, moving symbols or characters, and animated prompts" (p. 77). As visual input

enhancement (VIE) is a between-subjects variable in the present study, only the groups that received VIE (processing instruction with visual input enhancement and structured input with visual input enhancement) were given instructional treatments that contained word animation.

Najjar also recommends encouraging learners to actively process information, which is another principle of multimedia user interface design that pertains to the characteristics of the learning task. According to Najjar (1998), "Learning appears to improve when the learning task encourages the learner to actively process the information" (p. 320). Research on instructional materials that "force" learners to process information reveals that this condition leads to improved learning performance (Auble & Franks, 1978; Bock, 1978; Hunt & Elliot, 1980, Kolers, 1979; Sherman, 1976). This principle is consistent with PI; more specifically, the structured input activities that comprise PI are designed in such a way as to force learners to process targeted forms correctly in order to extract meaning from sentences or utterances. All of the treatment materials in the experimental groups (processing instruction with visual input enhancement, processing instruction without visual input enhancement, structured input with visual input enhancement, and structured input without visual input enhancement) contained structured input activities that forced learners to process the targeted grammatical form in order to answer questions correctly. The participants in the comparison group (traditional instruction), however, were not forced to process the targeted grammatical form through the instructional activities. Rather than process forms, these participants were forced to produce the targeted grammatical form.

Alpha/Usability Testing of Instructional Materials

Once the instructional materials were developed for the web, alpha (or usability) testing was conducted to test the user interface of each instructional package and to determine the overall usability of the web based instructional treatment packages. According to Nielsen (1993) usability has five main components: Learnability, Efficiency, Memorability, Errors, and Satisfaction. In order to determine the usability of each web based treatment package, a set of usability measures was developed to determine users' initial ease of learning, rate of errors, and satisfaction. Learnability is defined as the amount of time it takes users to reach a specific level of proficiency. To assess the learnability of the web based instructional materials, novice users were given five tasks that ranged from easy to difficult to complete. The amount of time that a user took to complete each task on his or her first attempt to use the materials was recorded. Five second semester university-level Spanish language learners who use computers, the Internet, and Blackboard CMS frequently were asked to take part in the usability study (five per instructional treatment). Nielsen and Landauer (1993) assert that five users are able to detect 85 percent of the usability problems that are present, and testing more users only results in diminishing returns. The researcher worked with one student at a time in the FL lab at the researcher's university to conduct the usability tests.

The results of the learnability study revealed that students did not experience any difficulties initially completing the five tasks for each instructional treatment package. The easiest task in each of the instructional treatment packages, opening the activity on Blackboard with a password, only took users between 19 to 24 seconds to complete. The

most difficult task, using the audio drop box, which only applied to Grammar Package 1, took students between 70 to 75 seconds to complete. Table 3.6 provides an overview of the learnability assessment for each of the five instructional treatment packages. Further, an examination of the standard deviations in Table 3.6 reveals that none of the tasks had a standard deviation of greater than 5 seconds, which supports the conclusion that learners were quickly able to reach a high level of proficiency using the web based instructional materials.

Efficiency is defined as an expert user's "steady-state level of performance" (Nielsen, 1993). Since the instructional materials were new to all of the participants in the present study and the treatment packages were designed for a single one-time use, it was not necessary to measure efficiency. Similarly, memorability, which is the ability to remember how to use the instructional materials based on previous learning experiences with them (Nielsen, 1993), was not a concern of the present study since participants only used the treatment materials once.

Errors are defined as actions that do not accomplish a desired purpose, and they are measured by counting the number of incorrect actions that users make while attempting to perform a specified task (Nielsen, 1993). Another way to view errors is the number of deviant clicks that users make while they perform a task. In order to compute an error score for each treatment package, the number of clicks to perform five separate tasks was computed and compared with the actual number of clicks that it takes users to perform these tasks. The error scores for five tasks in each of the web based instructional treatment packages are displayed in Table 3.7.

Table 3.6

Learnability Assessment for Each Task by Instructional Treatment Package

Package	Mean (seconds)	SD (seconds)	Min. (seconds)	Max. (seconds)
Package 1 (+TI)				
1. Open the Grammar Package with password	21.30	2.14	18.99	24.43
2. Open the link for the grammar explanation	35.13	1.44	33.80	37.14
3. Open the link for 4.1 and select a response	66.06	4.40	59.19	70.51
4. Open the link for 6.8 and type a response	29.54	1.54	27.12	31.07
5. Use the audio drop box to record an oral response to activity 10.1	72.25	2.09	70.04	74.59
Package 2 (+PI -VIE)				
1. Open the Grammar Package with password	19.82	1.40	18.31	21.97
2. Open the link for processing strategies	45.93	2.22	42.77	48.34
3. Open the link for 2.6 and select a response	48.57	2.10	46.28	51.53
4. Open the link for 5.4 and type a response	43.55	3.96	38.58	49.36
5. Read the instructions for activity 8 and put the sentences in order	70.38	1.97	68.17	73.36
Package 3 (+SI -VIE)				
1. Open the Grammar Package with password	19.91	0.96	18.84	21.12
2. Click on response for activity 1.3	37.68	4.21	33.30	44.58
3. Open the link for 2.4 and select a response	54.10	4.96	46.47	59.71
4. Open the link for 5.5 and select in a response	52.48	2.31	49.36	55.71
5. Read the instructions for activity 8 and put the sentences in order	66.04	2.52	62.36	68.76

Package	Mean (seconds)	SD (seconds)	Min. (seconds)	Max. (seconds)
Package 4 (+PI +VIE)				
1. Open the Grammar Package with password	21.14	1.60	19.85	23.80
2. Open the link for processing strategies	40.23	3.71	34.65	44.82
3. Open the link for 2.6 and select a response	46.75	2.48	43.43	49.72
4. Open the link for activity 6.4 and respond	49.03	2.83	45.94	52.48
5. Read the instructions for activity 10.5 and type a response (word animation)	44.57	2.49	41.38	47.69
Package 5 (+SI +VIE)				
1. Open the Grammar Package with password	19.79	1.02	18.81	21.06
2. Click on response for activity 1.3	45.71	4.99	41.05	52.18
3. Open up the link for 2.4 and select a response	48.78	2.71	45.86	52.02
4. Complete 7.1 and rank the sentence	50.40	3.12	47.11	54.72
5. Read the instructions for activity 10.5 and type a response (word animation)	43.97	4.34	37.39	49.09

Note. There were 5 users per instructional treatment package.

An examination of Table 3.7 reveals that the error rate for each task was low. Thus, students did not make many incorrect actions, as measured by deviant clicks, while completing five tasks in each of the web based instructional treatment packages. The students who took part in the usability study were representative of the actual participants in the research study in that they were accustomed to using Blackboard CMS on a daily basis to access course materials and complete assignments.

Table 3.7

Error Score for Each Task by Instructional Treatment Package

Package	Mean clicks	Expected clicks
Package 1 (+TI)		
1. Open the Grammar Package with password	4.0	4.0
2. Open the link for the grammar explanation	6.2	6.0
3. Open the link for 4.1 and select a response	5.2	5.0
4. Open the link for 6.8 and type a response	5.0	5.0
5. Use the audio drop box to record an oral response to activity 10.1	8.6	8.0
Package 2 (+PI -VIE)		
1. Open the Grammar Package with password	4.2	4.0
2. Open the link for processing strategies	6.0	6.0
3. Open the link for 2.6 and select a response	5.2	5.0
4. Open the link for 5.4 and type a response	5.2	5.0
5. Read the instructions for activity 8 and put the sentences in order	8.2	7.0
Package 3 (+SI -VIE)		
1. Open the Grammar Package with password	4.0	4.0
2. Click on response for activity 1.3	3.0	3.0
3. Open the link for 2.4 and select a response	5.2	5.0
4 Open the link for 5.5 and select in a response	5.0	5.0
5. Read the instructions for activity 8 and put the sentences in order	7.8	7.0

Package	Mean clicks	Expected clicks
Package 4 (+PI +VIE)		
1. Open the Grammar Package with password	4.4	4.0
2. Open the link for processing strategies	6.2	6.0
3. Open the link for 2.6 and select a response	5.0	5.0
4. Open the link for activity 6.4 and type in a response	5.4	5.0
5. Read the instructions for activity 10.5 and type a response (word animation)	5.2	5.0
Package 5 (+SI +VIE)		
1. Open the Grammar Package with password	4.0	4.0
2. Click on response for activity 1.3	3.2	3.0
3. Open up the link for 2.4 and select a response	5.0	5.0
4. Complete 7.1 and rank the sentence	5.4	5.0
5. Read the instructions for activity 10.5 and type a response (word animation)	5.2	5.0

Note. There were 5 users per instructional treatment package.

Subjective satisfaction, or how well users liked the web based materials, was determined by asking participants in the pilot tests for their subjective opinion about the materials. Nielsen (1993) recommends averaging the replies of multiple users to obtain an objective measure of the "pleasantness" of the materials. A pleasant user interface design is sought in order to increase learners' motivation and also to increase the likelihood that learners will complete the web based instructional materials. Ten participants who took part in the pilot tests completed the Satisfaction Survey. The

Satisfaction Survey asked participants to rank five statements on a scale of 1-5 with 1 being *strongly agree* and 5 being *strongly disagree.*

The results of the satisfaction survey indicate that participants enjoyed completing the web based activities in Packages 2-4 (processing instruction without visual input enhancement, structured input without visual input enhancement, processing instruction with visual input enhancement, and structured input with visual input enhancement respectively). However, participants in the pilot study indicated that they did not enjoy the output-based activities that comprised Package 1 (traditional instruction) because they were too similar to the instructional materials that they complete on Quia, the website that hosts the online workbook and lab manual activities for the face-to-face Spanish courses at participants' institutions. The students in the pilot study who completed Package 1 (traditional instruction) were told that the grammar activities in Package 1 were based on their regular course materials. Since students who piloted the materials perceived their regular course materials as being difficult and frustrating, this negative opinion likely influenced how they perceived the web based materials that they were testing. Due to participants' negative responses on the satisfaction survey, the decision was made not to tell study participants in the traditional instruction group that their materials were based upon their regular course materials; rather, all participants were told that they would be receiving a novel instructional technique for teaching complex Spanish grammar. The results of the satisfaction survey are presented in Table 3.8.

Table 3.8

Results of the Satisfaction Survey by Instructional Treatment Package

Package	Average score
Package 1 (+TI)	
The directions were clear and easy to follow	1.0
I learned something from completing the activity package	4.0
I preferred these activities to my regular classroom activities	4.5
It was easy to complete the web based grammar activities	3.5
I enjoyed learning Spanish grammar using the materials	4.0
Package 2 (+PI -VIE)	
The directions were clear and easy to follow	1.0
I learned something from completing the activity package	1.0
I preferred these activities to my regular classroom activities	1.0
It was easy to complete the web based grammar activities	1.5
I enjoyed learning Spanish grammar using the materials	2.0
Package 3 (+SI -VIE)	
The directions were clear and easy to follow	1.5
I learned something from completing the activity package	1.0
I preferred these activities to my regular classroom activities	1.0
It was easy to complete the web based grammar activities	1.5
I enjoyed learning Spanish grammar using the materials	1.5

Package	Average score
Package 4 (+PI +VIE)	
The directions were clear and easy to follow	1.5
I learned something from completing the activity package	1.5
I preferred these activities to my regular classroom activities	1.0
It was easy to complete the web based grammar activities	1.5
I enjoyed learning Spanish grammar using the materials	2.0
Package 5 (+SI +VIE)	
The directions were clear and easy to follow	1.5
I learned something from completing the activity package	1.0
I preferred these activities to my regular classroom activities	2.0
It was easy to complete the web based grammar activities	1.0
I enjoyed learning Spanish grammar using the materials	1.5

Note. There were 2 users per instructional treatment package.

The satisfaction survey also revealed that participants who completed instructional treatment Packages 2-4 believed that the directions were clear and easy to follow. Participants who received Packages 2-4 also indicated that they learned something from the instructional materials, that the materials were easy to complete online, and that they preferred this type of instruction to their regular classroom instruction. Further, participants who completed the Satisfaction Survey had the opportunity to provide additional comments about their experiences completing the web

based instructional treatment packages. One participant who completed instructional treatment Package 4 (processing instruction with visual input enhancement) wrote, "Easy to use. Felt like I was comprehending instead of memorizing grammar and regurgitating it." Another participant who completed instructional treatment Package 3 (structured input without visual input enhancement) wrote, "This program was extremely useful. I believe it should be used in regular classrooms! Very helpful in building my knowledge of Spanish." The Satisfaction Survey is presented in Appendix H.

In summary, no problems with usability emerged during alpha testing of the web based instructional materials. Participants who took part in the alpha tests had no trouble using Blackboard CMS to access the materials, and similarly they had no difficulty opening the links to the grammar explanations, audio files, and/or word animation files depending upon the instructional treatment package. In addition, although participants that worked with Package 1 (traditional instruction) at first seemed hesitant to use the audio drop box since this technology was completely new to them, they had no trouble following the instructions and recording their responses using the audio recorder that was embedded on a web page that was delivered via Blackboard. Further, it was expected that the materials in Package 1 would not necessarily be pleasing to students since these materials represented traditional instruction, which places a heavy emphasis on output-based production and mechanical drill activities, which learners perceive as tedious. Conversely, the students who completed instructional treatment Packages 2-4 found the materials to be pleasing and easy to use.

Beta and Pilot Testing of the Web Based Instructional Materials

Beta tests were conducted to test the content of the treatment packages, and pilot tests were conducted to test the flow of the web based instructional packages. For the beta test, two representative second semester Spanish language students and one representative subject matter expert (SME), a Spanish instructor who is a native-speaker of Spanish, were invited to give their opinions on the content of the five web based instructional treatment packages. The researcher conducted the beta test with each participant individually, and participants were stopped after they completed each screen (in each of the five treatments) in order for the researcher to ask their opinions about the content. The researcher took notes as the participants made comments. After the beta tests were conducted for each participant, the comments were consolidated and examined for trends.

The beta test with the SME uncovered two grammar/spelling mistakes in the Spanish language content that had to be corrected. The beta tests with the student participants, however, revealed many more areas that needed attention and revision. The most serious problem was that students did not remember verbs and vocabulary words to which they were exposed in previous Spanish language coursework. Their lack of comprehension of the meaning of basic verbs and vocabulary items negatively impacted their ability to answer questions regarding the targeted verb forms in the instructional treatment materials. The following Spanish verbs and vocabulary items were problematic for participants in the first round of beta tests:

Verbs: buscar, cargar, cambiar, costar, contribuir, descansar, encontrar, enseñar, ofrecer, prestar

Vocabulary items: alguien, bocadillos, esquina, extranjero, nadie, piscina, peso, pluma, vecinos, vista

After the first round of beta tests, the researcher created a vocabulary practice activity that students had to complete with 80% accuracy or higher prior to beginning their grammar packages. Further, the researcher revised the web based instructional materials to provide English translations of the most problematic vocabulary items and verbs that are listed above. The Vocabulary Practice Activity is available in Appendix I.

Another problem area that was revealed in the first round of the beta tests was the wording in the explicit grammar explanation that was provided to participants in the traditional instruction and processing instruction groups. Several of the participants in the beta tests had trouble understanding the terminology *opposite ending* when referring to the formation of the present subjunctive mood. This wording was removed from the instructional materials, and the terminology used in the explicit grammar explanations was simplified.

The last major problem uncovered by the beta tests was with the flow of the instructional activities. Some of the participants did not notice when the instructions changed from one activity to another. The researcher revised the materials adding the following statement in between activities:

NOTE: THIS ACTIVITY HAS A NEW SET OF DIRECTIONS!

The previous statement alerted students to pay attention to the new set of instructions.

Once the instructional materials were revised, another round of beta tests was conducted with five university students at the end of their second semester of Spanish language study. One participant was assigned to each of the instructional treatment packages for the second round of beta tests. The addition of the vocabulary practice activity, the inclusion of English translations for problematic vocabulary items and verb forms, the revision of the wording in the explicit grammar explanations, and the additional directions prompting students to pay attention to the directions when the activities changed all appeared to be effective. The second round of beta tests did not reveal any significant problems with the web based instructional materials.

The pilot tests were conducted after the alpha and beta tests were completed with ten participants in the language lab at the researcher's institution. The participants were university students at the end of their second semester of Spanish language study who use computers and the Internet frequently. The participants in the pilot test were representative of the actual participants in the study. Two participants were assigned to each treatment package for the pilot tests. The participants were not interrupted as they completed their web based instructional packages in order for the researcher to determine the amount of time it takes for a learner to complete a given treatment. The time that each participant took was recorded on Blackboard. Table 3.9 provides a description of the time that participants took to complete the instructional treatment packages. Most participants were able to complete their grammar package within one and one half hours. Only one participant who completed Package 4 (processing instruction with visual

Table 3.9

Time Needed to Complete the Instructional Treatment Packages

Package	Time on task
Package 1 (+TI)	
Participant 1	1 hour, 21 minutes, 25 seconds
Participant 2	1 hour, 2 minutes, 32 seconds
Average	1 hour, 12 minutes, 59 seconds
Package 2 (+PI -VIE)	
Participant 3	1 hour, 23 minutes, 38 seconds
Participant 4	1 hour, 12 minutes, 39 seconds
Average	1 hour, 18 minutes, 9 seconds
Package 3 (+SI -VIE)	
Participant 5	1 hour, 0 minutes, 19 seconds
Participant 6	1 hour, 21 minutes, 50 seconds
Average	1 hour, 11 minutes, 5 seconds
Package 4 (+PI +VIE)	
Participant 7	1 hour, 45 minutes, 44 seconds
Participant 8	1 hour, 0 minutes, 21 seconds
Average	1 hour, 23 minutes, 3 seconds
Package 5 (+SI +VIE)	
Participant 9	1 hour, 7 minutes, 25 seconds
Participant 10	1 hour, 18 minutes, 22 seconds
Average	1 hour, 12 minutes, 54 seconds

Note. $N = 10$ participants in the pilot test.

input enhancement) took over that amount of time. The researcher observed this participant taking copious amounts of notes while he completed his grammar activity package, which slowed down his progress considerably. Interestingly, of the ten participants in the pilot study, only one took notes as he went through the materials. Further, the pilot study revealed that the inclusion of an explicit grammar explanation in Package 1 (traditional instruction), Package 2 (processing instruction without visual input enhancement), and Package 4 (processing instruction with visual input enhancement) did not appear to increase the amount of time that participants would need to complete the materials, as one participant who completed Package 1 and one participant who completed Package 4 were able to do so in slightly over one hour. It appeared that individual differences between participants played a role in the amount of time that it took to complete an instructional treatment package. The researcher checked the work of all of the participants in the pilot study to ensure that they did not approach the materials in a cursory way. All of the participants in the pilot study scored 80% or higher, which indicated that they did put forth effort while completing the web based instructional materials during the pilot test.

It was determined from the pilot test that participants in the research study would need at least one hour to complete their web based instructional treatment packages, but that some students who work more slowly would need more time. Thus, participants in the research study were given up to two hours to complete their instructional treatment packages online.

In addition, the ten participants who took part in the piloting of the instructional treatment materials were also asked to pilot a reading activity (note-taking activity with the Authentic Input Text), the Comprehension Test, and the Posttreatment Questionnaire online. Participants took between 10 to 20 minutes to complete each of the aforementioned activities online. Given these results, participants in the research study were allowed up to 30 minutes to complete each of these activities online.

Traditional Instruction

The traditional instruction treatment activities were based on the activities found in Vista Higher Learning's *En Línea 2.0* Spanish distance learning course as well as the accompanying loose leaf companion text. The traditional instruction treatment package began with an explicit explanation of the targeted grammatical form and its rules of use in Spanish. In addition, several target language examples followed the grammar explanation. With traditional instruction, the full paradigm of present subjunctive forms was presented to participants, who were required to produce all of the subjunctive forms immediately following the grammar explanation through output-based practice activities. The Traditional Instruction Explicit Grammar Explanation is presented in Appendices J and K. Following the grammar explanation, the traditional instruction treatment package contained ten output-based practice activities. The activity types were as follows: mechanical drill, transformational drill, meaningful drill, and open-ended communicative. The mechanical and transformational drills had only one possible correct answer, and learners did not have to comprehend the meaning of the input sentences in these activities in order to respond correctly. With the meaningful drill activities, learners had to attach

meaning to both the stimulus and the response, but the intended meaning of the response was already known before the question was asked. It is important to note that authentic communication does not take place with meaningful drills. Further, there was only one possible correct answer for the meaningful drill activities. Conversely, the open-ended communicative practice activities required learners to comprehend both the stimulus and the response, and the intended meaning of the learner was not known in advance. See Table 1.1 for Paulston's (1972) taxonomy of Foreign Language Practice Types and Their Sequential Ordering.

Of the ten activities in the traditional instruction web based treatment package, there were two mechanical drill activities, two transformational drill activities, four meaningful drill activities, and two open-ended communicative activities. Thus, forty percent of the activities focused on form and not meaning, and sixty percent of the activities focused on meaning and form, which is consistent with the amount and type of activities that are employed to practice a new grammatical structure in the *En Línea* course materials. Past studies that compared PI with traditional instruction (Benati, 2001, 2005; Cadierno, 1995;Cheng, 1995, 2002; VanPatten & Cadierno, 1993a, 1993b; VanPatten & Wong, 2004) operationalized traditional instruction with fifty percent of the activities focusing on form only, and fifty percent focusing on form and meaning. VanPatten (2002) asserts that traditional instruction as it has been operationalized in the PI strand of research under his direction is ubiquitous in both classrooms and texts in the United States.

Two of the activities in the traditional instruction web based treatment package were aural. One of the aural activities required a written response and the other required an oral response from participants. The aural activities included one transformational drill activity and one open-ended communicative activity. The aural transformational drill contained five illustrations to facilitate participants' comprehension. The Traditional Instruction Treatment Package is presented in Appendix L.

Processing Instruction

Processing instruction was operationalized according to the guidelines set forth by J.F. Lee and VanPatten (2003), which includes an explicit explanation of grammar that is nonparadigmatic. In other words, only one grammar point should be presented at a time in order not to overload learners' abilities to process information. Therefore, while traditional instruction presented the entire paradigm of the present subjunctive verb forms, the PI materials in the present study only focused on the third person singular and plural forms. The Processing Instruction Explicit Grammar Explanation is presented in Appendices M and N.

After the PI participants read an explicit grammar explanation, they received information on processing strategies to help them master the subjunctive in adjectival clauses. The information on processing strategies included the faulty processing strategies that Spanish language learners are likely to engage in when reading input sentences that contain the subjunctive in adjectival clauses. In addition, participants were presented with more optimal strategies for processing the subjunctive. When learning the subjunctive in adjectival clauses in Spanish, learners are likely to have difficulty with the

subjunctive due to the following principles in VanPatten's (1993, 1996, 2002, 2004) model of input processing:

> Principle 1. The Primacy of Meaning Principle. Learners process input for meaning before they process it for form.
>
> Principle 1f. The Sentence Location Principle. Learners tend to process items in sentence initial position before those in final position and those in medial position (p. 14).

According to VanPatten's Primacy of Meaning Principle, learners will focus on the meaning of their linguistic input before they focus on grammatical form. The subjunctive is a form that is particularly difficult for students to notice because the present subjunctive endings are very similar to the present indicative verb endings. For example, the third person singular indicative form of the verb *hablar (to speak)* is *habla* while the third person singular subjunctive form is *hable.* This subtle difference in form (a vowel switch), which is often overlooked by L2 learners of Spanish, denotes an entirely different grammatical mood. Participants in the PI group had the Primacy of Meaning principle explained to them, and they were given alternate strategies to overcome this faulty processing strategy. For example, they were directed to pay particular attention to the verb endings in order to determine the grammatical mood of the TL input that they receive.

In addition to the Primacy of Meaning principle, the present study also focused on the Sentence Location principle, which states that learners process information in the sentence initial and sentence final position before they process information in the sentence medial position. The targeted grammatical form in the present study always

occurs in the sentence medial position in natural speech. When the subjunctive occurs in an adjectival clause, it is the subordinate clause of a sentence or utterance, which causes the subjunctive form to appear in the middle of the sentence. For example, in the following Spanish sentence, the subjunctive form *pueda* occurs in the sentence medial position:

> *Busco a alguien que pueda limpiar la casa.*
> I'm looking for someone who can clean the house.

Participants were made aware of their tendency to overlook items in the sentence medial position. They were also directed to pay attention to the verb form in the middle of sentences in order to extract meaning (whether the referent is unknown / hypothetical or known / certain), which is a more optimal processing strategy. The Information on Processing Strategies is presented in Appendix O.

Structured input activities are the final component of PI. J.F. Lee and VanPatten (2003) describe the guidelines for developing structured input activities in detail, and Wong (2004) stresses that the guidelines must be followed explicitly in order to create authentic structured input activities. Research on the components of PI (Benati, 2004b; Fernandez, 2008; VanPatten & Oikkenon, 1996) indicates that structured input is the most important feature of PI. Wong (2004) also cautions that not every activity that is input-based is automatically a structured input activity. A review of the literature on PI revealed that flawed structured input activities yielded results that were not comparable to the PI strand (L. Allen, 2000; DeKeyser & Sokalski, 1996; Erlam, 2003; Nagata 1998; Salaberry, 1997). The present study maintained strict treatment fidelity to PI by carefully

following the published guidelines for creating structured input activities (J.F. Lee & VanPatten, 1995, 2003). J.F. Lee and VanPatten (2003) present the following six guidelines for developing structured input activities:

1. Present one thing at a time
2. Keep meaning in focus
3. Move from sentences to connected discourse
4. Use both oral and written input
5. Have the learner do something with the input
6. Keep the learner's processing strategies in mind (p. 154).

Because L2 learners are limited capacity processors (McLaughlin, 1987; McLaughlin, Rossman, & McLeod, 1983), J.F. Lee and VanPatten (2003) assert that input must be delivered to learners in an efficient way. They claim that by presenting learners with one grammatical form or function at a time, they are more likely to notice and process the targeted feature.

Guideline two is a general recommendation to keep the communicative intent of sentences and utterances as the central focus of structured input activities. Wong (2004) proposes that learners must understand the propositional content of the input that they receive in order to successfully complete structured input tasks and activities. Further, she cautions that L2 learners should not be able to complete structured input tasks and activities without comprehending the referential meaning of their input. This guideline directly opposes the mechanical drill activities that are prevalent in the audiolingual, PPP, and traditional output-based instructional methods. With mechanical drills, L2 learners

need not comprehend the referential meaning of their linguistic input. Conversely, with PI, learners' comprehension of the communicative intent of their input is paramount.

J.F. Lee and VanPatten (2003) recommend that structured input activities begin with short, sentential level input, and then gradually move towards longer passages of connected discourse. They assert that longer passages may initially overwhelm learners' processing capabilities, which would likely result in them skipping over the targeted grammatical form in favor of processing content words. By presenting L2 learners initially with sentential level input (which is easier to process), they are more likely to pay attention to the targeted linguistic feature.

The fourth guideline recommends that L2 learners should receive both written and spoken input. J.F. Lee and VanPatten (2003) suggest that structured input activities can be either written, spoken, or a combination of the two. They state that the principal reason for providing learners with both types of input is to make adjustments for individual differences in language learning as some learners benefit more from visual cues while others prefer to learn by listening.

Perhaps one of the most innovative features of structured input activities pertains to guideline five. J.F. Lee and VanPatten (2003) assert that L2 learners should not be passive recipients of TL input, which is not sufficient for acquisition to take place. Rather, L2 learners should become actively involved with their input to increase the likelihood that they will process the targeted grammatical form(s). The authors suggest the following activities to engage learners with their linguistic input: "saying Yes/No, agreeing/disagreeing, checking off things that apply, matching, ordering, and so on" (J.F.

Lee and VanPatten, 2003, p. 158). Although learners actively attend to their input during structured input activities, it is important to note that they do not produce (either in speaking or writing) the targeted grammatical form. Learners may produce output during a structured input activity, more specifically during "supplying information" activities; however, their production involves alternative features rather than the targeted grammatical form. Figure 3.3 proves a visual depiction of the major types of structured input activities.

Although structured input activities prohibit students from producing the targeted grammatical form, VanPatten (2004) is not opposed to learners producing other types of output. However, the main goal of PI is to facilitate L2 learners' processing of targeted grammatical forms upon their first exposure to them, which is the initial step in the acquisition process. Thus, access and production procedures do not figure into this instructional technique.

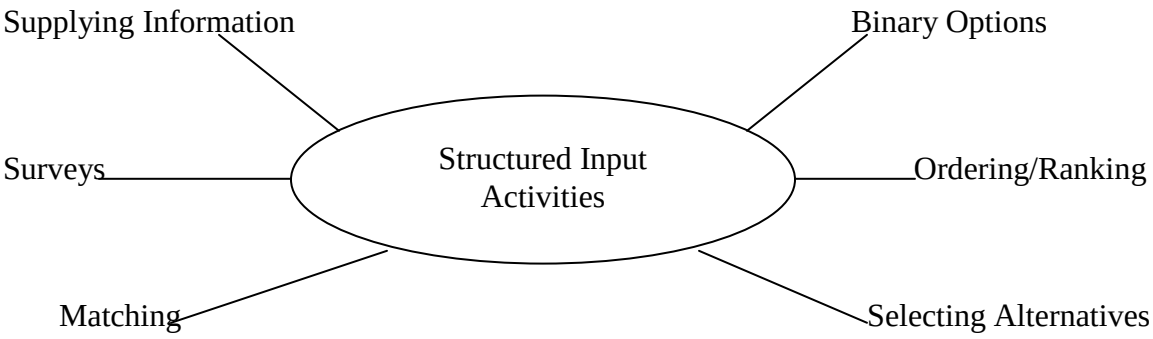

Figure 3.3. Major Types of Structured Input Activities (from J.F. Lee & VanPatten, 2003)

The final guideline for developing structured input activities is to keep learners' processing strategies in mind. In other words, VanPatten's principles of input processing (1993, 1996, 2002, 2004) need to be carefully examined before developing structured input activities. Faulty processing strategies need to be identified, and activities that push learners toward more optimal processing strategies should be created (Wong, 2004). For example, for the Lexical Preference Principle (which states that learners will tend to rely on lexical items rather than on grammatical form when both encode the same meaning), all structured input activities that are created should attempt to remove redundant lexical items in order to prompt learners to glean the communicative intent of the sentence or utterance from the targeted grammatical form rather than from lexical items within the sentence or utterance. The previous processing strategy and all of the others were taken into account when developing the structured input activities for the present study.

Further, J.F. Lee and VanPatten (2003) describe two types of structured input activities, referential and affective. In referential activities, learners must extract the meaning of the sentence or utterance from the targeted grammatical form. Also, with referential activities there is a right or a wrong answer, which allows the teacher or researcher to determine whether or not learners are attending to the targeted grammatical form for the meaning that it encodes. The guidelines also suggest having learners begin with two or three referential structured input activities and following these with affective structured input activities. Affective activities are those in which learners communicate a belief, an opinion, or an affective response as they engage in processing real world information (J.F. Lee & VanPatten, 2003). The present study employed a total of ten

structured input activities, five referential and five affective. Two of the referential activities were aural, one of which contained five illustrations to facilitate comprehension. The Processing Instruction Treatment Package is shown in Appendix P.

Structured Input

The web based instructional treatment package for the structured input groups did not contain any explicit grammar explanation or any information on processing strategies; otherwise, it was identical to the Processing Instruction Treatment Package. The treatment package for structured input only contained ten structured input activities (five referential and five affective), which were the same activities in the PI package. Two of the referential activities were delivered orally, and one of them contained illustrations to assist comprehension. The Structured Input Treatment Package is presented in Appendix Q.

Visual Input Enhancement

Visual input enhancement was operationalized as word animation of the targeted grammatical forms in the present study. Two of the groups received visual input enhancement: (a) processing instruction with visual input enhancement (+PI +VIE), and (b) structured input with visual input enhancement (+SI +VIE). The treatment packages for these two groups contained ten identical structured input activities: five referential and five affective activities. The five affective activities for these two groups contained visually enhanced input. In the present study, computerized visual input enhancement was operationalized as movement of the targeted verb forms, which grew larger and then smaller though a series of small pulses in order to capture participants' attention as they

worked online. The referential activities were not visually enhanced because participants had to choose a correct response (subjunctive or indicative verb form) in these activities, and visual enhancement of subjunctive forms might have prompted participants to select the enhanced forms even when they were not correct. With the affective structured input activities, answers were not right or wrong. The purpose of the affective structured input activities was for learners to communicate their beliefs, opinions, or other types of affective responses as they processed real world information (J.F. Lee & VanPatten, 2003). Thus, visual enhancement of the targeted grammatical forms through movement should have increased their perceptual salience and helped participants to notice the subjunctive forms in the input sentences of the affective structured input activities. Once targeted forms were noticed, the structured input activities in which the animations were embedded were designed to help learners correctly process these forms. Thus, computerized visual input enhancement was a good fit for the affective structured input activities.

The same type of animation was used in all five affective structured input activities in order to maintain continuity for the two groups that received input enhancement. Although M. Allen (2003) suggests that stimulus novelty is short-lived, if other types of animation were used to attract participants' attention within the context of the same study, the results could have been confounded. This is especially true given that some types of animation, such as flash animation, could have a negative effect as learners must suppress the distraction of flash before they can process the other information that is on the screen (Hong, Thong, & Tam, 2004).

Each animated verb form had a further enhancement on the verb ending, which is the most difficult feature for Spanish language learners to notice (J.F. Lee, 1987; J.F. Lee & Rodríguez, 1997). Each subjunctive ending appeared in a different color than the rest of the word for increased visual salience. Finally, the animations in the five affective structured input activities were presented to learners sequentially rather than simultaneously because the simultaneous presentation of animated objects could have overwhelmed participants and detracted from the static information that was on the page (Sutcliffe & Namoune, 2007). Therefore, each sentence that contained an animated verb form was delivered to participants one at a time. Sentences that contained word animation were presented as external links in the treatment packages that contained visual input enhancement. When participants clicked on the link, the sentence that contained word animation opened in a new window on participants' screens. An Example of Computerized Visual Input Enhancement is presented in Appendix R. In addition, the Processing Instruction with Visual Input Enhancement Treatment Package is presented in Appendix S, and the Structured Input with Visual Input Enhancement Treatment Package is presented in Appendix T.

Data Collection Procedures

During Day1 of the experiment, students from three separate online classes were asked to participate in the study and to sign an informed consent form. At that time, it was explained that completing all of the study activities would take approximately three and one half hours of their time. Students were informed that they did not have to participate in the study and that their course grades would not be affected if they chose

not to participate. Also, students who signed an informed consent form and agreed to participate in the study were informed that they could drop out of the study at any time without any penalties to their course grade. Students from Class 1 and Class 2 who participated in the study and completed all of the study activities received ten bonus points added to their lowest test grade and three bonus points added to their final average in their Spanish class. Students in Class 3 received two bonus points added to their final average and also had the opportunity to enter a raffle for cash prizes ($200 first prize, $100 second prize, and $50 third prize). Students who completed some of the study activities, but who dropped out of the study before finishing it, received ten bonus points added to their lowest test score. Students who did not wish to participate but who wanted to earn the bonus points were given the option of completing an alternative pencil-and-paper instructional activity package with reading and writing activities that focused on the targeted grammatical form. The optional materials also required three and one half hours of students' time. None of the students in the three classes who were invited to participate in the study opted for the alternative activity.

Once the informed consent documents were signed, participants were asked to fill out the Pretreatment Questionnaire. In order to maintain confidentiality, participants were assigned an identification number that was used on all of their study activities from that point on. In addition, informed consent forms were stored in a locked filing cabinet. Participants completed all other study activities online. The Informed Consent Form is presented in Appendix A.

Participants were required to take the Subjunctive Knowledge Test as pretest, which was comprised of an Interpretation Subtest and a Production Subtest, the same day or the day after signing the informed consent form. After completing the pretest, participants were randomly assigned to groups. However, low achieving students were identified based on their test average in their Spanish class, and these participants were assigned to groups based on a stratified random assignment procedure. Low achievers were students whose test average was below 50% in their Spanish class. High achieving students were also identified in each class, however; only two participants that were identified as high achievers opted to participate in the study. High achievers were students whose test average was higher than 90% in their Spanish class. The two high achieving participants were randomly assigned to groups in the present study. Further, participants who scored 60% or higher on either the Interpretation Subtest or the Production Subtest of the Subjunctive Knowledge Test that was administered as a pretest were excluded from the study as they already demonstrated a basic understanding of the use of the subjunctive in adjectival clauses in Spanish. The cut off level at pretest was in keeping with past studies in the PI strand. Participants who scored 60% or higher may have been exposed to the subjunctive if they took Spanish for more than two years in high school. There were three forms of the Subjunctive Knowledge Test, which were delivered as a pretest and two posttests in the present study. Table 3.10 provides a visual display of the order in which the tests were presented to the three classes that participated in the study.

Table 3.10

Order of Test Delivery by Class

Class	Pretest	Posttest 1	Posttest 2
Class 1	Version A	Version B	Version C
Class 2	Version B	Version C	Version A
Class 3	Version C	Version A	Version B

The instructional treatment packages were available online through Blackboard Courseware Management System (CMS) two to three days after participants completed the pretest. The instructional treatment packages were available for a period five days on Blackboard CMS. As this was a web based study, participants were able complete all of the study activities online any time of the day or night that was convenient for their schedules. In addition, Blackboard CMS recorded the time that each participant took to complete the study activities. Blackboard also provided a date stamp for each activity. Participants were asked to spend a minimum of one hour on their instructional treatment packages, but they had up to two hours if needed. The amount of time needed to complete the instructional treatment packages was determined based on the results of pilot testing. The researcher collected information on how much time each participant spent on the instructional treatments. In addition, the researcher checked each participant's treatment package to ensure that he or she did not approach the task in a cursory way. For example, if it was evident that a participant did not follow the

directions for the activities, exhibited random clicking, or spent significantly less than the minimum amount of time that was required, then he or she was excluded from the study. Participants were told that they had to follow the instructions carefully, spend at least the minimum amount of time required, and answer all of the questions completely (without leaving blanks) in order to receive the extra credit in their course. The extra credit offered was a strong incentive for participants, and very few approached the tasks in a cursory way. Only two students were excluded from the study for approaching their instructional treatment packages in a superficial way. These students spent under 15 minutes on their grammar packages and performed poorly on all of almost all of the items, which was likely the result of random clicking.

Participants received the following instructions for completing the study activities:

> After you complete your pretest, the researcher will send you a password for your grammar activity package. Please note the deadlines for completing this activity package on Blackboard. You will receive daily emails reminding you to begin your activity package until it is completed. You will need to allow up to a two-hour block of time to complete your grammar activity package, which is followed by a short test. Once you open your activity package, please complete all of the activities at one time. If you encounter an emergency and you must discontinue the activity package, please contact the researcher as soon as possible at vrussell@mail.usf.edu for further instructions. Once your activity package is complete, click the "submit" button.

Participants were asked to complete their activity packages on the same day that they opened them. If a participant encountered an emergency and had to stop the instructional treatment, he or she was asked to contact the researcher as soon as possible. If the participant had been working on the treatment activities for less than 30 minutes, then he

or she was allowed to resume the treatment from the beginning on another day of the experiment. If, however, the participant had been working on the treatment activities for more than 30 minutes before stopping the treatment, then he or she was no longer able to participate in the study. In order to keep the treatments homogeneous across groups, it was important for all participants to complete their instructional treatments in one day. Only one participant had to stop working on her instructional treatment before finishing it due to an emergency, and since she only spent 15 minutes working before having to stop, she was permitted to restart her grammar package the next day.

Participants were required to complete Posttest 1 immediately following their instructional treatments. Posttest 1 was timed, and participants had up to 30 minutes to complete this test. The amount of time needed to complete Posttest 1 was determined during pilot testing. Once completed, participants' responses on Posttest 1 were stored on Blackboard and printed by the researcher.

One to three days after completing their instructional treatment packages and Posttest 1, participants completed three online activities as follows: (a) the Authentic Input Reading Activity, (b) the Comprehension Test, and (c) the Posttreatment Questionnaire. Participants were required to complete the Comprehension Test immediately following the Authentic Input Reading Activity. Similarly, they were also required to complete the Posttreatment Questionnaire immediately following the Comprehension Test. All three activities were timed on Blackboard, and they were also time and date stamped upon completion. The researcher checked to ensure that participants completed the activities in the appropriate order.

While striving to control time on task between the treatment groups, the data collection procedures employed in the present study attempted to allow participants some flexibility when completing the activities online. Distance learners are accustomed to working asynchronously, during the days and times that suit their individual schedules. Thus, the study protocol did not require participants to spend more than two and one half hours at any given time on the study-related activities, and participants were able to choose when they opened the activities provided that they were within the appropriate date range (e.g., the instructional treatment packages could be opened anywhere from two to six days following the completion of the pretest).

Participants received an email message with the following instructions after they submitted their instructional treatment activities:

> Thank you for completing your online activity package and Posttest 1! You will now have up to three days to complete the following activities: 1) A Reading Activity where you will take some notes while you read a passage in Spanish (this should take only 10-15 minutes), 2) A Reading Comprehension Test (to be completed *immediately* after the reading activity; this should take about 15-20 minutes to complete), and 3) A Posttreatment Questionnaire (to be completed *immediately* after the Reading Comprehension Test; this will also take about 10-15 minutes to complete). You may begin these activities starting tomorrow. If you have any questions or concerns, please contact the researcher at vrussell@mail.usf.edu Thank you for giving your best effort to comply with these instructions!

The Authentic Input Reading Text, the Comprehension Test, and the Posttreatment Questionnaire were delivered via Blackboard CMS. After participants completed and submitted these items, their responses were stored on Blackboard and

printed by the researcher. Further, the researcher checked over these activities to ensure that participants did not leave any items blank and that they followed the instructions.

Finally, participants were asked to take Posttest 2 about two weeks after they completed their instructional treatment packages. The researcher made the delayed posttest available fourteen days after the first participant in each class completed the instructional treatment package; however, the majority of participants waited until the last day that the instructional treatment packages were available on Blackboard to complete them. Similarly, most participants also waited until the last day that Posttest 2 was available on Blackboard to complete it. Thus, most participants took Posttest 2 thirteen days after Posttest1. Posttest 2 was also delivered via Blackboard, and the researcher printed it once it was completed and submitted by each participant. In addition, all directions that were emailed to participants were also posted as permanent announcements on Blackboard. The experimental schedule is presented in Figure 3.4.

Data Analysis

All data was analyzed using SAS® 9.1 for Windows software. Data were screened for outliers prior to running any statistical tests. In addition, the researcher checked to ensure that the underlying assumptions for each statistical test that was employed in the present study. The procedures that were used to analyze each research question are described below.

In order to answer the first two research questions, which are listed below, data were subjected to two repeated measures Analyses of Variance (ANOVAs) with one between-subjects factor (type of instruction) and one within-subjects factor (time). Type

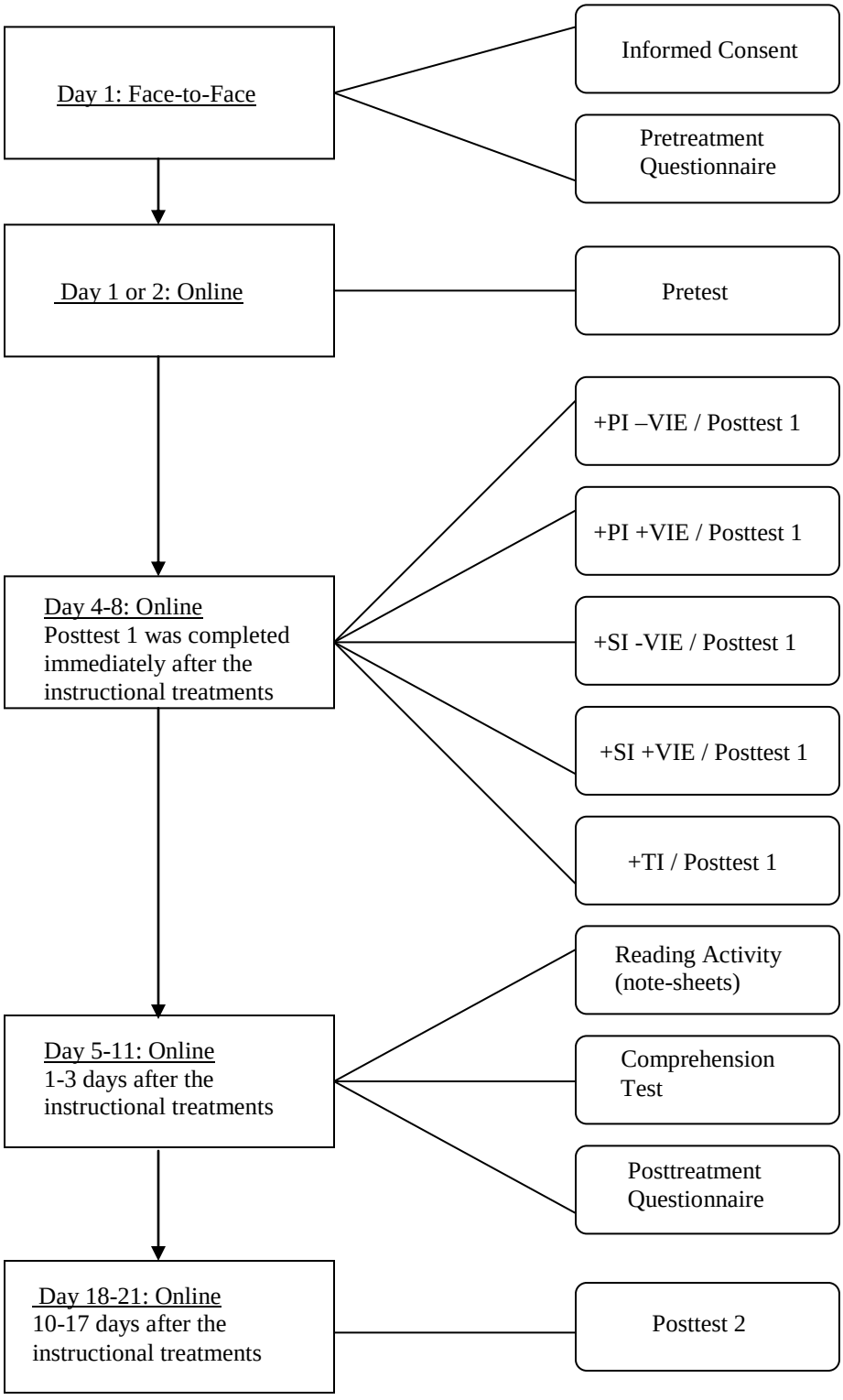

Figure 3.4. Experimental Schedule

of instruction had five levels: processing instruction with visual input enhancement, processing instruction without visual input enhancement, structured input with visual input enhancement, structured input without visual input enhancement, and traditional instruction. The within-subjects factor, time, had three levels (Pretest, Posttest 1, and Posttest 2). A separate analysis was performed for each type of task, interpretation or production.

1. Is there a differential performance between treatment groups for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by interpretation tasks over time?
2. Is there a differential performance between treatment groups for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by production tasks over time?

Each repeated measures ANOVA examined the within-subjects effects for time, the between-subjects effect for type of instruction, and the possible interaction effect between time and type of instruction. In addition, if significant main or interaction effects were revealed by the repeated measures ANOVAs, post-hoc procedures were performed to determine which specific treatments differed from each other. If any of the ANOVAs were found to be significant, follow-up Tukey tests were performed to examine all pairwise comparisons in order to determine which groups had significant differences.

The researcher reported the following descriptive statistics: group means, standard deviations, skewness values, and kurtosis values for scores on the Interpretation and Production Subtests by group. In addition, the researcher reported the *F* and *p* values, the

sums of squares, the mean squares, and the degrees of freedom. Any statistically significant interaction effects were graphed, and any significant differences by group revealed by follow-up Tukey tests were reported.

Research Question Three, which is listed below, examined learners' ability to notice the targeted grammatical form when it was embedded in an authentic input text that was received subsequent to the instructional treatments.

3. Is there a differential performance between treatment groups in participants' ability to notice targeted forms in subsequent authentic input as measured by note-scores and awareness scores?

To address the question of how well do participants notice the targeted form that is embedded in an authentic input text, their note-scores, which measured the amount of noticing that took place, and their awareness scores, which measured the depth of noticing that took place, were submitted to a multivariate analysis of variance (MANOVA) with alpha set at .05 to determine if there were significant differences by treatment group. The dependent variables were note-scores and awareness scores. The independent variable was type of instruction with five levels: processing instruction with visual input enhancement, processing instruction without visual input enhancement, structured input with visual input enhancement, structured input without visual input enhancement, and traditional instruction. If significant effects were found on the MANOVA, follow-up ANOVAs were performed on each dependent variable with alpha set at .05. If the *F* value was found to be significant with the follow up ANOVAs, post-hoc Tukey tests were performed to examine all pairwise comparisons in order to

determine which groups had significant differences. The researcher reported the group means and standard deviations. Also, ANOVA summary tables were constructed with the *F* and *p* values, the sums of squares, the mean squares, and the degrees of freedom. In addition, any significant group differences revealed by the post-hoc Tukey tests were reported by the researcher.

Research Question Four, which is listed below, examined learners' ability to comprehend the targeted grammatical form when it was embedded in an authentic input text that was received subsequent to the instructional treatments.

4. Following the instructional treatments, is there a differential performance between treatment groups in participants' ability to comprehend the referential meaning of the targeted grammatical form (input processing) and the message of the authentic input text in which it is embedded as measured by grammar comprehension and text comprehension scores?

The Comprehension Test measured participants' comprehension of an authentic input passage that they received subsequent to completing their instructional treatments. The purpose of the Comprehension Test was to determine if the treatments, which utilized structured or manipulated input, were able to improve how participants processed the targeted grammatical form when they encountered it in its natural TL context (authentic input). The Comprehension Test yielded two scores per participant, one score for comprehension of the propositional content of the text (text comprehension) and another score for comprehension of the referential meaning of the targeted grammatical form (input processing). Text and grammar comprehension scores were submitted to a

MANOVA with alpha set at .05 to determine if there were significant differences by treatment group. If statistically significant differences were found with the MANOVA, follow-up ANOVAs were performed on each dependent variable. In addition, if the *F* value was found to be significant with the follow-up ANOVAs, then post-hoc Tukey tests were performed to examine all pairwise comparisons in order to determine which groups differed from each other. The researcher reported the following descriptive statistics: group means, standard deviations, skewness values, and kurtosis values for text and grammar comprehension scores by group. In addition, for the overall MANOVA test, the researcher reported Wilks's Lambda and the *p* value associated with it. For the follow-up ANOVAs, the researcher reported the following for each independent variable, the *F* and *p* values, the sums of squares, the mean squares, and the degrees of freedom. Further, any significant group differences revealed by the post-hoc Tukey tests were reported.

Research Question 5, addressed the relationship between text comprehension and input processing.

5. What is the relationship between text comprehension and input processing when learners encounter the targeted form in subsequent authentic input?

In order to answer this question, a Pearson Product-Moment Correlation Coefficient was computed using on the two scores that the Comprehension tests yielded: the grammar comprehension score and the text comprehension score. The Pearson *r* determined the magnitude of the relationship between message comprehension and grammar comprehension for each instructional treatment group (processing instruction with visual input enhancement, processing instruction without visual input enhancement, structured

input with visual input enhancement, structured input without visual input enhancement, and traditional instruction). The Pearson *r* value was reported for each group.

Chapter 4

Results

Introduction

This chapter presents the results of the major analyses conducted on the data that was obtained from participants before, during, and after the instructional treatments. Major analyses were conducted on pre- and posttest scores, note-scores, awareness scores, and comprehension scores. In addition, the descriptive summaries of participants' responses on the Pretreatment and Posttreatment Questionnaires are also provided. The chapter is divided as follows: (a) summary of participants' responses on the Pretreatment Questionnaire, (b) analyses of pre- and posttest scores from the Interpretation and Production Subtests, (c) analyses of note- and awareness scores, (d) analyses of grammar and text comprehension scores, and (e) summary of participants' responses on the Posttreatment Questionnaire.

Summary of the Pretreatment Questionnaire

The Pretreatment Questionnaire was divided into three major sections as follows: demographic information, language background information, and perceptions on learning a language online. A breakdown of participants' characteristics is reported in Table 4.1.

Table 4.1

Participant Background Information from the Pretreatment Questionnaire

	+PI-VIE *n* = 19	+PI+VIE *n* = 18	+SI-VIE *n* = 19	+SI+VIE *n* = 18	+TI *n* = 18
Gender distribution	Male (8) Female (11)	Male (3) Female (15)	Male (4) Female (15)	Male (6) Female (12)	Male (8) Female (10)
Age range	20-45	19-42	19-40	19-45	19-39
Mean	27.58	25.78	25.79	26.72	23.72
SD	7.74	6.57	6.40	7.93	5.51
First language	English (18) Singhalese (1)	English (18)	English (19)	English (18)	English (18)
Home language	English (18) Singhalese (1)	English (18)	English (19)	English (18)	English (18)
Number of semesters of college Spanish	Four (0) Three (1) Two (18)	Four (1) Three (1) Two (16)	Four (0) Three (0) Two (19)	Four (0) Three (1) Two (17)	Four (0) Three (0) Two (18)
Number of years of high school Spanish	Four (2) Three (1) Two (5) One (6) None (5)	Four (1) Three (5) Two (8) One (2) None (2)	Four (2) Three (4) Two (7) One (2) None (4)	Four (1) Three (2) Two (6) One (2) None (7)	Four (0) Three (2) Two (10) One (1) None (5)
Why elected to study a language online	Convenience (16) Enjoy computers (0) Other (3)	Convenience (16) Enjoy computers (0) Other (2)	Convenience (17) Enjoy computers (1) Other (1)	Convenience (18) Enjoy computers (0) Other (0)	Convenience (17) Enjoy computers (1) Other (0)
Computer skills	High (12) Fair (7) Poor (0)	High (9) Fair (9) Poor (0)	High (8) Fair (11) Poor (0)	High (6) Fair (11) Poor (1)	High (14) Fair (4) Poor (0)
Ease of using blackboard CMS	Easy (19) Moderate (0) Difficult (0)	Easy (18) Moderate (0) Difficult (0)	Easy (18) Moderate (1) Difficult (0)	Easy (18) Moderate (0) Difficult (0)	Easy (15) Moderate (1) Difficult (2)
Would take another language class online	Yes (7) No (11) Maybe (1)	Yes (8) No (10) Maybe (0)	Yes (11) No (8) Maybe (0)	Yes (12) No (5) Maybe (1)	Yes (11) No (7) Maybe (0)

Note. $N = 92$.

As is shown in the participant sample (n = 92), there were 29 males (31.52%) and 63 females (68.48%). Participants ranged in age from 19 to 45, with a mean age of 25.94 and a standard deviation of 6.86.

All of the participants spoke English at home, but one participant also spoke Singhalese at home. A total of 88 participants (95.65%) were at the end of their second semester of Spanish at the university level, and 4 participants (4.45%) indicated that they had completed more than two semesters of Spanish at the university level. A closer inspection of the Pretreatment Questionnaire revealed that all four of these participants failed either their first or second semester of Spanish at the university level, which had to be repeated. None of the participants had advanced beyond their second semester of Spanish language study at the university level. With respect to the number of years of high school Spanish, 23 participants (25%) indicated that they had never taken Spanish in high school, 13 (14.13%) indicated that they had taken one year of Spanish in high school, 36 (39.13%) indicated that they took two years of high school Spanish, and 20 (21.74%) indicated that they took three or four years of high school Spanish. It is important to note that at both the large urban university and the small suburban university, Spanish language students who completed more than two years of high school Spanish were required to take a placement exam before enrolling in a Spanish course. If students were placed in second semester Spanish or lower, they did not demonstrate a sufficient understanding of the subjunctive mood in Spanish to warrant placement in a

higher level of Spanish, even though it is likely that they had exposure to the subjunctive mood in high school.

Regarding why students elected to take Spanish online, 84 participants (91.31%) listed convenience as the main reason that they chose to study Spanish online. Only 2 participants (2.17%) stated that they elected to take Spanish online because they enjoyed using computers and the Internet. However, 6 participants (6.52%) stated that they took Spanish online for other reasons, which included having a disability. Participants were asked to rate their computer skills and the responses broke down as follows: 49 participants (53.26%) rated their computer skills as high, 42 (45.65%) rated their computer skills as fair, and 1 participant (1.09%) rated her computer skills as poor. Participants were also asked to rate the ease of using Blackboard Courseware Management System to access and complete assignments, and they responded as follows: 88 participants (95.65%) responded that Blackboard was easy to use, 2 participants (2.17%) responded that it was moderate to use, and 2 participants (2.17%) responded that Blackboard was difficult to use to access and complete assignments. Finally, participants were asked whether they would take another language class online. In response, 49 participants (53.26%) indicated that they would take another language class online, while 41 (44.57%) indicated that they would not take another language class online. In a third category, 2 participants (2.17%) were undecided and stated that they might take another language class online. A breakdown of participants' responses on the Pretreatment Questionnaire by treatment group is provided in Table 4.1.

Time on Task

Before examining the inferential statistical procedures presented in this chapter, descriptive statistics are provided for the amount of time that participants spent completing their instructional treatment packages online. There were five types of instruction examined in the present study: processing instruction with visual input enhancement, processing instruction without visual input enhancement, structured input without visual input enhancement, structured input with visual input enhancement, and traditional instruction. The participants assigned to the first four instructional types comprised the experimental groups while the participants assigned to the last instructional type served as a comparison group. The amount of time that participants spent completing their instructional treatment packages was recorded on Blackboard. For the 92 participants in the present study, the mean time it took to complete an instructional treatment package online was 75.15 minutes with a standard deviation of 19.62. The minimum amount of time spent was 33 minutes, and the maximum amount of time spent was 126 minutes. Table 4.2 provides the descriptive statistics on the amount of time that participants spent completing their instructional treatments online by group.

Participants in the traditional instruction group (TI) spent the most time (M = 85.38 min.) completing their instructional treatment packages, approximately 10 minutes more than the mean time for all participants (75.15 minutes), while participants in the structured input with visual input enhancement group (+SI +VIE) spent the least amount of time (M = 69.56 min) completing their instructional treatment packages,

Table 4.2

Time Spent on Task by Instructional Group

		Time in Minutes			
Group	*n*	Mean	*SD*	Min	Max
+PI -VIE	19	76.68	17.46	59	126
+PI +VIE	18	73.66	20.00	42	120
+SI -VIE	19	70.79	18.60	33	110
+SI +VIE	18	69.56	12.42	52	106
+TI	18	85.38	25.46	40	120
Overall	92	75.15	19.62	33	126

approximately 5 minutes less than the mean time for all participants. In order to determine if the mean difference in time spent completing the instructional treatments by group was statistically significant, the amount of time participants in each group spent on task was submitted to a one-way analysis of variance (ANOVA) with the amount of time as the dependent variable and type of instruction as the independent variable. The results revealed that there were no statistically significant differences between the groups for time spent on task, F (4, 87) = 1.96, $p > .05$.

Analyses of Pre- and Posttests

A repeated measures ANOVA with one between-subjects factor, type of instruction, and one within-subjects factor, time with three levels (Pretest, Posttest 1,

Posttest 2), was conducted for each of the four constructs that the pre- and posttests assessed; namely, interpretation of the subjunctive, production of the subjunctive, interpretation of the indicative, and production of the indicative to determine if there was equivalence between groups on each of these measures. The four analyses are presented below.

Establishing Pretreatment Equivalence of Groups

Before conducting the analyses to examine the effects of the instructional treatments by group over time, scores from the interpretation of the subjunctive component of the Subjunctive Knowledge Test and scores from the production of the subjunctive component of the Subjunctive Knowledge Test were submitted to two one-way ANOVAs to determine if there were group differences prior to the experiment on participants' ability to interpret and produce the subjunctive in adjectival clauses in Spanish. The ANOVA that examined pretest scores for the interpretation of the subjunctive by group revealed no significant group differences prior to the experiment, F (4, 87) = 0.73, $p > .05$. Similarly, the ANOVA that examined pretest scores for the production of the subjunctive by group also revealed no significant group differences at pretest, F (4, 87) = 0.24, $p > .05$.

Analysis of Scores for Interpretation of the Subjunctive

Participants' pre-, post- and delayed posttest scores on the Interpretation Subtest of the Subjunctive Knowledge Test were analyzed using two repeated measures ANOVAs with one between-subjects factor (type of instruction) and one within-subjects factor (time). The within-subjects factor had three levels: Pretest, Posttest 1, and Posttest

2. One repeated measures ANOVA analyzed participants' interpretation of the subjunctive while the other analyzed participants' interpretation of the indicative. The Interpretation Subtest consisted of 20 items, 15 of the items measured participants' interpretation of the subjunctive in adjectival clauses and 5 of the items measured participants' interpretation of the indicative in adjectival clauses in Spanish. The present analysis focused on participants' interpretation of the subjunctive, while a separate analysis focused on participants' interpretation of the indicative. The latter analysis was included in the present study to examine the possibility of learner overextension of the targeted grammatical form. The highest score possible for interpretation of the subjunctive was 15. Since the Pretest was used as a screening device, only participants who scored 8 (53.33%) or below for the interpretation of the subjunctive component of the Interpretation Subtest were invited to participate in the study. Thus, participants were excluded from the study if they scored 9 (60%) or higher. The 60% cutoff level was employed in order for the results of the present study to be comparable with past research in the PI strand. The descriptive statistics for participants' scores on the interpretation of the subjunctive component of the Interpretation Subtest are included in Table 4.3.

An examination of the table of means reveals that mean scores for all groups on the Pretest appear to be similar. The traditional instruction group had the highest mean score on the Pretest (7.22) while the processing instruction with visual input enhancement group had the lowest mean score on the Pretest (6.50). The differences in mean scores for Posttest 1, however, appear to be further apart. The processing instruction with visual input enhancement group had the highest mean score (12.50) while the structured input

without visual input enhancement group had the lowest mean score (9.89). On Posttest 2, the processing instruction with visual input enhancement group had the highest mean

Table 4.3

Descriptive Statistics for Scores on the Interpretation Subtest by Group at Pretest, Posttest 1, and Posttest 2 for Interpretation of the Subjunctive

Instructional Group		*n*	Time of Testing		
			Pretest	Posttest 1	Posttest 2
+PI -VIE		19			
	M		6.53	11.26	10.16
	SD		1.90	2.35	3.04
	sk		-0.97	-0.50	-0.40
	ku		-0.44	-0.26	-0.29
+PI +VIE		18			
	M		6.50	12.50	10.28
	SD		1.50	1.95	2.89
	sk		-0.64	-0.81	-0.48
	ku		-0.24	0.48	-0.13
+SI -VIE		19			
	M		6.79	9.89	9.53
	SD		1.23	2.90	3.13
	sk		-0.76	0.41	-0.01
	ku		-0.24	-1.00	0.19
+SI +VIE		18			
	M		6.83	10.28	9.89
	SD		1.47	3.04	2.89
	sk		-1.19	-0.61	0.57
	ku		1.06	-0.09	-0.84

Instructional Group		*n*	Time of Testing		
			Pretest	Posttest 1	Posttest 2
+TI		18			
	M		7.22	10.56	8.89
	SD		1.06	2.94	3.31
	sk		-1.16	-0.06	0.04
	ku		0.16	-1.47	-0.62
Overall		92			
	M		6.77	10.89	9.75
	SD		1.45	2.77	3.03
	sk		-1.04	-0.38	-0.10
	ku		0.30	-0.75	-0.53

score (10.28) while the traditional instruction group had the lowest mean score (8.89). To determine if there were significant differences in group means over time, interpretation test scores were submitted to a repeated measures ANOVA with one-between-subjects factor (type of instruction) and one within-subjects factor (time of testing), which had three levels: Pretest, Posttest 1 and Posttest 2.

Before proceeding with the statistical test, univariate normality and sphericity assumptions underlying factorial ANOVA with repeated-measures factors and between-subjects factors were checked; namely, independence, random sampling, univariate normality, and sphericity. The repeated measures test allows for data to be collected from participants at multiple points in time under the within-subjects variable as subject differences are removed from the error term, which leaves error components independent from treatment group to treatment group.

Univariate rather than multivariate normality was assessed because the present analysis took a univariate approach, examining the results of the ANOVA test rather than the results generated from the MANOVA test. In order to assess univariate normality, the distributions of interpretation test scores were examined to assess skewness and kurtosis at each level of time by group. For the Pretest, skewness values ranged from -1.19 to -.64 and kurtosis values ranged from -.44 to 1.06. For Posttest 1, skewness values ranged from -.81 to .41 and kurtosis values ranged from -1.47 to .48. The distributions of interpretation test scores for Posttest 2 by group were fairly normally distributed with skewness values ranging from -.48 to .57 and kurtosis values ranging from -.84 to .19.

In addition to the examination of skewness and kurtosis values, the Shapiro-Wilk test for normality was performed on each dependent variable by group. The Shapiro-Wilk tests revealed that the assumption of normality was met for the distributions of interpretation test scores for all of the groups on Posttest 1 and Posttest 2, as *p* values were all in excess of .05. However, the Shapiro-Wilk test revealed that the assumption of normality was violated for the distributions of interpretation test scores on the Pretest for all four experimental groups and for the comparison group. The nonnormal distribution of scores was likely due to the fact that participants who scored higher than 8 on the Pretest were excluded from the study. Thus, the Pretest did not reflect any scores higher than 8 even though the highest score possible for the interpretation of the subjunctive component of the Pretest was 15. In addition, the data were checked for outliers by examining box plots for each dependent variable by instructional group. The box plots

revealed that there were no significant outliers in the data set. Although the assumption of univariate normality was partially violated, the ANOVA test is fairly robust to violations of normality. Given the robustness of the test to violations of normality, it seemed reasonable to proceed with the analysis.

The final assumption that was checked was sphericity. In order to assess the assumption of sphericity, the Greenhouse-Geisser estimator, which is a fairly conservative test, was used. Sphericity assumes that the difference variables have equal variances and that they do not covary. Since the present study examined participants' scores at three points in time (Pretest, Posttest 1, and Posttest 2), the estimate for sphericity could have ranged from .5 to 1, with 1 being an ideal estimate of sphericity. The Greenhouse-Geisser estimate was $\varepsilon = .98$, which is nearly an ideal estimate of sphericity. Since the Greenhouse-Geisser estimator is a conservative test that tends to underestimate the sphericity parameter, it is likely that the actual value was even slightly higher. Thus, the results of the Greenhouse-Geisser test verified that the assumption of sphericity was met in the present study.

After the assumptions were assessed, the data were subjected to a repeated measures analysis of variance (ANOVA) with one between-subjects factor (type of instruction) and one within-subjects factor (time) to determine if there were significant differences in interpretation test scores across time (from pre- to posttests). The results of the analysis are reported in Table 4.4.

Table 4.4

Analysis of Variance of Interpretation Test Scores by Instructional Treatment Group and Time for Interpretation of the Subjunctive

Source	*df*	*SS*	*MS*	*F*
Between Subjects (Ss)	91	932.10		
Group (A)	4	36.20	9.05	0.88
S/A	87	895.90	10.30	
Within Subjects	184	1,625.00		
Time (B)	2	832.73	416.36	100.26**
A x B	8	69.71	8.71	2.10*
SB/A	174	722.56	4.15	
Total	275	2,557.10		

Note. $N = 92$.

*$p < .05$. **$p < .0001$.

An examination of Table 4.4 reveals a significant Group x Time interaction effect, F (8, 174) = 2.10, $p < .05$. The Greenhouse-Geisser test also showed a significant effect ($p < .05$). There was also a significant main effect for time, F (2, 174) = 100.26, $p < .0001$, but there was not a significant main effect for type of instruction, F (4, 87) = 0.88, $p > .05$. The effect size for the Group x Time interaction effect was computed, $\eta^2 = .09$, which was a small effect size. The effect size for the main effect for time was also

computed, $\eta^2 = .54$, which was a very large effect size. A graph of the interaction effect is shown in Figure 4.1. The interaction is disordinal.

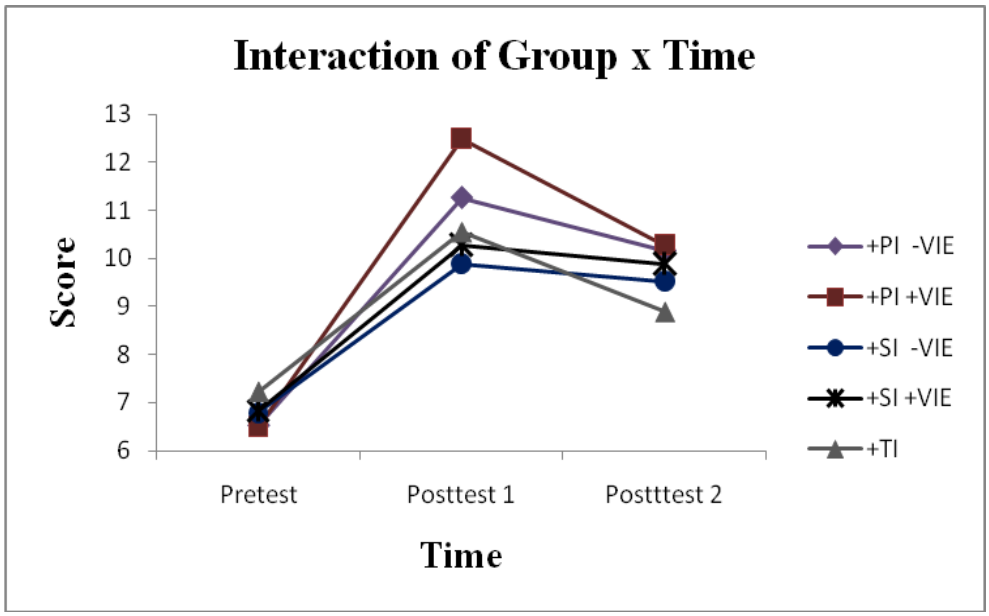

Figure 4.1. Interaction Plot for Instruction Type and Time for Interpretation of the Subjunctive

In order to determine which groups had significant differences in mean interpretation test scores over time, post-hoc comparisons of mean interpretation test scores using Tukey's HSD were employed. The test revealed that the processing instruction with visual input enhancement group had a significantly higher mean interpretation test score than the structured input without visual input enhancement group at Posttest 1 compared to Pretest ($p < .05$).

However, the processing instruction with visual input enhancement group did not have a significantly higher mean interpretation test score than the processing instruction without visual input enhancement group, the structured input with visual input

enhancement group, or the traditional instruction group at Posttest 1 compared to Pretest. Further, Tukey's HSD test did not reveal any significant group differences from Posttest 1 to Posttest 2 or from Pretest to Posttest 2. Stevens (2002) asserts that the Tukey test is appropriate in repeated measures designs and that alpha is controlled for the set of tests if the sphericity assumption is met and there are equal or nearly equal group sizes.

The repeated measures ANOVA also revealed a highly significant main effect for time. A graph of the significant main effect for time is presented in Figure 4.2.

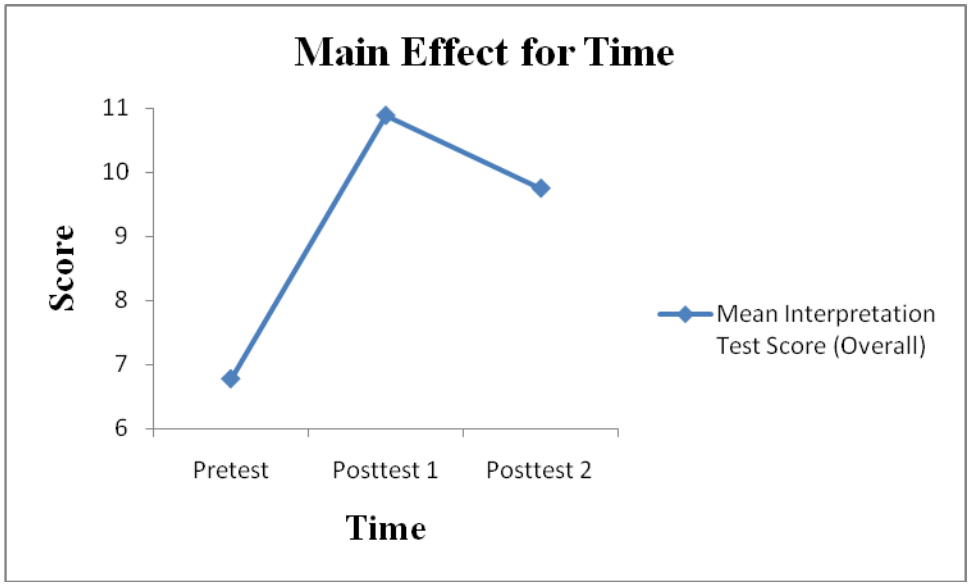

Figure 4.2. Graph of the Main Effect for Time for the Mean Interpretation Test Score at Pretest, Posttest 1, and Posttest 2 for Interpretation of the Subjunctive

Post-hoc contrast tests were performed to determine if changes in the mean interpretation test score were significant at each point in time. The contrast tests revealed that the mean interpretation test score was significantly higher at Posttest 1 compared to Pretest, F (1, 87) = 182.86, $p < .0001$. The mean interpretation test score was also

significantly lower at Posttest 2 compared to Posttest 1, F (1, 87) = 17.25, $p < .0001$. However, the mean interpretation test score was still significantly higher at Posttest 2 compared to Pretest, F (1, 87) = 87.30, $p < .0001$. In order to control for the Type I error rate, the Bonferroni adjustment was applied, with alpha set at .0167 for the set of post-hoc contrast tests.

Analysis of Scores for Production of the Subjunctive

Participants' pre- and posttest scores on the Production Subtest of the Subjunctive Knowledge Test were analyzed using two repeated measures ANOVAs with one between-subjects factor (type of instruction) and one within-subjects factor (time of testing). One repeated measures ANOVA analyzed participants' production of the subjunctive while the other analyzed participants' production of the indicative. The Production Subtest consisted of 20 items, 15 of the items measured participants' production of the subjunctive in adjectival clauses and 5 of the items measured participants' production of the indicative in adjectival clauses in Spanish. The present analysis focused on participants' production of the subjunctive, while a separate analysis focused on participants' production of the indicative. The latter analysis was included in the present study to examine the possibility of learner overextension of the targeted grammatical form. The highest score possible for production of the subjunctive was 15. Since the Pretest was used as a screening device, only participants who scored 8 (53.33%) or below for the production of the subjunctive component of the Production Subtest were invited to participate in the study. Similar to the Interpretation Subtest, participants who scored 9 (60%) or above on the production of the subjunctive

component of the Production Subtest were excluded from the study, which is in line with past studies in the PI strand. Table 4.5 presents the descriptive statistics for participants' scores on the production of the subjunctive component of the Production Subtest.

Table 4.5

Descriptive Statistics for Scores on the Production Subtest by Group at Pretest, Posttest 1, and Posttest 2 for Production of the Subjunctive

Instructional Group		*n*	Time of Testing		
			Pretest	Posttest 1	Posttest 2
+PI -VIE		19			
	M		1.95	10.21	7.66
	SD		2.20	2.96	3.61
	sk		1.24	-1.45	-0.26
	ku		0.77	3.11	-1.51
+PI +VIE		18			
	M		2.72	9.28	8.14
	SD		2.40	4.17	3.71
	sk		0.41	-0.71	-0.44
	ku		-1.53	-0.62	-0.31
+SI -VIE		19			
	M		2.47	7.37	7.16
	SD		3.44	3.72	3.94
	sk		0.90	0.07	-0.14
	ku		-1.11	-1.18	-0.91
+SI +VIE		18			
	M		2.25	7.86	7.78
	SD		2.69	2.92	3.30
	sk		1.21	-0.17	-0.53
	ku		0.49	-0.88	-0.55

Instructional Group		*n*	Time of Testing		
			Pretest	Posttest 1	Posttest 2
+TI		18			
	M		2.58	10.08	8.47
	SD		2.43	3.76	4.35
	sk		0.78	-0.14	-0.16
	ku		-0.14	-1.46	-1.52
Overall		92			
	M		2.39	8.96	7.83
	SD		2.63	3.65	3.74
	sk		0.90	-0.35	-0.22
	ku		-0.48	-0.80	-1.01

A visual examination of the table of means reveals that mean scores for all groups on the Pretest appear to be similar. The processing instruction with visual input enhancement group had the highest mean score on the Pretest (2.72), while the processing instruction without visual input enhancement had the lowest mean score at Pretest (1.95). However, the mean scores on Posttest 1 appear to be significantly higher than the mean scores earned on the Pretest for all groups. The processing instruction without visual input enhancement group had the highest mean score (10.21), and the structured input without visual input enhancement group had the lowest mean score (7.37) on Posttest 1 for production of the subjunctive. For Posttest 2, the scores for all of the groups appear to be similar. The traditional instruction group had the highest mean score on Posttest 2 (8.47), while the structured input without visual input enhancement

group had the lowest mean score on Posttest 2 for production of the subjunctive (7.16). In order to determine if mean scores differed significantly by group over time, participants' scores on the production of the subjunctive component of the Production Subtest were submitted to a repeated measures ANOVA with one between-subjects factor (type of instruction) and one within-subjects factor (time of testing).

Before the data were subjected to the statistical test, univariate normality and sphericity assumptions for factorial ANOVA with repeated-measures factors and between-subjects factors were assessed. In order to assess univariate normality, the distributions of interpretation test scores were examined to check the skewness and kurtosis values at each level of time by group. For production test scores on the Pretest, most of the distributions appear to be approximately normally distributed, with most skewness and kurtosis values less than 1. For Posttest 1, skewness values ranged from -1.45 to .07 and kurtosis values ranged from -1.46 to 3.11. For Posttest 2, the skewness values ranged from -.53 to -.14 and the kurtosis values ranged from -1.51 to -.31. Further, the data were also checked for outliers by examining box plots for each dependent variable by instructional treatment group. The box plots revealed that there were no significant outliers.

In addition to the examination of skewness and kurtosis values, the Shapiro-Wilk test for normality was performed on each dependent variable by group. The Shapiro-Wilk tests revealed that the assumption of normality was met for the distributions of production test scores for all of the groups on Posttest 2 ($p > .05$). The Shapiro-Wilk test also revealed that the assumption of normality was met for the distributions of production

test scores on Posttest 1 for all groups except for the processing instruction without visual input enhancement group ($p < .05$). For the distribution of production test scores on the Pretest, the Shapiro-Wilk test revealed that the assumption of normality was violated by all four of the experimental groups ($p > .05$). However, the Shapiro-Wilk test revealed that production test scores were normally distributed for the traditional instruction group on the Pretest. The nonnormal distribution of scores for the four experimental groups on the Pretest was likely due to the fact that participants who scored higher than 8 on the Pretest were excluded from the study. Thus, even though the highest score possible for the production of the subjunctive component of the Production Subtest was 15, the Pretest did not reflect any scores higher than 8.

Another assumption of the repeated measures ANOVA test is sphericity. In order to assess the assumption of sphericity, the Greenhouse-Geisser estimator was used. Sphericity assumes that the difference variables have equal variances and that they do not covary. The Greenhouse-Geisser estimate was $\varepsilon = .89$. Since this value was close to 1, which is an ideal estimate, the assumption of sphericity was met in the present study. It is also likely that the actual estimate for sphericity was slightly higher since the Greenhouse-Geisser estimate for the sphericity parameter is somewhat conservative.

After assessing all of the assumptions of the statistical test, it seemed reasonable to proceed with the analysis, as the repeated measures ANOVA is robust to violations of normality. The results of the repeated measures analysis on production test scores at Pretest, Posttest 1, and Posttest 2 are presented in Table 4.6.

Table 4.6

Analysis of Variance of Production Test Scores by Instructional Treatment Group and Time for Production of the Subjunctive

Source	*df*	*SS*	*MS*	*F*
Between Subjects (Ss)	91	1,597.76		
Group (A)	4	71.20	17.80	1.01
S/A	87	1,526.56	17.55	
Within Subjects	184	3,783.02		
Time (B)	2	2,267.91	1,133.96	137.31*
A x B	8	78.11	9.76	1.18
SB/A	174	1,437.00	8.26	
Total	275	5,380.78		

Note. $N = 92$.

*$p < .0001$.

The results revealed that there was not a significant Group x Time interaction effect, F (8, 174) = 1.18, $p > .05$; however, there was a highly significant main effect for time, F (2, 174) = 137.31, $p < .0001$. The Greenhouse-Geisser test also showed a significant effect for time, $p < .0001$. Further, the main effect for type of instruction was not significant, F (4, 87) = 1.01, $p > .05$. The effect size was computed for the significant

main effect for time, $\eta^2 = .61$, which was a very large effect size. A graph of the significant main effect for time is presented in Figure 4.3.

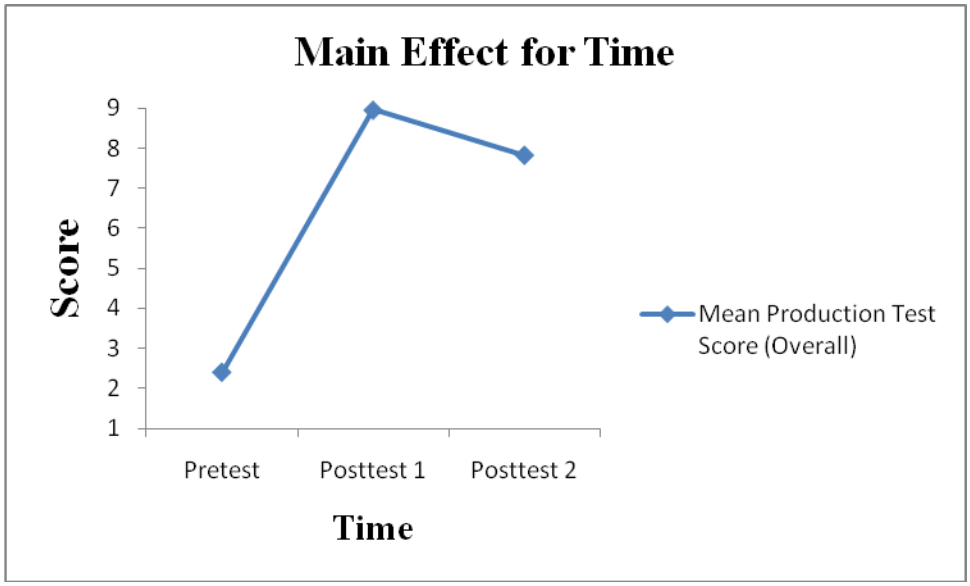

Figure 4.3. Graph of the Main Effect for Time for the Mean Production Test Score at Pretest, Posttest 1, and Posttest 2 for Production of the Subjunctive

As a follow-up to the significant main effect for time, post-hoc contrast tests were performed to determine if changes in the mean production test score at each point in time were statistically significant. The contrast tests revealed that the mean production test score was significantly higher at Posttest 1 compared to Pretest, F (1, 87) = 212.11, $p <$ .0001. In addition, there was a statistically significant decrease in the mean production test score from Posttest 1 to Posttest 2, F (1, 87) = 10.63, $p < .001$. However, the mean production test score was significantly higher at Posttest 2 compared to Pretest, F (1, 87) = 136.05, $p < .0001$. In order to control for the Type I error rate, the Bonferroni adjustment was applied, with alpha set at .0167 for the set of post-hoc contrast tests.

Analysis of Scores for Interpretation of the Indicative

Participants' pre- and posttest scores on the Interpretation Subtest of the Subjunctive Knowledge Test were analyzed using two repeated measures ANOVAs with one between-subjects factor (type of instruction) and one within-subjects factor (time of testing). One repeated measures ANOVA analyzed participants' interpretation of the subjunctive while the other analyzed participants' interpretation of the indicative. The Interpretation Subtest consisted of 20 items, 15 of the items measured participants' interpretation of the subjunctive in adjectival clauses and 5 of the items measured participants' interpretation of the indicative in adjectival clauses in Spanish. The present analysis focused on participants' interpretation of the indicative, which was included in the present study to examine the possibility of learner overextension of the targeted grammatical form. Participants in the present study already knew how to form and use the indicative mood in Spanish; however, the instructional treatments focused on subjunctive versus indicative contrasts. Therefore, it was important to determine if the instructional treatments either positively or negatively impacted participants' prior knowledge of the use of the indicative mood in Spanish.

The interpretation of the indicative component of the Interpretation Subtest was not used as a screening device for exclusion from participation in the study; rather, scores measuring the interpretation of the indicative at Pretest served as a baseline measure of participants' knowledge of the use of the indicative in adjectival clauses in Spanish. The highest score possible for interpretation of the indicative was 5. Table 4.7 provides the

descriptive statistics for participants' scores on the interpretation of the indicative component of the Interpretation Subtest.

Table 4.7

Descriptive Statistics for Scores on the Interpretation Subtest by Group at Pretest, Posttest 1, and Posttest 2 for Interpretation of the Indicative

Instructional Group		*n*	Time of Testing		
			Pretest	Posttest 1	Posttest 2
+PI -VIE		19			
	M		2.95	3.84	3.47
	SD		0.85	1.01	1.07
	sk		0.11	-0.36	0.08
	ku		-1.62	-0.91	-1.16
+PI +VIE		18			
	M		3.39	4.22	3.44
	SD		0.98	0.88	1.20
	sk		-0.50	-1.07	-0.31
	ku		1.03	0.87	-0.66
+SI -VIE		19			
	M		3.00	3.63	3.79
	SD		0.82	1.12	0.98
	sk		0.00	-0.24	-0.33
	ku		-1.48	-1.24	-0.73
+SI +VIE		18			
	M		3.50	3.33	3.56
	SD		0.99	1.24	1.15
	sk		0.00	-0.93	-0.55
	ku		-0.84	1.91	-0.13

Instructional Group		*n*	Time of Testing		
			Pretest	Posttest 1	Posttest 2
+TI		18			
	M		3.17	3.72	3.56
	SD		1.04	1.07	1.25
	sk		-0.02	-0.01	-0.04
	ku		0.08	-1.37	-1.68
Overall		92			
	M		3.20	3.75	3.57
	SD		0.94	1.09	1.11
	sk		0.00	-0.59	-0.24
	ku		-0.50	0.09	-0.93

A visual examination of Table 4.7 reveals that mean interpretation scores for all five groups appear to be similar. On the Pretest, the structured input with visual input enhancement group had the highest mean interpretation test score (3.50), while the processing instruction without visual input enhancement had the lowest mean score (2.95). On Posttest 1, the processing instruction with visual input enhancement group had the highest mean score (4.22), while the structured input with visual input enhancement group had the lowest mean score (3.33). On Posttest 2, the structured input without visual input enhancement group had the highest mean score (3.79), while the processing instruction with visual input enhancement group had the lowest mean score (3.44). In order to determine if there were significant group differences over time, the

data were subjected to a repeated measures ANOVA. However, before conducting the ANOVA, the assumptions underlying the statistical test were assessed.

In order to assess the assumption of univariate normality, skewness and kurtosis values were examined for each dependent variable by group. For the distributions of scores on the Pretest, skewness values ranged from -.50 to .11 and kurtosis values ranged from -1.62 to 1.03. For the distributions of scores on Posttest 1, skewness values ranged from -1.07 to -.01 and kurtosis values ranged from -1.37 to 1.91, and for the distributions of scores on Posttest 2, skewness values ranged from -.55 to .08 and kurtosis values ranged from -1.68 to -.13.

Shapiro Wilk tests were performed on each variable by group. The Shapiro Wilk tests revealed that the distributions of scores on the Pretest were not normal for the following groups: processing instruction without visual input enhancement, structured input without visual input enhancement, and processing instruction with visual input enhancement. Similarly, interpretation test scores at Posttest 1 were found to deviate from normality for the following groups: traditional instruction, structured input without visual input enhancement, and processing instruction with visual input enhancement. Finally, for the distributions of scores at Posttest 2, the Shapiro Wilk tests revealed that the following distributions were nonnormal: traditional instruction and processing instruction without visual input enhancement. As several of the distributions were found to deviate from normality, box plots were examined for outliers and no significant outliers were identified in the data set. As the ANOVA test is robust to violations of normality, the decision was made to proceed with the analysis.

The assumption of sphericity was checked with the Greenhouse-Geisser test, which estimated sphericity at $\varepsilon = .97$. As this is almost a perfect estimate, the assumption of sphericity was met for the present analysis.

Data were subjected to a repeated measures ANOVA with one between-subjects factor (type of instruction) and one within-subjects factor (time of testing). The results of the analysis are presented in Table 4.8.

Table 4.8

Analysis of Variance of Interpretation Test Scores by Instructional Treatment Group and Time for Interpretation of the Indicative

Source	*df*	*SS*	*MS*	*F*
Between Subjects (Ss)	91	128.33		
Group (A)	4	2.34	0.58	0.40
S/A	87	125.99	1.45	
Within Subjects	184	186.38		
Time (B)	2	14.37	7.18	7.76*
A x B	8	10.88	1.36	1.47
SB/A	174	161.13	0.93	
Total	275	314.71		

Note. $N = 92$.

*$p < .001$.

The results did not reveal a significant Group x Time interaction effect, F (8, 174) = 1.36, $p > .05$. The main effect for time using the Greenhouse-Geisser test was significant, F (2, 174) = 7.77, $p < .001$. The main effect for type of instruction was not significant, F (4, 87) = 0.40, $p > .05$. The effect size for the significant main effect for time was computed, $\eta^2 = .08$, which was a small effect size. A graph of the significant main effect for time is presented in Figure 4.4.

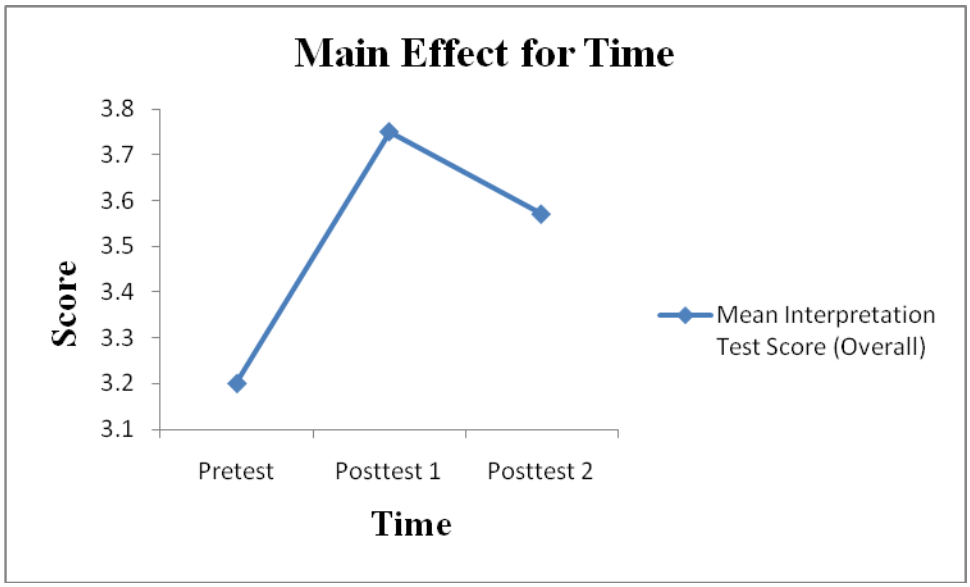

Figure 4.4. Graph of the Main Effect for Time for the Mean Interpretation Test Score at Pretest, Posttest 1, and Posttest 2 for Interpretation of the Indicative

As a follow-up to the significant main effect for time, post-hoc contrast tests were performed to determine if changes in the mean interpretation test score were statistically significant at each point in time. Post-hoc contrast tests revealed that the mean interpretation test score was significantly higher at Posttest 1 compared to Pretest, F (1, 87) = 14.77, $p < .001$. Similarly, the mean interpretation test score was also significantly

higher at Posttest 2 compared to Pretest, F (1, 87) = 7.87, $p < .01$. However, there was no statistically significant difference in the mean interpretation test score from Posttest 1 to Posttest 2, F (1, 87) = 1.50, $p > .05$. In order to control for the Type I error rate, the Bonferroni adjustment was applied, with alpha set at .0167 for the set of contrast tests.

Analysis of Scores for Production of the Indicative

Participants' pre- and posttest scores on the Production Subtest of the Subjunctive Knowledge Test were analyzed using two repeated measures ANOVAs with one between-subjects factor (type of instruction) and one within-subjects factor (time of testing). One repeated measures ANOVA analyzed participants' production of the subjunctive while the other analyzed participants' production of the indicative. The Production Subtest consisted of 20 items, 15 of the items measured participants' production of the subjunctive and 5 of the items measured participants' production of the indicative in adjectival clauses in Spanish. The present analysis focused on participants' production of the indicative, which was included in the present study to examine the possibility of learner overextension of the targeted grammatical form. Participants in the present study already knew how to form and use the indicative mood in Spanish; however, the instructional treatments focused on subjunctive versus indicative contrasts. Therefore, it was important to determine if the instructional treatments either positively or negatively impacted participants' prior knowledge of the use of the indicative mood in Spanish. The production of the indicative component of the Production Subtest was not used as a screening device for exclusion from participation in the study; rather, scores measuring the production of the indicative at Pretest served as a baseline measure of

participants' knowledge of the use of the indicative in adjectival clauses in Spanish. The highest score possible for production of the indicative was 5. Table 4.9 presents the descriptive statistics for participants' scores on the production of the indicative component of the Production Subtest.

Table 4.9

Descriptive Statistics for Scores on the Production Subtest by Group at Pretest, Posttest 1, and Posttest 2 for Production of the Indicative

Instructional Group		*n*	Time of Testing		
			Pretest	Posttest 1	Posttest 2
+PI -VIE		19			
	M		2.42	3.05	2.79
	SD		1.44	1.12	1.31
	sk		0.22	-0.01	-0.13
	ku		-0.86	-1.06	0.02
+PI +VIE		18			
	M		2.80	3.25	3.14
	SD		1.43	1.49	1.17
	sk		-0.63	-1.00	-0.28
	ku		-0.10	0.22	-0.08
+SI -VIE		19			
	M		2.45	3.53	2.39
	SD		1.52	1.36	1.70
	sk		0.03	-0.43	0.30
	ku		-0.86	-1.06	-0.83

Instructional Group		*n*	Time of Testing		
			Pretest	Posttest 1	Posttest 2
+SI +VIE		18			
	M		2.83	2.89	2.86
	SD		1.36	1.54	1.49
	sk		0.22	-0.43	-0.56
	ku		-1.16	-0.36	-0.20
+TI		18			
	M		2.33	2.89	2.61
	SD		1.47	1.84	1.37
	sk		-0.08	-0.28	-0.03
	ku		-0.96	-1.54	-1.27
Overall		92			
	M		2.57	3.13	2.76
	SD		1.43	1.47	1.41
	sk		-0.07	-0.49	-0.18
	ku		-0.89	-0.71	-0.68

A visual examination of Table 4.9 reveals that mean scores for production of the indicative appear to be similar for all five groups at Pretest, Posttest 1, and Posttest 2. The structured input with visual input enhancement group had the highest mean score on the Pretest (2.83), while the traditional instruction group had the lowest mean score at Pretest (2.33). On Posttest 1, the mean scores for all of the groups appear to be somewhat higher than the mean scores for production of the indicative at Pretest. The processing instruction with visual input enhancement group had the highest mean score on Posttest 1 (3.25), while the traditional instruction group and the structured input with visual input

enhancement groups had the lowest mean scores on Posttest 1 (2.89). On Posttest 2, the processing instruction with visual input enhancement group had the highest mean score (3.14), while the structured input without visual input enhancement group had the lowest mean score for production of the indicative (2.39). In order to determine if mean scores differed significantly by group over time, participants' scores on the production of the indicative component of the Production Subtest were submitted to a repeated measures ANOVA with one between-subjects factor (type of instruction) and one within-subjects factor (time of testing).

Before conducting the ANOVA test, univariate normality and sphericity assumptions were assessed. An examination of the skewness and kurtosis values from Table 4.9 reveal that the distributions of scores on the Pretest were approximately normally distributed, with skewness values ranging from -.63 to .22 and kurtosis values ranging from -1.16 to -.10 The distributions of scores on Posttest 1 had skewness values that ranged from -1.0 to -.01 and kurtosis values that ranged from -1.54 to .22. The distributions of scores on Posttest 2 had skewness values that ranged from -.56 to .30 and kurtosis values that ranged from -1.27 to .02

As a further assessment of normality, the Shapiro-Wilk test was performed on each dependent variable by group. These tests revealed that there were no violations of normality for the distribution of mean production test scores on the Pretest and on Posttest 1 for all of the groups ($p > .05$). However, the distributions of mean production test scores were not normally distributed on Posttest 2 for the traditional instruction group, the structured input without visual input enhancement group, and the processing

instruction with visual input enhancement group. Although there was a violation of the assumption of normality, the decision was made to proceed with the analysis since the ANOVA test is fairly robust to violations of this assumption.

The final assumption that was checked was sphericity. The Greenhouse-Geisser test was used to assess this assumption, and the estimate for sphericity was $\varepsilon = .97$. This was nearly a perfect estimate of sphericity. After assessing the assumptions, the data were submitted to a repeated measures ANOVA with one between-subjects factor (type of instruction) and one within-subjects factor (time of testing). The results of the analysis are presented in Table 4.10.

The ANOVA did not reveal a significant Group x Time interaction effect, F (8, 174) = 0.77, $p > .05$. There was a significant main effect for time using the Greenhouse-Geisser test, F (2, 174) = 04.92, $p < .01$; however, there was not a significant main effect for type of instruction, F (4, 87) = 0.45, $p > .05$. The effect size for the main effect for time was computed, $\eta^2 = .05$, which was a small effect size. A graph of the significant main effect for time is presented in Figure 4.5.

As a follow-up to the significant main effect for time, post-hoc contrast tests were performed to determine if changes in the mean production test score at each point in time were statistically significant. In order to control the Type I error rate, the Bonferroni adjustment was applied, with alpha set at .0167 for the set of post-hoc contrast tests. The contrast tests revealed that the mean production test score was significantly higher at Posttest 1 compared to Pretest, F (1, 87) = 8.79, $p < .01$; however, there was not a

Table 4.10

Analysis of Variance of Production Test Scores by Instructional Treatment Group and Time for Production of the Indicative

Source	*df*	*SS*	*MS*	*F*
Between Subjects (Ss)	91	297.58		
Group (A)	4	5.98	1.49	0.45
S/A	87	291.60	3.35	
Within Subjects	184	280.61		
Time (B)	2	14.52	7.26	4.92*
A x B	8	9.15	1.14	0.77
SB/A	174	256.94	1.48	
Total	275	578.19		

Note. $N = 92$.

*$p < .05$.

significant difference in the mean production test score at Posttest 2 compared to Posttest 1, F (1, 87) = 4.99, $p = .03$. Nor was there a significant difference in the mean production test score at Posttest 2 compared to Pretest, F (1, 87) = 1.03, $p > .05$.

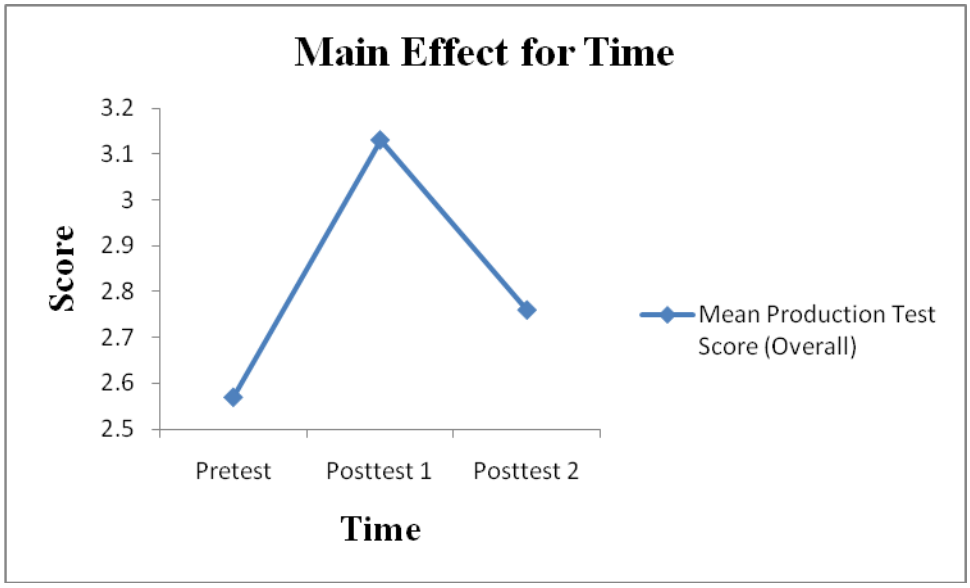

Figure 4.5. Graph of the Main Effect for Time for the Mean Production Test Score at Pretest, Posttest 1, and Posttest 2 for Production of the Indicative

Analysis of Note- and Awareness Scores

The results of the data obtained from the notes that participants took while they read an Authentic Input Passage online and the results of the data obtained from a Posttreatment Questionnaire that was designed to assess participants' level of awareness of the targeted forms that were embedded in the Authentic Input Passage were submitted to a Multivariate Analysis of Variance (MANOVA) with type of instruction as the independent variable and note-scores and awareness scores as the dependent variables. There were a total of 15 instances of the targeted verb forms embedded in the Authentic Input text; thus, the maximum note-score possible was 15, which would indicate that a participant noticed all of the subjunctive forms in the passage. The Posttreatment Questionnaire was a retrospective measure of participants' awareness of the targeted

form as it appeared in authentic input, and it required participants to provide metalinguistic information about the use of the subjunctive in adjectival clauses. The highest awareness score possible was 3, with a score of 2-3 indicating a high level of awareness. A score of 1 indicated that a participant had a medium level of awareness, and a score of 0 - .5 indicated a low level of awareness. As noticing and awareness are separate but related constructs, note-scores were used to assess the amount of participants' noticing while awareness scores were used to assess participants' level or depth of noticing. The descriptive statistics for participants' note- and awareness scores by group are provided in Table 4.11.

Table 4.11

Descriptive Statistics on Note- and Awareness Scores by Group

Instructional			Type of Measure	
Group		*n*	Note	Awareness
+PI -VIE		19		
	M		9.42	1.63
	SD		2.81	1.08
	sk		0.00	0.21
	ku		-1.13	-1.71
+PI +VIE		18		
	M		9.61	2.14
	SD		3.82	1.05
	sk		-0.47	-1.09
	ku		0.08	-0.17

Instructional Group	*n*	Type of Measure: Note	Type of Measure: Awareness
	19		
+SI-VIE			
	M	8.42	1.03
	Sk	3.76	1.03
	sk	-0.75	1.22
	ku	-0.12	0.11
+SI +VIE	18		
	M	7.72	1.06
	SD	3.88	0.95
	sk	-0.19	1.08
	ku	-0.17	0.24
+TI	18		
	M	7.83	1.17
	SD	3.11	1.04
	sk	0.24	0.77
	ku	0.73	-0.88
Overall	92		
	M	8.61	1.40
	SD	3.51	1.10
	sk	-0.31	0.38
	ku	-0.20	-1.45

An examination of Table 4.11 reveals that mean note-scores were the highest for the processing instruction with visual input enhancement group (9.61) and they were the lowest for the structured input with visual input enhancement group (7.72). However, there does not appear to be a large difference between the mean note-scores of any of the

groups. For awareness scores, the processing instruction with visual input enhancement group had the highest mean awareness score (2.14), while the structured input without visual input enhancement had the lowest mean awareness score (1.03). In order to determine if the differences were statistically significant, the data were subjected to a MANOVA with one independent variable (type of instruction) and two dependent variables (note-scores and awareness scores).

Before submitting the data to the statistical test, multivariate normality and homogeneity of covariance assumptions were assessed. The research design ensured that the assumption of independence was met, as the Authentic Input text and Posttreatment Questionnaire were individually administered to participants online. In addition, there was random assignment of participants to groups. In order to evaluate normality, both univariate and multivariate normality were examined.

Univariate normality was assessed by checking the skewness and kurtosis values of the distributions of note- and awareness scores by group. The distributions of note-scores for all of the groups appear to be fairly normally distributed, with skewness values ranging from -.75 to .24 and kurtosis values ranging from -1.13 to .73. The distributions of awareness scores had skewness values that ranged from -1.09 to 1.22 and kurtosis values that ranged from -1.71 to .24. As some of the skewness and kurtosis values were higher than 1, the Shapiro-Wilk test for normality was performed on each dependent variable by group. The *p* values for all of the tests were higher than .05, which indicates that the assumption of univariate normality was not violated.

In order to assess multivariate normality, the data were first checked for multivariate outliers by calculating the effect size for note- and awareness scores using Mahalanobis' Distance: maximum $D^2 = 7.95$. Two multivariate outliers were identified; however, the outliers were not outside the range of possible scores as indicated by the *F* test to check for multivariate outliers, $F\ (2, 89) = 4.31$, $p < .05$. Since the scores for the multivariate outliers were possible, the analysis was run with the scores included. Multivariate skewness was checked and found to be in the range expected for samples from a multivariate normal distribution, $X^2\ (4) = 4.44$, $p > .05$. The chi-square value was not significant, which indicates that multivariate skewness was not violated. Similarly, multivariate kurtosis was checked and converted to a z-score, which fell within the normal distribution, indicating that multivariate kurtosis was not violated. Thus, the examination of multivariate skewness and kurtosis values revealed that the assumption of multivariate normality was met.

The correlation between the two dependent variables was checked to examine the strength of the relationship. The relationship between note-scores and awareness scores was linear and positive ($r = .27$). In addition, the standard deviations for both dependent variables for each group were examined and found to be similar. Finally, in order to verify that the assumption of homogeneity of covariance matrices was met, the data were subjected to Box's M test. An examination of the Box's M test revealed that the chi-square value was not statistically significant, $\chi^2\ (12) = 6.59$, $p > .05$. Thus, it is reasonable to conclude that the assumption of homogeneity of covariance matrices was not violated.

In addition, the degree of association was quantified by calculating η^2. The obtained value was 0.17, which indicates that approximately 17% of the generalized variance in note- and awareness scores was accounted for by type of instructional method. The proportion accounted for in the population was estimated to be somewhat less, $\hat{\omega}_c^2 = .07$.

Once it was verified that the assumptions were met, the data were submitted to a MANOVA test, with note- and awareness scores as the dependent variables and type of instruction as the independent variable. The test yielded a statistically significant difference in group centroids, $\Lambda = 0.83$, $p < .05$. The effect size for the MANOVA was calculated, $\eta^2 = .17$, which was a medium effect size.

Since the MANOVA was significant, follow-up ANOVA tests were performed on each of the dependent variables to determine on which of the variables the groups differed. The follow-up ANOVA with note-scores as the dependent variable revealed that there was no statistically significant difference for type of instruction, F (4, 87) = 1.15, $p > .05$. However, the follow-up ANOVA with awareness scores as the dependent variable revealed that there was a statistically significant difference for type of instruction F (4, 87) = 3.98, $p < .01$. The magnitude of the treatment effect was computed, $R^2 = 0.15$, which was a small treatment effect. Table 4.12 presents the results of the significant ANOVA.

Table 4.12

ANOVA Summary Table for Awareness Scores by Instructional Treatment Group

Source	*df*	*SS*	*MS*	*F*
Type of instruction (A)	4	16.61	4.15	3.98*
(S/A)	87	93.01	1.07	
Total	91	109.62		

Note. $N = 92$.

*$p < .01$.

Because significant differences were found on the one-way ANOVA with awareness scores as the dependent variable, a post-hoc Tukey test was performed controlling alpha at the .05 level for the set of tests to determine which groups had significant differences. Tukey's HSD test showed that the mean awareness score for the processing instruction with visual input enhancement group was significantly higher than mean awareness scores for the traditional instruction group, the structured input without visual input enhancement group, and the structured input with visual input enhancement group ($p < .05$). However, the Tukey test did not reveal any significant differences in mean awareness scores between the two processing instruction groups (processing instruction with visual input enhancement and processing instruction without visual input enhancement).

Analysis of Text and Grammar Comprehension Scores

Two scores were obtained from a comprehension test that participants completed after reading an authentic input passage in Spanish that contained 15 instances of the targeted grammatical form. The comprehension test measured participants' ability to comprehend the message of the passage and also their ability to comprehend the referential meaning of the targeted grammatical form, also known as input processing. Thus, the comprehension test yielded two scores, a text comprehension score and a grammar comprehension score. The maximum score for text comprehension was 5, and the maximum score for grammar comprehension was 6. The descriptive statistics for text and grammar comprehension scores by group are presented in Table 4.13.

Table 4.13

Descriptive Statistics on Text and Grammar Comprehension Scores by Group

Instructional			Type of Measure	
Group		*n*	Text	Grammar
+PI -VIE		19		
	M		4.05	4.21
	SD		0.85	2.09
	sk		-0.72	-0.51
	ku		0.37	-1.59
+PI +VIE		18		
	M		4.11	4.50
	SD		0.76	1.92
	sk		-0.19	-0.70
	ku		-1.12	-1.37

Instructional Group		*n*	Type of Measure: Text	Type of Measure: Grammar
+SI -VIE		19		
	M		4.32	2.47
	SD		0.82	1.54
	sk		-0.68	1.33
	ku		-1.13	1.17
+SI +VIE		18		
	M		4.44	2.94
	SD		0.86	1.76
	sk		-1.07	0.82
	ku		-0.70	-0.75
+TI		18		
	M		4.17	3.22
	SD		1.20	2.18
	sk		-1.05	0.37
	ku		-0.58	-1.73
Overall		92		
	M		4.22	3.46
	SD		0.90	2.02
	sk		-0.82	0.21
	ku		-0.40	-1.65

A visual examination of Table 4.13 reveals that the group means for text comprehension appear to be similar for all five groups. The structured input with visual input enhancement group had the highest mean score for text comprehension (4.44) and the processing instruction without visual input enhancement had the lowest mean score (4.05). For grammar comprehension, the processing instruction with visual input

enhancement group had the highest mean score (4.50), while the structured input without visual input enhancement group had the lowest mean score (2.47).

In order to determine if the group differences were significant, the data were subjected to a MANOVA with type of instruction as the independent variable and text and grammar comprehension scores as the dependent variables. However, before submitting the data to the MANOVA, multivariate normality, and homogeneity of covariance matrices were assessed, which are assumptions of the statistical test. In order to assess the assumption of normality, both univariate and multivariate normality were examined.

Univariate normality was assessed by examining skewness and kurtosis values for each dependent variable by group. For the distributions of text comprehension scores, skewness values ranged from -1.07 to -.19 and kurtosis values ranged from -1.13 to .37. For the distributions of the grammar comprehension scores, skewness values ranged from -.70 to 1.33 and kurtosis values ranged from -1.73 to 1.17. Thus, the distributions for these dependent measures were not considered to be markedly skewed or kurtotic. Shapiro-Wilk tests were also performed on each dependent variable by group. The Shapiro-Wilk tests revealed that the scores for both text and grammar comprehension were not normally distributed. The data set was checked for outliers by examining box plots; however, there were no significant outliers in the data set.

Data were also examined to determine if the assumptions of multivariate skewness and kurtosis were met. The results suggested departures from normality for both multivariate skewness and kurtosis. The data were screened for multivariate outliers

using Mahalnobis' distance. The maximum D^2 value was 7.63, and two multivariate outliers were identified. The data were run without the multivariate outliers, and there was not a significant impact on multivariate skewness or kurtosis values. Therefore, the multivariate outliers were retained in the data set. Consequently, the assumption of multivariate normality was not met. However, there is evidence to suggest that MANOVA is robust against lack of multivariate normality (Stevens, 2002).

To determine if the departure from normality adversely affected power, Steven's power analysis was performed using statistical analysis software (SAS). The analysis revealed that the power of the MANOVA test was estimated to be .85. According to Stevens (2002), power of .80 is sufficient to detect group differences if they exist. Thus, it appears that the departure from normality did not adversely affect power. In addition, the MANOVA test is robust against violations of normality. Thus, the decision was made to proceed with the analysis.

The final assumption that was checked was homogeneity of covariance matrices. Box's M test was used to assess this assumption. It should be noted that Box's M test is highly sensitive to violations of normality. Examination of the chi-square value from Box's M test reveals that the *p* value was not statistically significant, X^2 (12) = 7.63, $p >$ .05. Thus, it is reasonable to conclude that the assumption of homogeneity of covariance matrices was not violated.

In addition, the degree of association was quantified by calculating η^2. The obtained value was 0.17, which indicates that approximately 17% of the generalized variance in text and grammar comprehension scores was accounted for by type of instructional method. The proportion accounted for in the population was estimated to be somewhat less, $\hat{\omega}_c^2 = .07$.

After assessing the assumptions of the test, the data were subjected to a MANOVA with one independent between-subjects variable (type of instruction) and two dependent variables (text and grammar comprehension scores). The results revealed a significant difference in group centroids, $\Lambda = 0.83$, $p < .05$. The effect size for the MANOVA was calculated, $\eta^2 = .17$, which was a medium effect size.

As the MANOVA was significant, follow-up ANOVA tests were performed on each of the dependent variables to determine on which of the variables the groups differed. The ANOVA with text comprehension scores as the dependent variable did not reveal a significant effect for type of instruction, F (4, 87) = 0.57, $p > .05$. However, the ANOVA with grammar comprehension scores as the dependent variable revealed a significant effect for type of instruction, F (4, 87) = 3.72, $p < .01$. The magnitude of the treatment effect was computed, $R^2 = 0.15$, which was a small treatment effect. The results of the significant ANOVA are presented in Table 4.14.

Table 4.14

ANOVA Summary Table for Grammar Comprehension Scores by Instructional Treatment Group

Source	*df*	*SS*	*MS*	*F*
Type of instruction (A)	4	54.45	13.61	3.72*
(S/A)	87	318.45		
Total	91	372.90		

Note. $N = 92$.

*$p < .01$.

Because the one-way ANOVA test revealed significant group differences in mean grammar comprehension scores, a post-hoc Tukey test was performed controlling alpha at the .05 level for the set of tests to determine which groups had statistically significant differences. Tukey's HSD test showed that the processing instruction with visual input enhancement and the processing instruction without visual input enhancement groups had significantly higher mean grammar comprehension scores than the structured input without visual input enhancement group ($p < .05$). However, the Tukey test did not reveal any significant differences between the two processing instruction groups and the structured input with visual input enhancement group or between the two processing instruction groups and the traditional instruction group.

Correlational Analyses of Comprehension Test Scores

In order to determine if there was a relationship between text comprehension and input processing (grammar comprehension), a Pearson product moment correlation coefficient was computed between the variables text comprehension and grammar comprehension for each of the four experimental groups (processing instruction without visual input enhancement, processing instruction with visual input enhancement, structured input without visual input enhancement, and structured input with visual input enhancement) and for the comparison group (traditional instruction). For the processing instruction without visual input enhancement group, r = -.19, which indicates a weak negative relationship between text comprehension and input processing. For the processing instruction with visual input enhancement group, r = .20, which indicates a weak positive relationship between text comprehension and input processing. Similarly, for the structured input without visual input enhancement group, r = .27, which indicates a weak positive correlation between text comprehension and input processing. However, the structured input with visual input enhancement group and the traditional instruction group demonstrated no correlation between text comprehension and input processing, r = .06 and r = .03 respectively.

Summary of the Posttreatment Questionnaire

At the end of the study, participants completed a Posttreatment Questionnaire. The purpose of the questionnaire was twofold: (a) it was a retrospective measure of participants' level of awareness of the targeted verb form that was embedded in an authentic input text, and (b) it elicited participants' opinions about the study related

materials. The Posttreatment Questionnaire asked participants whether they believed that the study materials were more helpful and/or enjoyable than their regular course materials. Participants were also asked to rank the difficulty level of the study materials compared to their regular course materials, and they were asked if they felt that the study grammar activities were new and insightful. In addition, participants were asked to select the elements of the instructional treatments that they found to be the most and least helpful for learning the targeted grammatical form. Finally, participants were asked if they sought outside assistance while completing any of the study activities; and if so, they were asked to list which resource(s) they consulted.

The results of the Posttreatment Questionnaire revealed that 82 students (90.22%) believed that the grammar activities presented in the study were new and insightful. Only 9 students (9.78%) stated that the study grammar activities were not new and insightful. Interestingly, 17 of the 18 students in the traditional instruction group stated that they believed that the study grammar activities were new and insightful, even though the activities that they completed were almost identical to their regular course materials. It is important to note that all participants were told that they were receiving a novel instructional technique for teaching complex Spanish grammar online. By and large, participants in the traditional instruction group did not recognize that the method of instruction that they received was not new or unique.

When asked to rate the level of difficulty of the study materials compared to participants' regular course materials, 50 participants (54.34%) stated that the study materials were easier than their regular course materials, 21 participants (22.83%) felt

that the study materials were harder than their regular course materials, and 21 participants (22.83%) stated that the study materials were about the same as their regular course materials with respect to level of difficulty.

When asked if the study materials were more helpful than their regular course materials, 72 participants (78.26%) expressed that the study materials were more helpful than their regular course materials, and 20 participants (21.74%) stated the study materials were not more helpful than their regular course materials.

Participants were also asked if the study materials were more enjoyable than their regular course materials. A total of 52 students (56.52%) felt that the study materials were more enjoyable than their regular course materials, while 40 students (43.48%) felt that the study materials were not more enjoyable than their regular course materials.

In an effort to uncover which elements of the instructional treatments the participants in the various groups believed were the most and least helpful for learning Spanish grammar, they were given two lists of the major components in the study materials, and they were asked to check the ones that they felt were the most and least helpful to them. Participants were able to check one, several, all, or none of the components that were listed. The participants in all of the groups were exposed to the following three components: listening activities, written activities, and graphics. However, not all of the study participants selected these activities as being the most or least helpful for learning. A total of 40 participants (43.48%) selected the listening activities as being the most helpful component of the study materials; while 41 participants (44.56%) stated that the listening activities were the least helpful component

of the study materials. A total of 11 participants (11.96%) did not select the listening activities as being helpful or unhelpful for learning. For the written activities, 65 participants (70.65%) felt that they were helpful, 16 (17.39%) felt that they were not helpful, and 11 (11.96%) did not rate the written activities as either helpful or unhelpful. Regarding the graphics, 16 participants (17.39%) found the graphics to be helpful and 30 participants (32.61%) found the graphics to be unhelpful. However, 46 participants (50%) did not rate the graphics as being particularly helpful or unhelpful for learning.

The following components were specific to certain groups: speaking activities, word animations, grammar explanations, and information on processing strategies. Only the traditional instruction group had speaking activities. There were 18 participants in the traditional instruction group and 3 participants (16.67%) in this group stated that the speaking activities were helpful, while 3 participants (16.67%) stated that the speaking activities were not helpful. However, 12 participants (66.66%) in the traditional instruction group did not rate the speaking activities as being particularly helpful or unhelpful for learning.

Regarding the word animations, the participants in two groups received instructional treatments that included word animations: the processing instruction with visual input enhancement group and structured input with visual input enhancement group. There were a total of 37 participants in both of these groups, and 7 participants (18.92%) in these two groups stated that the word animations were helpful, while 8 participants stated that they were not helpful (21.62%). However, 22 participants

(59.46%) in the two groups that received visual input enhancement did not rate the word animations as being helpful or unhelpful for learning.

Three groups received an explicit explanation of grammar: the processing instruction without visual input enhancement group, the processing instruction with visual input enhancement group, and the traditional instruction group. There were a total of 55 participants in these three groups, and 26 students (47.27%) in these three groups expressed that the grammar explanations were helpful, while only 2 students (3.64%) felt that the grammar explanations were not helpful. A total of 27 students (49.09%) did not rate the grammar explanations as being particularly helpful or unhelpful for learning.

Finally, two groups received information on processing strategies: the processing instruction without visual input enhancement group and the processing instruction with visual input enhancement group. There were a total of 37 participants in these two groups, and 15 of the 37 participants (40.54%) found the information on processing strategies to be helpful, while 3 participants (8.12%) did not find the information on processing strategies to be helpful. Over half of the participants in these two groups (19 participants or 51.35%) did not rate the information on processing strategies as being particularly helpful or unhelpful for learning.

Finally, only 2 of the 92 participants (2.17%) in the study stated that they consulted outside resources when completing their web based instructional activities. A closer examination of their questionnaires revealed that one participant in the traditional instruction group consulted a dictionary for unknown vocabulary words and one participant in the processing instruction with visual input enhancement group consulted

the Internet for unknown vocabulary words. None of the participants indicated that they consulted their textbooks, the Internet, their teacher, their peers, or any other resource for an explanation of the targeted grammatical form. A breakdown of participants' responses on the Posttreatment Questionnaire by group is provided in Table 4.15.

Participants' Open-Ended Responses from the Posttreatment Questionnaire

Participants were asked to express their opinions on the Posttreatment Questionnaire, which revealed information about learners' preferences. A close examination of participants' responses reveals that the learners in the two PI groups expressed a clear preference for the PI materials over their regular course materials (traditional instruction), as 86.49% of participants in these two groups stated that the PI materials were more helpful than their regular course materials, 70.27% of participants expressed that the PI activities were easier than their regular course materials, and 91.89% of participants stated that the PI materials were a new and insightful way to learn Spanish grammar. Students had the opportunity to express their opinions on the Posttreatment Questionnaire, and the majority of students in the two PI groups expressed a clear preference for the study materials over their present course materials, mainly due to the explicit information that they received. Participant #178 from Class 3 stated,

> I think the grammar package presented the information in a way that was easy to understand. I picked up on it a lot easier than some other concepts I've encountered during the Spanish II course. I think the grammar activities broke things down into very understandable bits of information. A lot of times in the Spanish course, things are just thrown at us without much of an explanation as to why things are the way they are. I actually understood what was going on in the grammar activities for the study.

Table 4.15

Participant Responses from the Posttreatment Questionnaire

	+PI-VIE (n = 19)	+PI+VIE (n = 18)	+SI-VIE (n = 19)	+SI+VIE (n = 18)	+TI (n = 18)
Study grammar activities new and insightful	Agree (19) Disagree (0)	Agree (15) Disagree (3)	Agree (16) Disagree (3)	Agree (16) Disagree (2)	Agree (17) Disagree (1)
Difficulty of study materials compared to regular course materials	Easier (14) Harder (1) Same (4)	Easier (12) Harder (2) Same (4)	Easier (9) Harder (4) Same (6)	Easier (7) Harder (8) Same (3)	Easier (8) Harder (6) Same (4)
Study materials more helpful than regular course materials	Agree (18) Disagree (1)	Agree (14) Disagree (4)	Agree (14) Disagree (5)	Agree (13) Disagree (5)	Agree (13) Disagree (5)
Study materials more enjoyable than regular course materials	Agree (13) Disagree (6)	Agree (10) Disagree (8)	Agree (9) Disagree (10)	Agree (7) Disagree (11)	Agree (13) Disagree (5)
<u>Most/Least helpful aspects</u>					
listening activities	Helpful (10) Not helpful (7)	Helpful (10) Not helpful (4)	Helpful (4) Not helpful (15)	Helpful (11) Not helpful (6)	Helpful (5) Not helpful (9)
written activities	Helpful (13) Not helpful (2)	Helpful (10) Not helpful (2)	Helpful (15) Not helpful (4)	Helpful (10) Not helpful (6)	Helpful (17) Not helpful (2)
graphics	Helpful (2) Not helpful (8)	Helpful (2) Not helpful (6)	Helpful (5) Not helpful (3)	Helpful (2) Not helpful (9)	Helpful (5) Not helpful (4)
speaking activities	N/A	N/A	N/A	N/A	Helpful (3) Not helpful (3)
word animations	N/A	Helpful (1) Not helpful (0)	N/A	Helpful (5) Not helpful (4)	N/A
grammar explanations	Helpful (11) Not helpful (0)	Helpful (8) Not helpful (2)	N/A	N/A	Helpful (7) Not helpful (0)
processing strategies	Helpful (8) Not helpful (1)	Helpful (7) Not helpful (2)	N/A	N/A	N/A

Note. N = 92.

Another aspect of PI that participants found helpful was the information on processing strategies. Participant #122 from Class 2 stated the following:

> I think that the grammar package expressed the subjunctive forms in a much more "understandable" explanation. Also, I appreciated the document that explained the common problems that Spanish language learners encounter when trying to understand the subjunctive form. This was very helpful for me and explained a different way of thinking when approaching a Spanish sentence in the subjunctive form. The materials in the activity package were significantly easier for me to understand, and in my opinion were much more informative than the book assigned to this course.

Interestingly, several participants in the two PI groups stated that they felt the study materials "taught" them the information, while the regular course materials expected them to teach the information to themselves. Participant #165 from Class 2 stated the following:

> I feel like I have learned more from using this method where it is explained instead of the trial and error method of the current system. There came a point in the activity package where all of a sudden I felt like I understood the concept of subjunctive vs. indicative. The best way I can phrase the difference is that with the explanations in the word documents I felt like I was being taught something whereas with the normal method, it seems like I am teaching myself.

As all three classes that comprised the sample in the presents study operated under the traditional instruction paradigm, students were expected to work independently and learn the course content through interaction with the materials. Interestingly, many of the participants in the two PI groups expressed the belief that the study materials provided them with instruction, while their current course materials required them to teach the course content to themselves. Both the PI materials and participants' regular course materials provided an explicit explanation of grammar; however, the PI materials were

not paradigmatic as only one subjunctive form was presented (the third person) in order not to overwhelm learners' capacity to process input. Further, the PI materials provided additional information on processing strategies, which are not included in participants' regular course materials.

For the two structured input groups, the participants expressed more mixed feelings about the study materials. While 86.79 % of the participants in these two groups felt that the study grammar activities were a new and insightful way to learn Spanish grammar, only 43.24% of participants in the structured input groups expressed that the study materials were easier than their regular course materials, and 56.76% of participants expressed that the study activities were less enjoyable than their current course materials. An examination of participants' opinions regarding the study activities revealed that they sometimes felt lost and confused because they did not receive an explanation of the grammar rules for using the subjunctive.

Participant #151 from Class 2 stated,

> I didn't feel there was enough information or instruction to fully understand how to do the activity. I feel the book doesn't always give enough information and the grammar pack that I worked with had even less information.

Another participant, #164 from Class 2 stated the following:

> The grammar package presented the verbs in a way that was easy to understand, but didn't give me enough information to fully understand the conjugations. It did improve my ability to recognize them but didn't help me to conjugate them in sentences.

It appears that the participants in the structured input groups felt that they were lacking key information that they needed to complete the activities correctly. Although these

participants received structured input activities with an example of how to answer each activity type correctly, they did not receive an explicit explanation of grammar or information on processing strategies.

The responses from the participants in the traditional instruction group were very mixed as well. Even though these participants received instructional activities and grammar explanations that were identical to their regular course materials, 91.67% of participants in the traditional instruction group stated that the study activities presented grammar in a new and insightful way. Upon closer inspection of participants' responses, it appears that many of them were referring to the way that the information was displayed rather than the content of the instruction. For example, participant #54 from Class 1 stated,

> I found it to have some similar teaching styles that are found in the online class except I like the style of this study more than that of the class. I found it to be more helpful and a little more informative, displaying the information in different ways.

The traditional instruction group had the same format as the experimental groups with respect to screen size, navigation, tool bars, etc. However, it is possible that the learners found the interface and the way the instructional content was visually displayed to be more helpful than their regular course materials.

In addition, 41.67% of the participants in the traditional instruction group felt that the study materials were easier than their regular course materials, while 38.89% of participants felt that the study materials were harder than their regular course materials.

Participants' opinions about the efficacy of the materials were equally mixed. Participant #7 from Class 1 stated,

> I found that it was a lot more helpful in helping me understand the subjunctive tense and be able to use it and write it in sentences. I think playing individual sentences and having to pick out verbs or determining if the sentence was in the subjunctive or indicative tense was new a proved to be a lot easier than the activities I normally do in my online Spanish class. Perhaps it was because there were many little activities and individual questions and recordings instead of paragraphs to be read and lots of long activities.

In the previous example, the participant expressed that the study materials helped her learn subjunctive verses indicative contrasts. She also mentions that the format of the study grammar activities was helpful because there were many short activities rather than a few longer ones. This response and others like it reveal that the traditional instruction materials in the study may have been slightly easier for participants than their regular course materials because they were only required to produce sentential-level output, either orally or in writing. In contrast, their regular course materials required them to produce discourse-level output, or written and spoken output that spanned one or two paragraphs in length.

Participant #142 from Class 2 felt that the study materials were not particularly helpful or unhelpful. She stated,

> It did help some. I still don't understand how to change the verbs in each sentence. These activities seemed harder but I think that is only because I don't really understand what is needed. I don't know how to change the verbs at all. The way things were explained was better. I don't really understand most of the information in the book because it is in Spanish and I still don't speak Spanish.

This participants points out another key difference between the study materials and participants' regular course materials; the directions were given in English for all four experimental groups and the comparison group in order to avoid confusion. With participants' regular course materials, most of the instructions for activities are given in Spanish.

Finally, 72.22% of the participants in the traditional instruction group felt that the study materials were more helpful than their regular course materials. While this figure was initially surprising since the study activities were taken directly from participants' regular course materials, an examination of their responses revealed that there were three key factors that contributed to participants' preference for the study activities over their regular course activities: (a) the way the content was displayed visually, (b) the study activities only required participants to produce sentential-level output, and (c) the instructions were given in English. It is important to note that these differences were equivalent across the treatment groups in the present study. The participants in all five groups received the instructional activities in the same format (screen design, navigation, etc.), all groups received instructions in English, and while participants in the traditional instruction group were only required to produce sentential-level output, participants in the four experimental groups were only required to interpret sentential-level input.

Out of the 92 participants in the study, 72 (78.26%) expressed that the study activities were more helpful than their regular course materials. In addition, many participants in all five groups expressed a clear dislike for their regular course materials on the Posttreatment Questionnaire. The participants were very familiar with their

regular course materials and had been working with them for almost a full academic year by the time that the study took place. Their regular course materials fit into what Paultson (1972) describes as traditional instruction, and they were delivered within the traditional instruction distance learning paradigm, which relies on the materials rather than on the teacher to provide instruction.

Overall Summary of the Results of the Major Statistical Analyses

Repeated Measures Analyses

Regarding the repeated measures analysis that examined participants' interpretation of the subjunctive at three points in time (Pretest, Posttest 1, and Posttest 2), the results indicated that there was a significant Group x Time interaction effect, F (8, 174) = 2.10, $p < .05$. A Post-hoc Tukey test revealed that the processing instruction with visual input enhancement group had a significantly higher mean interpretation test score than the structured input without visual input enhancement group at Posttest 1 compared to Pretest ($p < .05$). There was also a significant main effect for time, F (2, 174) = 100.26, $p < .0001$; however, there was not a significant between-subjects effect for type of instruction. As a follow-up to the significant main effect for time, post-hoc contrast tests were performed. The contrast tests revealed that the mean interpretation test score was significantly higher at Posttest 1 compared to Pretest, F (1, 87) = 182.86, $p < .0001$. The mean interpretation test score was also significantly lower at Posttest 2 compared to Posttest 1, F (1, 87) = 17.25, $p < .0001$. However, the mean interpretation test score was still significantly higher at Posttest 2 compared to Pretest, F (1, 87) = 87.30, $p < .0001$.

For the repeated measures analysis that investigated participants' production of the subjunctive over time, the results indicated that there was not a significant Group x Time interaction effect; however, there was a highly significant main effect for time, F (2, 174) = 137.31, $p < .0001$. There was not a significant between-subjects effect for type of instruction. Post-hoc contrast tests were performed as a follow-up to the significant main effect for time. The contrast tests revealed that the mean production test score was significantly higher at Posttest 1 compared to Pretest, F (1, 87) = 212.11, $p < .0001$. In addition, the mean production test score was significantly lower at Posttest 2 compared to Posttest 1, F (1, 87) = 10.63, $p < .01$. However, the mean production test score was still significantly higher at Posttest 2 compared to Pretest, F (1, 87) = 136.05, $p < .0001$.

The repeated measures analysis that examined participants' interpretation of the indicative did not reveal a significant Group x Time interaction effect. The test did reveal a significant main effect for time, F (2, 174) = 7.77, $p < .001$; however, there was not a significant between-subjects effect for type of instruction. As a follow-up to the main effect for time, post-hoc contrast tests were performed, which revealed that the mean interpretation test score was significantly higher at Posttest 1 compared to Pretest, F (1, 87) = 14.77, $p < .001$. Similarly, the mean interpretation test score was significantly higher at Posttest 2 compared to Pretest, F (1, 87) = 7.78, $p <.001$. Conversely, there was not a significant difference in the mean interpretation test score from Posttest 1 to Posttest 2, F (1, 87) = 1.50, $p >.05$.

For the analysis of participants' scores for production of the indicative over time, the repeated measures analysis did not reveal a significant Group x Time interaction

effect. However, there was a significant main effect for time, F (2, 174) = 04.92, $p < .05$, and there was not a significant between-subjects effect for type of instruction. Post-hoc contrast tests were performed as a follow-up to the significant main effect for time. The contrast tests revealed that the mean production test score was significantly higher at Posttest 1 compared to Pretest, F (1, 87) = 8.79, $p < .01$. However, there was no significant difference in the mean production test score from Posttest 1 to Posttest 2, F (1 87) = 4.99, $p = .03$. Nor was there a significant difference in the mean production test score at Posttest 2 compared to Pretest, F (1 87) = 1.03, $p > .05$. In order to control the Type I error rate, the Bonferroni adjustment was applied, with alpha set at .0167 for the set of post-hoc contrast tests.

Multivariate Analyses

The MANOVA that examined participants' note- and awareness scores revealed a statistically significant difference in group centroids, $\Lambda = 0.83$, $p < .05$. Follow-up ANOVAs on both dependent measures revealed that there were significant differences in mean awareness scores by instructional treatment group, F (4, 87) = 3.98, $p < .01$, and a post-hoc Tukey test revealed that the processing instruction with visual input enhancement group performed significantly better than three other groups: the traditional instruction group, the structured input without visual input enhancement group, and the structured input with visual input enhancement group ($p < .05$). However, there were no significant differences in mean awareness scores between the processing instruction with visual input enhancement group and the processing instruction without visual input enhancement group.

The MANOVA that examined participants' text and grammar comprehension scores also revealed a significant difference in group centroids, $\Lambda = 0.83$, $p < .05$. Follow-up ANOVAs on both dependent measures revealed that there were significant differences in mean grammar comprehension test scores by instructional treatment group, $F(4, 87) = 3.72$, $p < .01$. A post-hoc Tukey test revealed that the processing instruction with visual input enhancement group and the processing instruction without visual input enhancement performed significantly better than the structured input without visual input enhancement group ($p < .05$). However, the two processing instruction groups (with and without visual input enhancement) did not perform significantly better than the structured input with visual input enhancement group and the traditional instruction group.

Correlational Analyses

There was no correlation found between text and grammar comprehension scores for the traditional instruction group ($r = .03$) or the structured input with visual input enhancement group ($r = .06$). There was a weak negative correlation between text and grammar comprehension scores for the processing instruction without visual input enhancement group ($r = -.19$). There was a weak positive correlation between text and grammar comprehension scores for the structured input without visual input enhancement group ($r = .27$) and the processing instruction with visual input enhancement group ($r = .20$).

Chapter 5

Discussion

Introduction

This chapter provides a discussion of the results of the experiment that compared four novel instructional techniques (processing instruction without visual input enhancement, processing instruction with visual input enhancement, structured input without visual input enhancement, and structured input with visual input enhancement) with traditional instruction for the acquisition of the subjunctive in adjectival clauses by intermediate-level distance learners of Spanish. The chapter begins with a discussion of the results of the experiment in terms of the research questions and hypotheses. After discussing the findings of the experiment, the chapter also presents a discussion of the theoretical and pedagogical implications of the research findings. Finally, the limitations of the study are presented and discussed, and some suggestions are made for future research.

Discussion of Results

Discussion of Findings in Relation to the Research Questions

The present study investigated the components of processing instruction, a novel instructional technique that is informed by second language acquisition (SLA) research. Processing instruction (PI) consists of an explicit explanation of grammar that is not

paradigmatic, information on processing strategies, and structured input activities. VanPatten (1993, 1996, 2002, 2004) claims that only structured input activities are needed to bring about improved performance on interpretation and production tasks. Interpretation tasks require learners to comprehend the referential meaning of targeted grammatical forms, and production tasks require learners to produce targeted forms either orally or in writing. However, Farley (2004) and Fernández (2008) found that the explicit explanation component of PI is necessary when the targeted grammatical form is complex. The present study combined PI and structured input activities with visual input enhancement (VIE) in an attempt to increase the salience of subjunctive verb forms for web based delivery. VanPatten's (2004) Sentence Location Principle states that items that are in the sentence medial position are processed last by second language (L2) learners. The targeted form of the present study was the subjunctive in adjectival clauses when the referent is uncertain, hypothetical, or unknown to the speaker. In Spanish, the subjunctive in adjectival clauses always occurs in the sentence medial position in natural speech. Thus, VIE, which was operationalized as word animation in the present study, was utilized to facilitate noticing of targeted verb forms as participants read input sentences online. In addition, VIE was combined with structured input activities that were designed to help learners process targeted verb forms correctly. In order to determine if the explicit explanation component of PI is necessary, learners in the experimental groups either received PI, which contained an explicit explanation of grammar, or structured input activities, which did not. The present study also investigated whether the addition of VIE to PI and structured input activities was able to

increase the beneficial effect of these instructional techniques for learning complex Spanish grammar online. A meta-analysis on VIE only revealed a slight positive effect for VIE (S. Lee & Huang, 2008) on grammar learning; however, in past language acquisition studies VIE was only operationalized as simple typographical enhancements such as underling or bolding targeted forms. The present study updated VIE for web based delivery by using flash programming language to animate subjunctive forms by making them grow larger and smaller for a period of seven seconds after participants opened the link for an input sentence that contained VIE. In addition, the word animations were delivered sequentially rather than simultaneously to avoid overloading learners' capacity to process L2 input and to avoid distracting them from other static items on the screen.

The novel instructional techniques investigated in the present study were compared to traditional instruction, which is currently the dominant paradigm for foreign language instruction at the secondary and postsecondary levels in the United States (VanPatten, 2004). Traditional instruction requires learners to produce target language (TL) output immediately after they receive an explicit explanation of grammar that is paradigmatic. Further, traditional instruction places a heavy emphasis on mechanical drill activities, which are vestiges from the audiolingual method, a foreign language teaching method that was founded on the principles of behaviorism. Mechanical drill activities do not require learners to comprehend the stimulus in order to formulate a correct response in the TL. Thus, mechanical drills require learners to focus on form rather than on TL meaning. Conversely, structured input activities require a focus on

both form and meaning in order for learners to answer questions correctly. Past research in the PI strand has found that PI is superior to traditional instruction for interpretation tasks and that PI is equivalent to traditional instruction for production tasks (Benati, 2001, 2005; Cadierno, 1995; VanPatten & Cadierno, 1993a, 1993b; VanPatten & Wong, 2004).

Below are the first two research questions that were addressed within the context of the present study:

1. Is there a differential performance between treatment groups for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by interpretation tasks over time?
2. Is there a differential performance between treatment groups for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by production tasks over time?

Regarding the first research question, the results of the present study differ from the findings of past studies in the PI strand that compared processing instruction with traditional instruction, as past studies found that processing instruction was superior to traditional instruction for interpretation tasks (Benati, 2001, 2005; Cadierno, 1995; VanPatten & Cadierno, 1993a, 1993b; VanPatten & Wong, 2004). A repeated measures ANOVA performed on the interpretation test scores found a significant Group x Time interaction effect, and a post-hoc Tukey test revealed that participants who were exposed to processing instruction with visual input enhancement (+PI +VIE) performed significantly better than participants who were exposed to structured input without visual

input enhancement (+SI -VIE) across time (from Pretest to Posttest 1) as measured by interpretation tasks. The findings of the present study did not indicate that exposure to processing instruction, with or without visual input enhancement, was superior to traditional instruction for interpreting the subjunctive, as there were no significant differences between the processing instruction groups and the traditional instruction group across time. Although the processing instruction with visual input enhancement group (+PI +VIE) outperformed the structured input without visual input enhancement group (+SI -VIE) for interpreting the subjunctive in the short-term, significant group differences were not retained from Posttest 1 to Posttest 2. However, the repeated measures analysis also revealed a highly significant main effect for time. When the overall mean interpretation test score was examined over time, it appears that exposure to the instructional treatments had a beneficial effect on learners' interpretation of the subjunctive, as the mean interpretation test score was significantly higher at both Posttest 1 and Posttest 2 compared to Pretest.

For the second research question, the results of the present study support the findings of past studies in the PI strand. Past studies (Benati, 2001, 2005; Cadierno, 1995; VanPatten & Cadierno, 1993a, 1993b; VanPatten & Wong, 2004) found PI to be equivalent to traditional instruction for production tasks. A repeated measures ANOVA performed on production test scores revealed that there was not a significant Group x Time interaction effect. In addition, there was not a significant between-subjects effect for type of instruction. However, there was a highly significant main effect for time. Thus, when the overall mean production test score was examined over time, it appears

that exposure to the instructional treatments had a beneficial effect on learners' ability to produce the subjunctive, as the mean production test score was significantly higher at both Posttest 1 and Posttest 2 compared to Pretest. Although participants in the four experimental groups never produced the subjunctive verb forms during their instructional treatments, they performed equally as well on production tasks as participants who did, as there was no significant between-subjects effect for type of instruction.

Research Question 3, which is listed below, investigates whether the instructional treatments were able to help participants notice targeted verb forms when they encountered them in authentic input following the instructional treatments.

3. Is there a differential performance between treatment groups in participants' ability to notice targeted forms in subsequent authentic input as measured by note-scores and awareness scores?

To answer this question, noticing was measured two ways: (a) the amount of noticing that took place, and (b) the depth of participants' noticing, which was assessed by examining their level of awareness. In order to assess the amount of noticing that took place, participants took notes while they read an authentic input text online one to three days after completing their instructional treatments. They were asked to note all of the vocabulary words and verb forms that were necessary to comprehend the text. The number of targeted verb forms that participants noted was tallied, and as there were 15 subjunctive forms embedded in the text, the highest note-score possible was 15.

Participants' level of awareness was measured by a Posttreatment Questionnaire that they completed after reading an authentic input passage and taking a comprehension

test. The Posttreatment Questionnaire asked participants if they could state the targeted grammatical form that was present in the authentic input text and give an example of it, which constituted awareness at the level of noticing, or a medium level of awareness (Leow, 2000). Participants were also asked if they could state the morphological rule for using the grammatical form that they listed, and if they were able to do so, they demonstrated awareness at the level of understanding, or a high level of awareness (Leow, 2000). Participants demonstrated a low level of awareness if they were only able to name the grammatical form or provide an example of a subjunctive form from the authentic input text.

By examining note-scores and awareness scores, the present study found that there were no significant differences between the groups for the amount of noticing that took place. In other words, the mean number of targeted verb forms that were noted while participants read an authentic input passage online did not differ significantly by instructional treatment group. However, when participants' depth of noticing was measured by examining their level of awareness, the results revealed that the participants in the processing instruction with visual input enhancement group (+PI +VIE) outperformed the following groups: traditional instruction (+TI), structured input without visual input enhancement (+SI -VIE), and structured input with visual input enhancement (+SI +VIE). Interestingly, the processing instruction with visual input enhancement group (+PI +VIE) did not outperform the processing instruction without visual input enhancement group (+PI -VIE).

It appears that exposure to processing instruction with visual input enhancement helped participants notice the targeted forms in subsequent authentic input with a deeper level of awareness. In other words, participants in the processing instruction with visual input enhancement group not only noticed the targeted verb forms in subsequent authentic input, they were also able to explicitly state the morphological rule for the use of the targeted grammatical form as it appeared in authentic input, which Leow (1997, 2000) defines as noticing with metalinguistic awareness, or noticing at the level of understanding.

Research Question 4, which is listed below, examined participants' text and grammar comprehension scores. The Comprehension Test measured two constructs: (a) comprehension of the propositional content of the input passage, and (b) comprehension of the referential meaning of the targeted verb forms. The second construct refers to grammar comprehension, which is also known as input processing.

4. Following the instructional treatments, is there a differential performance between treatment groups in participants' ability to comprehend the referential meaning of the targeted grammatical form (input processing) and the message of the authentic input text in which it is embedded as measured by grammar comprehension and text comprehension scores?

The results revealed that there were no significant group differences in participants' ability to comprehend the propositional content of the input text. However, there were significant group differences in participants' ability to comprehend the referential meaning of the subjunctive forms that were embedded in the authentic input text that was

received one to three days after completing the instructional treatments. The two processing instruction groups, processing instruction with visual input enhancement (+PI +VIE) and processing instruction without visual input enhancement (+PI -VIE), outperformed the structured input without visual input enhancement group (+SI -VIE) as measured by grammar comprehension scores. This finding lends weight to Leow's (2000) claim that awareness plays a critical role in learners' subsequent processing of L2 input. In addition to the beneficial effect on awareness, it appears that exposure to processing instruction facilitated learners' correct input processing of targeted forms that were embedded in an authentic input text that was received post experimental exposure.

Research Question 5, which is listed below, investigated the relationship between text comprehension and input processing, which are two related but separate constructs.

5. What is the relationship between text comprehension and input processing when learners encounter the targeted grammatical form in subsequent authentic input?

Text comprehension and grammar comprehension scores were examined by group to determine if there was a relationship between the two constructs. The results of Research Question 5 do not indicate that there is a strong relationship between text comprehension and grammar comprehension for any of the groups that were investigated in the present study. There was no correlation found between text and grammar comprehension scores for the traditional instruction (+TI) group or the structured input with visual input enhancement group (+SI +VIE). There was a weak negative correlation between text and grammar comprehension scores for the processing instruction without visual input

enhancement group (+PI -VIE). Several participants in this group appeared to have low text comprehension scores, but high grammar comprehension scores, which may account for the inverse relationship that was found. There was a weak positive relationship between text and grammar comprehension scores for the structured input without visual input enhancement group (+SI -VIE) and the processing instruction with visual input enhancement group (+PI +VIE). These results mirror the findings of J.F. Lee (1998) and J.F. Lee and Rodríguez (1997). J.F. Lee (1998) found no correlation between comprehension and input processing when examining L2 learners' comprehension of words, and J.F. Lee and Rodríguez (1997) found a weak positive relationship between the two constructs when examining L2 learners' comprehension of sentences. While theoretically there should be a strong positive relationship between comprehension and input processing; thus far, no study has been able to support this claim. It is not possible to claim that good comprehenders are also good input processors, or conversely that poor comprehenders are poor input processors.

Discussion of Findings in Relation to the Research Hypotheses

There were seven hypotheses related to the first two research questions in the present study, which are presented below. The hypotheses were formulated based upon previous empirical research and theory in the areas of processing instruction and visual input enhancement. The research studies and theory associated with these areas were presented and discussed in the review of literature. Each hypothesis is listed below with a brief synopsis of whether the results of the present study either support or refute each hypothesis.

Hypothesis 1: Learners who are exposed to processing instruction and structured input activities will outperform learners who are exposed to traditional instruction for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by interpretation tasks over time. (+PI -VIE and +SI –VIE > TI)

The results of the present study do not support Hypothesis 1, as there were no statistically significant differences between learners who received processing instruction and structured input activities and learners who received traditional instruction as measured by interpretation test scores across time.

Hypothesis 2: Learners who are exposed to processing instruction and structured input activities will perform as well as learners who are exposed to traditional instruction for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by production tasks over time. (+PI -VIE and +SI –VIE = TI)

The results of the present study support Hypothesis 2. There were no statistically significant differences between learners who received processing instruction and structured input activities and learners who received traditional instruction as measured by production test scores across time.

Hypothesis 3: Learners who are exposed to processing instruction and structured input activities with visual input enhancement will outperform learners who are exposed to traditional instruction for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by interpretation tasks over time. (+PI +VIE and +SI +VIE > TI)

Hypothesis 3 is not supported by the findings of the present research study, as there were no significant differences between learners who received processing instruction and structured input activities with visual input enhancement and learners who received traditional instruction as measured by interpretation test scores across time.

Hypothesis 4: Learners who are exposed to processing instruction and structured input activities with visual input enhancement will perform as well as learners who are exposed to traditional instruction for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by production tasks over time. (+SI +VIE and +SI +VIE = TI)

The results of the present study support Hypothesis 4. The present study did not find any significant differences between the groups as measured by production test scores; thus, participants in the experimental groups performed equally as well as participants who received traditional instruction for production tasks, even though participants in the experimental groups never produced the targeted forms during their instructional treatments.

Hypothesis 5: Learners who are exposed to processing instruction and structured input activities with visual input enhancement will outperform learners who are exposed to processing instruction and structured input activities without visual input enhancement for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by interpretation tasks over time. (+PI +VIE and +SI +VIE > +PI –VIE and +SI –VIE)

Hypothesis 5 is partially supported by the findings of the present research study. The processing instruction with visual input enhancement group had significantly higher

mean interpretation test scores than the structured input without visual input enhancement group from Pretest to Posttest 1. However, there were no significant group differences between the processing instruction with visual input enhancement group and the following groups: the processing instruction without visual input enhancement group, the structured input with visual input enhancement group, and the traditional instruction group. It is also important to note that significant group differences were not retained from Posttest 1 to Posttest 2.

Hypothesis 6: Learners who are exposed to structured input activities alone will not perform as well as learners who are exposed to processing instruction for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by interpretation tasks over time. (+SI –VIE < +PI -VIE)

The results of the research study do not support Hypothesis 6. There were no significant differences in mean interpretation test scores between the structured input without visual input enhancement group and the processing instruction without visual input group across time.

Hypothesis 7: Learners who are exposed to structured input activities combined with visual input enhancement will perform as well as learners who are exposed to processing instruction for the acquisition of the present subjunctive in adjectival clauses in Spanish as measured by interpretation tasks over time. (+SI +VIE = +PI -VIE)

Hypothesis 7 was supported by the results of the present research study. There were no significant differences in mean interpretation test scores between the structured

input with visual input enhancement group and the processing instruction without visual input enhancement across time.

Hypothesis 8a: Learners who are exposed to processing instruction and structured input activities with visual input enhancement will notice more targeted verb forms that are embedded in a subsequent authentic input passage than learners who are exposed to traditional instruction and learners who are exposed to processing instruction and structured input activities without visual input enhancement as measured by note-scores. (+PI +VIE, +SI +VIE > +PI -VIE, +SI –VIE, and +TI)

Hypothesis 8a was not supported by the results of the present research study. There were no significant differences in mean note-scores by instructional treatment group.

Hypothesis 8b: Learners who are exposed to processing instruction and structured input activities with visual input enhancement will have a higher level of awareness (or a deeper level of noticing) of the targeted verb forms that are embedded in a subsequent authentic input passage than learners who are exposed to traditional instruction and learners who are exposed to processing instruction and structured input activities without visual input enhancement as measured by awareness scores. (+PI +VIE, +SI +VIE > TI, +PI –VIE and +SI –VIE)

The results of the present study partially support Hypothesis 8b. The processing instruction with visual input enhancement group had higher mean grammar comprehension scores than the following groups: traditional instruction, structured input without visual input enhancement, and structured input with visual input enhancement.

However, there were no significant differences in mean grammar comprehension scores between the processing instruction with visual input enhancement group and the processing instruction without visual input enhancement group.

Hypothesis 9a: Learners who are exposed to processing instruction and structured input activities with and without visual input enhancement will perform as well as learners who are exposed to traditional instruction for comprehending the message of a subsequent authentic input text in which the targeted grammatical form is embedded as measured by text comprehension scores. (+PI +VIE, +PI -VI, +SI +VIE, +SI -VIE = TI)

The results of the present research study support Hypothesis 9a. There were no significant differences in mean text comprehension scores by group.

Hypothesis 9b: Learners who are exposed to processing instruction and structured input activities with and without visual input enhancement will outperform learners who are exposed to traditional instruction for processing targeted forms that are embedded in a subsequent authentic input text as measured by grammar comprehension scores. (+PI +VIE, +PI -VI, +SI +VIE, +SI -VIE > TI)

Hypothesis 9b is not supported by the results of the present research study. There were no significant differences in mean grammar comprehension scores between the four experimental groups and the comparison group (traditional instruction). However, the two processing instruction groups (with and without visual input enhancement) outperformed the structured input without visual input enhancement group as measured by grammar comprehension scores.

Hypothesis 10: There will be a significant positive correlation between input processing and text comprehension.

The results of the present study do not support Hypothesis 10. The traditional instruction group and the structured input with visual input enhancement groups had no correlation between text and grammar comprehension scores. The processing instruction without visual input enhancement group demonstrated a weak negative relationship between text and grammar comprehension scores, and the processing instruction with visual input enhancement group as well as the structured input without visual input enhancement group demonstrated a weak positive correlation between text and grammar comprehension scores.

Discussion of Results for Interpretation and Production of the Indicative

Before the instructional treatments took place, participants already understood how to form and use the indicative mood in Spanish. During the instructional treatments, they were required to make numerous subjunctive versus indicative contrasts. In order to determine if participants overgeneralized the subjunctive by using subjunctive forms in adjectival clauses when indicative forms were required, scores from the interpretation of the indicative component of the Interpretation Subtest and scores from the production of the indicative component of the Production Subtest were analyzed. If participants' scores for interpretation or production of the indicative decreased over time, it could indicate that participants overgeneralized the subjunctive.

The findings of the repeated measures ANOVA that was performed on scores for interpreting the indicative revealed that although there were no significant differences

between the groups over time, there was a significant main effect for time. Post-hoc contrast tests revealed that the overall mean interpretation test score was significantly higher at both Posttest 1 and Posttest 2 compared to Pretest. However, the overall mean interpretation test score was not significantly different from Posttest 1 to Posttest 2. These results indicate that the instructional treatments helped participants improve their use of the indicative in adjectival clauses in Spanish over time, and subjunctive forms do not appear to have been overgeneralized.

Regarding production of the indicative, the results of the repeated measures ANOVA did not reveal any significant differences in mean production test scores over time by instructional treatment group. However, there was a significant main effect for time. Post-hoc contrast tests revealed that the overall mean production test score was significantly higher at Posttest 1 compared to Pretest. Conversely, the overall mean production test score was not significantly different at Posttest 2 compared to Posttest 1 or at Posttest 2 compared to Pretest. It appears that exposure to the instructional treatments helped participants improve in their production of the indicative in adjectival clauses in the short-term, but the improvements were not retained over time. As the overall mean production test score did not decrease over time, it does not appear that overgeneralization of the subjunctive took place as a result of exposure to the instructional treatments.

Theoretical Implications

Processing Instruction and the Spanish Subjunctive

The findings of the present study have a number of theoretical implications. First and foremost, the present study did not find that learners who received processing instruction and/or structured input activities, with or without visual input enhancement, outperformed learners who received traditional instruction for interpretation tasks; rather, there were no significant differences between the experimental groups and the traditional instruction group as measured by interpretation tasks. For production tasks, however, the present study found that learners who received processing instruction and structured input activities, with or without visual input enhancement, performed equally as well as learners who received traditional instruction. Thus, the results of the present study only partially support the findings of past studies that compared PI with traditional instruction (Benati, 2001, 2005; Cadierno, 1995; VanPatten & Cadierno, 1993a, 1993b; VanPatten & Wong, 2004), as these studies found that PI is superior to traditional instruction for the interpretation of targeted forms and that PI is equal to traditional instruction for the production of targeted forms.

The results of the present study lend weight to Collentine's (1998b) findings; he found that both PI and traditional instruction were equally effective for the acquisition of complex Spanish grammar for both interpretation and production tasks. Collentine also investigated the subjunctive in adjectival clauses; however, his research study was heavily criticized by VanPatten and his colleagues because he failed to maintain treatment fidelity to PI. In particular, he did not follow the appropriate guidelines for the

development of structured input activities, which are a key component of PI. Collentine (1998) asserts that the pushed output tasks that were included in his traditional instruction treatment may have had some impact on learners' acquisition of the targeted grammatical form. In the present study, 80% of the activities that comprised traditional instruction did not represent authentic communication in the TL (40% of the activities were mechanical or transformational drills and 40% were meaningful drills). However, 20% of the activities were open-ended communicative, where learners were required to produce subjunctive forms either verbally or in writing in order to communicate a message in the TL. The two open-ended communicative activities represented authentic communication in the TL, and during these activities learners may have become aware of gaps in their interlanguage knowledge regarding the appropriate use of the subjunctive in adjectival clauses.

Swain and Lapkin (1995) assert that the production of output compels learners to notice a "hole" in their L2 knowledge, which is information that they either cannot recall or do not know in the TL. Therefore, when learners attempt to produce output, they notice what they do not know, which prompts them to pay closer attention to relevant forms and structures in subsequent L2 input. Swain (1985) claims that pushed output forces learners to shift to a deeper level of language processing and that the act of producing either spoken or written language contributes to the acquisition process. It is possible that the two open-ended communicative activities in the traditional instruction treatment package that required participants to produce "pushed output" may have

facilitated the acquisition process, which could have blurred the differences between the effects of processing and traditional instruction for interpretation tasks.

Other studies in the PI strand that examined the subjunctive mood did not compare PI with traditional instruction; rather, Farley (2001a, 2001b) compared PI with meaning-based output instruction (MOBI) for the acquisition of the subjunctive in nominal clauses following expressions of doubt. Rather than examine traditional instruction where most of the activities focus on form rather than on meaning, MOBI required learners to focus on both meaning and form simultaneously, which is similar to the structured input activities that comprise PI. While Farley (2001a) found that PI was superior to MOBI for interpretation tasks and equal to MOBI for production tasks, Farley (2001b) did not find any significant differences between the PI group and the MOBI group for interpretation or production tasks. He claims, " . . . there is something about the nature of the subjunctive that causes the results in our two studies [his and Collentine's] to be different from other PI-oriented studies" (Farley, 2004a, p. 159). Thus, PI may be more effective than traditional instruction for grammatical forms that are simple, but for complex forms such as the Spanish subjunctive, it appears that both PI and traditional instruction are equally effective.

Further, there was no significant difference between the structured input groups, with or without visual input enhancement (+SI +VIE, +SI -VIE), and the processing instruction without visual input enhancement group (+PI -VIE) as measured by interpretation and production tasks over time. The key difference between full PI and structured input activities is that PI provides learners with an explicit explanation of

grammar and information on processing strategies before learners begin structured input activities. The results of the present study indicate that when PI is delivered without VIE, the presence of an explicit grammar explanation and the provision of information on processing strategies do not result in significant gains when compared to groups that only received structured input activities, with or without VIE.

Processing Instruction and Input Enhancement

The present study combined PI with computerized visual input enhancement in an effort to increase the salience of subjunctive forms for web based delivery. Past studies that utilized input enhancement employed simple typographical enhancements such as bolding and underlining, which may not be effective for capturing learners' attention in multimedia and web based environments where learners are often exposed to multiple layers of information such as text, video, and audio simultaneously. The present study attempted to optimize the capabilities of the web based learning environment by using flash programming language to create word animation, where the movement of subjunctive verb forms was designed to attract learners' attention as they read input sentences online. A meta-analysis on the efficacy of VIE conducted by S. Lee and Huang (2008) only found a very small positive effect for VIE on grammar learning, (d = .22). In addition, scholars such as J. White (1998), Izumi (2002), and Hwu (2004) assert that VIE should be combined with other pedagogical techniques because VIE is more effective for facilitating noticing rather than learning of targeted forms. Given the results of the meta-analysis and the assertions of SLA scholars regarding the efficacy of VIE, the present study did not examine VIE in isolation. Rather, VIE was combined with

structured input, which is another type of input enhancement technique. VIE was employed to attract participants' attention to the targeted forms that were present in the structured input activities while the structured input activities themselves were designed to help learners process subjunctive forms correctly once they were noticed. Hence, the two types of input enhancement techniques were designed to work synergistically in the present study.

The results of the present study indicate that learners who were exposed to processing instruction with visual input enhancement (+PI +VIE) outperformed learners who were exposed to structured input without visual input enhancement (+SI -VIE) on Posttest 1 compared to Pretest as measured by scores for interpreting the subjunctive. With PI, learners were provided with an explicit explanation of grammar and information on processing strategies, which participants in the structured input groups did not receive. Sharwood Smith (1991) asserts that grammar explanations that provide metalinguistic rule explanations are an explicit and elaborate form of input enhancement. Thus, learners who received processing instruction with visual input enhancement (+PI +VIE) actually received four types of enhanced input: (a) metalinguistic information in the form of an explicit explanation of L2 grammar rules, (b) metalinguistic information about processing strategies, (c) structured input, and (d) computerized visual input enhancement operationalized as word animation of targeted verb forms. Conversely, participants who received structured input without visual input enhancement (+SI -VIE) only received one type of input enhancement: structured input. Learners who were exposed to structured input without visual input enhancement did not receive an explicit explanation of

grammar rules, information on processing strategies, or word animation of targeted forms. Consequently, processing instruction with visual input enhancement (+PI +VIE) is a highly explicit type of focus on form instruction with multiple layers of input enhancement while structured input without visual input enhancement (+SI -VIE) only contains one layer of input enhancement and presumes that grammar will be learned inductively through exposure to structured input activities alone. The findings of the present study indicate that instructional techniques that are highly explicit and that contain multiple layers of input enhancement are superior to inductive instructional techniques that only contain one layer of enhanced input for learning complex L2 grammar online.

Interestingly, the present study found that participants who received processing instruction with visual input enhancement (+PI +VIE) did not outperform participants who received processing instruction without visual input enhancement (+PI -VIE), structured input with visual input enhancement (+SI +VIE), or traditional instruction (+TI) for interpreting the subjunctive in the short-term. Traditional instruction provided learners with an explicit explanation of L2 grammar (an elaborate form of input enhancement), structured input with visual input enhancement provided learners with two layers of input enhancement: structured input and word animation. Processing instruction without visual input enhancement provided learners with three layers of input enhancement: an explicit explanation of L2 grammar, information on processing strategies, and structured input. These findings support the claim that language learners

benefit from exposure to multiple layers of input enhancement for learning complex L2 grammar online.

Processing Instruction and Authentic Input

Past studies in the PI strand have not investigated whether PI is able to facilitate how learners notice and process targeted grammatical forms when they are embedded in authentic input that is received after exposure to PI treatments. Collentine (2004) states, " . . . we do not know if learners respond to forms constituting the targeted grammatical phenomenon in normal input conditions (i.e., authentic input) once they have left the processing instruction laboratory" (p. 179). Further, Collentine asserts that it is impossible to determine if PI has a beneficial effect on the acquisition process until there is evidence of how learners' developing systems respond to authentic input following exposure to PI.

Thus far, all experiments in the PI strand, including the present study, provided participants with input that was structured, or manipulated, during the experimental treatments in order to facilitate input processing. For example, many of the subjunctive forms in the instructional activities of the present study appeared in the sentence initial position in order to facilitate noticing for the experimental groups. However, in authentic input the subjunctive in adjectival clauses always appears in the sentence medial position, which is the most difficult place for learners to notice it. Further, structured input activities tend to embed targeted forms within short input sentences that contain basic vocabulary items in order not to overload learners' processing capacity. Conversely, the authentic input passage that participants received post experimental exposure in the

present study contained longer input sentences as well as more advanced vocabulary items and colloquial expressions to which the participants were not accustomed.

One of the main goals of the present study was to determine if PI facilitates noticing and processing of targeted forms that were present in authentic input that was received following the instructional treatments. By exposing participants to an authentic input text that contained 15 subjunctive forms in the adjectival clause where the referent was uncertain, hypothetical, or unknown one to three days after participants completed their experimental treatments, the present study was able to provide evidence that PI has a beneficial effect when learners encounter targeted forms that are present in subsequent authentic input. Although the authentic input passage was more difficult for participants to comprehend than the input that they received during the experimental treatments, the results of the present study indicate that exposure to processing instruction with visual input enhancement facilitated a deeper level of noticing (noticing with metalinguistic awareness) than exposure to traditional instruction or exposure to structured input with or without VIE. In addition, exposure to processing instruction, with or without VIE, resulted in correct input processing of targeted forms when they appeared in subsequent authentic input. The present study found that both processing instruction groups outperformed the structured input without visual input enhancement group as measured by grammar comprehension scores (input processing).

Attention and Awareness in SLA

The results of the present study have theoretical implications for the areas of attention and awareness in SLA. The concept of attention has been a matter of

controversy in the field of SLA over the past two decades. Some scholars assert that SLA is a conscious process (Robinson, 1995; Schmidt, 2001; VanPatten; 1994) and that focal attention is a necessary prerequisite in the noticing, storing, and learning of TL forms. Others (Krashen, 1980, 1981, 1985; Schachter, 1998; Truscott, 1998) contradict this view and hypothesize that SLA is a largely unconscious process with learners acquiring TL forms subliminally, or without focal attention.

The Noticing Hypothesis (Schmidt, 1990, 1993, 1995; Schmidt & Frota, 1986), which serves as a theoretical underpinning for Sharwood Smith's (1981, 1991) input enhancement techniques and VanPatten's (1993, 1996, 2002, 2004) model of input processing, states that learners must notice features of their TL input with conscious attention before form learning can take place. A major goal of both input enhancement and PI is to direct learners' attention to the formal features of the L2 that they would not otherwise notice.

However, Truscott (1998), one of the most ardent challengers of Schmidt's Noticing Hypothesis, asserts that second language learning occurs subconsciously, with conscious noticing merely leading to the acquisition of metalinguistic knowledge, or knowledge about the language, and not to the ability to use the language. Further, he suggests that metalinguistic knowledge may actually impede L2 performance, although he acknowledges that more research is needed in this area before any definitive claims can be made about the role of metalinguistic knowledge in SLA. Schachter (1998) also refutes the belief that learners must attend to all linguistic input with focal attention. She claims that while certain aspects of L2 learning require conscious attention, namely the

learning of individual sounds, individual words, and writing systems, the bulk of learning with respect to phonological, morphological, and syntactic rules does not require focal attention on the part of the learner. Further, Schachter (1998) suggests that it is practically impossible to ascertain whether the language acquisition process for children or adults is "attentional or nonattentional, with or without awareness, in part because the methodological problems are so hideous" (p. 576).

In contrast to the aforementioned views, Schmidt (1995, 2001) set forth the strong version of the Noticing Hypothesis, which states that there is no subliminal learning in SLA, although there may be subliminal perception. In other words, nearly all L2 learning is a conscious process that requires at least some attention to form. There has been considerable research to back up Schmidt's claims (Bialystok, 1994; Carr & Curran, 1994; N. Ellis, 1994, 1996; R. Ellis, 1997; Gass, 1988, 1997; Hatch 1983; Pienemann, 1989; Pienemann & Johsnson, 1987; Robinson, 1995; Skehan, 1998, Swain, 1993, 1995; VanPatten, 1990, 1994, 1996; Wolfe-Quintero, 1992), in particular research that stems from cognitive accounts of L2 development. Research from this theoretical framework presumes that conscious attention is what mediates input and intake, especially given that not all input becomes intake for learning (Gass, 1997; VanPatten, 1994). Further, attention to input is essential for storage into short-term memory, and it is a critical precursor to hypothesis formation and testing (Schmidt, 2001). It is important to note that not all of the researchers cited above adhere to the strong version of Schmidt's Noticing Hypothesis; Carr and Curran (1994) and Gass (1997) deny that all L2 learning

requires focal attention. Conversely, VanPatten (1994) asserts that attention is the only necessary and sufficient condition for learning L2 structure.

In addition to the disagreement over the role of attention in SLA, there is also controversy over the amount and type of attention that is needed for L2 learning. Schmidt (1990, 1993, 1995) contends that L2 learners must allocate attention with awareness for learning to take place. Further, he argues that learning can occur without intention and without knowledge of metalinguistic rules, but it cannot occur without awareness. Robinson (1995) built upon and redefined Schmidt's concept of noticing to include attention plus rehearsal in short-term memory. According to Robinson, focal attention with rehearsal in short-term memory is necessary but insufficient for SLA to take place. In contrast, Tomlin and Villa (1994), who drew upon the work of Posner (1994) and Posner and Peterson (1990), hypothesize that there are three subsystems of attention: alertness, orientation, and detection. Alertness refers to the learner's motivation, interest, and overall readiness to learn, while orientation is associated with an allocation of attentional resources to form, which may increase the likelihood of detection. Tomlin and Villa (1994) assert that alertness and orientation may assist with detection, which is the cognitive registration of stimuli, but only detection is necessary for further L2 processing and learning. Additionally, detection may occur with or without awareness. Detection without awareness signifies the mere registration of stimuli, while detection with awareness is analogous to noticing in Schmidt's sense of the word. Interestingly, Tomlin and Villa (1994) theorize that only detection without

awareness is necessary for L2 processing and learning, a point of view that directly opposes the Noticing Hypothesis.

Williams' (2005) study appears to support Tomlin and Villa's assertions, as the participants in his study were able to make generalizations in an artificial grammar even though they expressed no awareness of the targeted forms during retrospective self-reports. According to Williams (2005), "noticing is a necessary condition for learning, but understanding might not be" (p. 272). However, Leow and Hama (2008) replicated Williams' (2005) study and made modifications to the research design, one of which was to use think-aloud protocols to measure awareness rather than retrospective self-reports. Leow (2000) found that participants who demonstrated noticing at the level of understanding were able to make generalizations, but those who demonstrated awareness at the level of noticing were not.

Izumi (2002) also found that learners who noticed targeted forms did not necessarily learn them. Izumi compared the production of output with exposure to textual input enhancement for the acquisition of relative clause formation in English. He measured noticing by examining the notes that participants took while they read an input passage in the TL, which he converted to note-scores. Izumi found that participants who were exposed to textual input enhancement operationalized as underling, bolding, and/or a change of font style or size demonstrated significantly higher note-scores than participants who produced output; however, he also found that the increased noticing did not lead to learning of targeted forms. Textual enhancement appeared to facilitate noticing in Izumi's study, but once learners noticed the targeted forms, they may have

been unsure about their meaning or relevance, which could have prohibited them from making the necessary form-meaning connections for intake to occur. Izumi did not assess participants' level of awareness; rather, he only measured the amount of noticing that took place. Thus, it is possible that the participants in his study only had a low level of awareness (simple detection) rather than awareness at the level of understanding.

According to Schmidt (2001), noticing, by itself, is not the only necessary ingredient for SLA; he states, "SLA is largely driven by what learners pay attention to and notice in target language input and what they understand the significance of noticed input to be" (p. 4). Similarly, VanPatten (1993, 1996, 2002, 2004) posits that in addition to noticing linguistic features of input, learners must also be able to make form-meaning connections, or understand the relationship between a linguistic form and the referential meaning that it encodes. Further, N. Ellis (1994) asserts that form-meaning connections are made in learners' declarative or episodic memory, which would imply that explicit recall might play a large part in L2 learning.

Empirical research supports the facilitative effects of awareness on foreign language learning (Leow, 1997, 2000; Rosa, 1999; Rosa & Leow, 2004; Rosa & O'Neill 1999). Further, Leow (2000) asserts that awareness at the level of noticing is a necessary precursor for learning, but awareness at the level of understanding plays a critical role in learners' intake and subsequent processing of targeted grammatical forms. The findings of the present study lend weight to these assertions and reveal that learners who demonstrated awareness at the level of understanding were also better processors of L2 input. Thus, the results of the present study indicate that when learners consciously

attend to targeted forms and notice them with understanding, there is a positive facilitative effect on input processing.

Pedagogical Implications

The results of the present study offer a number of pedagogical implications. The first major pedagogical implication is that distance language learners benefit from having a combination of the following features for short-term form learning of complex L2 grammar: an explicit explanation of grammar that is not paradigmatic, information on processing strategies, structured input activities, and computerized visual input enhancement. The results of the study indicate that processing instruction with visual input enhancement (+PI +VIE) was superior to structured input without visual input enhancement (+SI -VIE) for short-term learning gains on interpretation tasks. Interestingly, the most explicit and elaborate instructional method was found to be significantly better than the least explicit and least enhanced method when the immediate effects of the experimental treatments were examined for interpreting the subjunctive. It appears that providing distance language learners with multiple layers of input enhancement, including a metalinguistic explanation of grammar rules, is beneficial. Sharwood Smith (1991) posits that providing an explanation of grammar rules is as an elaborate way to enhance input using the technical terminology that describes language. C. White (2003) asserts that under the traditional distance learning paradigm, where the emphasis is on independent learning and self-instruction, learners rely on the course materials rather than on their teacher for instruction. Thus, web based materials that are highly explicit and elaborate, such as processing instruction with visual input

enhancement, appear to facilitate the self-instruction of complex aspects of L2 grammar in the short-term.

The results of the present study suggest that combining computerized visual input enhancement with processing instruction is an effective way to teach complex L2 grammar online. In the present study, computerized visual input enhancement was operationalized as word animation of targeted verb forms. This type of input enhancement technique optimized the capabilities of the web based learning environment, and it would not have been possible with the traditional print medium.

The present study also found that exposure to processing instruction with visual input enhancement (+PI +VIE) resulted in significantly higher awareness of targeted forms in subsequent authentic input than exposure to the following techniques: traditional instruction (+TI), structured input without visual input enhancement (+SI -VIE), and structured input with visual input enhancement (+SI +VIE). These results indicate that exposure to PI helps learners notice and process targeted forms when they encounter them in subsequent authentic input. This finding has clear implications for foreign language pedagogy, especially for instruction that stems from the Communicative Language Teaching Approach (CLT), which is a teaching philosophy that is advocated by the American Council on the Teaching of Foreign Languages (2002), a professional organization that sets the program standards for the preparation of foreign language teachers. CLT emphasizes authentic communication in the TL. Richards and Rodgers (1986) assert that CLT is founded upon three foundational principles as follows:

1. The communication principle: Activities that involve communication promote language learning.

2. The task principle: Activities that involve the completion of real world tasks promote learning.

3. The meaningfulness principle: Learners must be engaged in meaningful and authentic language use for learning to take place. (p. 72)

Thus, the findings of this study indicate that exposure to processing instruction has the potential to facilitate the meaningfulness principle listed above, as PI appears to prime learners to notice and process targeted forms that appear in subsequent authentic language input.

Finally, learner preference should be taken into account when developing web based instructional materials. Responses from the Posttreatment Questionnaire revealed that learners who received PI expressed an overwhelming preference for the PI materials over their regular course materials. Participants in the two PI groups felt that the explicit grammar explanation and the information on processing strategies were extremely helpful for learning complex grammar online. According to C. White (2003), distance language learners rank motivation and confidence in one's ability to cope with distance learning as the two most important factors for success in a distance language course. Thus, materials that learners perceive as being highly beneficial, such as information on processing strategies, could be an effective way increase learners' self-efficacy and motivation to continue with the distance course.

The results from the Posttreatment Questionnaire for the two structured input groups and for the traditional instruction group were more mixed, with some participants

expressing that the materials were highly effective for learning the subjunctive and others stating that they were not very effective for learning Spanish grammar online. In addition, learners across all five groups expressed dissatisfaction and frustration with their regular course materials, which fall under the traditional instruction paradigm. It is important to consider learners' preferences when selecting or creating course materials because materials that learners perceive as being too difficult or lacking in clear explanations could dampen their feelings of self-efficacy as well as their motivation to continue with the course.

Another important consideration is that the present study was conducted entirely online. By and large, past studies in the PI strand were classroom-based and used the individual rather than the class as the unit of analysis. With classroom-based studies, a number of factors other than the instructional treatment, such as interaction between participants, could potentially influence the outcome of the study. According to Stevens (2002), even a small amount of dependence among observations can cause the Type I error rate to increase several times greater than the level of significance. Conversely, with instructional method studies that are conducted online, the instructional treatment is individually administered and there is no interaction between participants. It is possible that the present study provides a clearer picture of the effects of processing instruction than prior classroom-based studies.

Limitations

The present study had a number of limitations; namely, learners' prior knowledge of the subjunctive was not taken into account, visual input enhancement was not

examined in isolation as an independent variable, the traditional instruction group received differential feedback for one activity, the instructional treatment was relatively short in duration, and awareness was measured retrospectively.

Rather than take into account learners past knowledge of the subjunctive, the present study used a 60% cutoff level for scores on the Interpretation and Production Subtests, which was in keeping with past studies in the PI strand. However, a better methodological design would have been to account for participants' prior knowledge of the subjunctive by administering a pretreatment subjunctive knowledge test before the pretest. Thus, the pretreatment subjunctive knowledge test means and the pretest means could have served as covariates in the analysis of posttest means, which is the design that Collentine (1998) utilized. The present study did not take prior subjunctive knowledge into account because the students enrolled in the Spanish classes at the two institutions that comprised the sample were required to take a placement exam if they took two or more years of Spanish in High School. If students had already mastered the subjunctive mood as evidenced by their placement test score, they would have been placed higher than second semester Spanish. However, based on participants' performance on the pretest, it was apparent that many students had intuitions about how the subjunctive mood is used in adjectival clauses. A total of 43 of the 44 participants that were excluded from the study due to their performance on the pretest scored 60% or higher on the Interpretation Subtest, which required learners to choose between subjunctive and indicative forms in order to interpret sentences correctly. Only one student from the initial pool scored 60% or higher on the Production Subtest. Thus, if previous exposure

to the subjunctive had been taken into account by administering a pretreatment subjunctive knowledge test, then participants who scored 60% or higher on the Interpretation Subtest could have had their prior knowledge accounted for statistically rather than be eliminated from the study.

Another limitation of the present study is that VIE was not examined in isolation as an independent variable. Since the instructional techniques were grouped in the present study, it was not possible to determine if VIE had an effect on its own. The decision was made to pair VIE with structured input activities based on the results of a meta-analysis of past empirical research (S. Lee & Huang, 2008), which only found a very small effect for VIE on grammar learning. Theory also supported the decision to pair VIE with structured input activities as several prominent scholars in the field of SLA (Hwu, 2004; Izumi, 2002; J. White, 1998) assert that VIE should be used to promote noticing, or detection of targeted forms, while another pedagogical technique should be used to facilitate form learning. The present study found that for interpreting the subjunctive in the short-term, the processing instruction with visual input enhancement group outperformed the structured input without visual input enhancement group. However, it was not possible to determine whether the explicit grammar explanation, the information on processing strategies, the computerized visual input enhancement, or a combination of two or more of these factors was responsible for the significant differences that were found. In addition, although the processing instruction with visual input enhancement group outperformed the structured input without visual input enhancement group for interpreting the subjunctive in the short-term, the processing

instruction without visual input enhancement group did not. However, the processing instruction with visual input enhancement group did not outperform the processing instruction without visual input enhancement group on any of the measures used in the present study (interpretation scores, production scores, note-scores, awareness scores, and grammar comprehension scores). Thus, VIE could be responsible for the significant Group x Time interaction effect that was found for interpreting the subjunctive, but due to the design of the present study, it is not possible to make any definitive claims regarding the efficacy of VIE in isolation.

The differential feedback that the traditional instruction group received for the open-ended communicative activity that required an oral response is another limitation of the present study. With this activity, participants were required to record an oral response to five prompts, and correct answers necessitated a subjunctive verb form. Answers were recorded using an audio drop box that was embedded on a web page within the instructional materials. The traditional instruction participants received delayed feedback for this activity, as voice recognition software is still not widely available, and its use in the present study would have been too costly and time consuming to implement. As voice recognition technology improves and becomes less costly and more readily available, future studies will be able to avoid this design flaw. In an attempt to mitigate the effects of receiving delayed feedback, participants in the traditional instruction group were asked to self-reflect on their answers to the oral activity. For all other study activities, participants in the comparison and experimental groups received implicit feedback that was immediate. In other words, participants were only told if their answers

were correct or incorrect, and they were not given the correct forms if the answers that they provided were incorrect. Correct forms were not given to participants in order to avoid providing them with incidental input of the targeted grammatical form.

Another limitation of the present study is the relatively short treatment period that participants had to learn the targeted grammatical form. The mean time for all 92 participants to complete their instructional treatments was 75.15 minutes. However, the second semester face-to-face (FTF) Spanish classes that are offered at the participating institutions meet for 50 minutes four times per week. Teachers in the FTF courses typically spend no more than one 50-minute class period on the instruction of the subjunctive in adjectival clauses (the targeted grammatical form in the present study.) Thus, while the treatment period in the present study was relatively short, it still provided participants with the equivalent of 1.5 FTF classes of instruction on the targeted grammatical form.

The final limitation that will be discussed is the data collection procedures that were used to measure participants' level of awareness of targeted verb forms that were embedded in an authentic input text that was received after the experimental exposure. A Posttreatment Questionnaire was used to assess participants' level of awareness retrospectively in the present study. Leow (2000) criticizes this technique because it is an off-line measure, and it may not capture what learners actually paid attention to or became aware of during the experimental exposure. The issue of how to operationalize and measure awareness is a thorny issue in SLA research. There are three prominent data collection procedures that are currently used to assess participants' level of awareness: (a)

online elicitation measures such as think-aloud protocols, (b) off-line elicitation measures such as postexposure questionnaires, and (c) a combination of online and off-line elicitation measures (Leow, 2000, p. 559). The present study used an online elicitation procedure to assess participants' noticing, or detection, of targeted forms that were present in an authentic input text. Participants were asked to write down all of the vocabulary items and verb forms that were necessary to comprehend the text, and the subjunctive forms that were noted were tallied to compute a note-score. All 92 participants noted at least one subjunctive form during this activity. Thus, it was possible to establish that all participants in the present study demonstrated at least a low level of awareness of the targeted grammatical form that was present in an authentic input passage. The postexposure questionnaire elicited metalinguistic information from participants to determine if they demonstrated awareness at the level of noticing and/or awareness at the level of understanding. In order to demonstrate awareness at the level of noticing, participants had to specifically state that the subjunctive mood was present in the input text and provide an example of it, and in order to demonstrate awareness at the level of understanding, participants had to explicitly state the grammatical rule for using the subjunctive in adjectival clauses. While two types of elicitation were used to assess noticing and awareness, it was not feasible to use think-aloud protocols because the experiment was conducted entirely online and the present study employed a purely quantitative research design with a large number of participants. Leow (1997, 2000) asserts that think-aloud protocols are the optimal way to collect information on participants' level of awareness; however, this technique is also flawed because thinking

aloud while completing a task has the potential to interfere with learners' thought processes. More recently (Matsunaga & Crosby, 1997; Godfroid, Boers, & Housen, 2008) eye-tracking technology has been used to measure noticing of targeted forms, but this method is also flawed because it only reveals what participants detect in their L2 input and not whether they understand the significance of detected forms and structures. As all measures that attempt to capture learners' internal processes are problematic, studies that use multiple data elicitation techniques and that analyze data both quantitatively and qualitatively are preferable for assessing the construct of awareness in SLA.

Suggestions for Future Research

Future research studies are needed that examine the effects processing instruction and structured input activities qualitatively. By examining the effects of processing instruction and structured input with smaller, more focused samples, it may be possible to uncover how the nature of the subjunctive and learners' developmental readiness to aquire it affect instructional outcomes. In addition, participants' responses on the Posttreatment Questionnaire suggest that learners who identified themselves as poor language learners found processing instruction to be extremely helpful for learning complex Spanish grammar online. Future research could take into account individual differences such as age, gender, language aptitude, and developmental readiness when investigating the efficacy of processing instruction and structured input activities. Research studies are needed that investigate whether processing instruction is more

effective than traditional instruction for learners with a low aptitude for language learning or for learners who are older.

Further, more research studies are needed that examine computerized visual input enhancement in isolation, as it was not possible in the present study to determine if this type of input enhancement had an effect on its own. The type of enhancement used in this study could be compared with other types of computerized input enhancement to investigate which techniques are the most effective for directing learners' attention to the formal features of their L2 input as they work online.

Finally, more research studies are needed that examine the cumulative effects of processing instruction. The present study only investigated the effects of processing instruction and structured input for the acquisition of the subjunctive in adjectival clauses. However, future studies could examine the effects of repeated exposure to processing instruction and its components. For example, processing instruction could be investigated over the course of a semester for the acquisition of the subjunctive in nominal clauses, followed by the subjunctive in adverbial clauses and the subjunctive adjectival clauses. This type of study would help uncover whether the effects of processing instruction for the acquisition of the Spanish subjunctive are more durative with repeated exposure.

Conclusion

The results of the present study are encouraging for the use of processing instruction combined with visual input enhancement for the instruction of complex Spanish grammar online. Although the analyses of the pre- and posttests did not reveal

any significant differences between the experimental groups and traditional instruction for interpretation and production tasks over time, the findings of the present study suggest that instructional techniques that are highly explicit and that contain multiple layers of input enhancement are superior to instructional techniques that are inductive with only a single layer of input enhancement for short-term learning of complex grammar online. As distance language learners typically rely more heavily on the materials than on their teacher for instruction, techniques such as processing instruction with visual input enhancement appear to facilitate the self-instruction process.

In addition, the present study also examined whether the instructional treatments had an effect on learners' ability to notice and process targeted forms that were embedded in an authentic input passage that was received following the experimental exposure. Thus far, past studies in the PI strand have only examined how learners interact with structured, or manipulated, input. The results of the present study indicate that exposure to processing instruction increases the likelihood that learners will notice targeted forms in subsequent authentic input with metalinguistic awareness, which Leow (2000) claims plays a critical role in learners' intake and subsequent processing of targeted forms. In addition to the beneficial effect on noticing, processing instruction also appears to facilitate correct input processing of targeted forms when learners encounter them in subsequent authentic input, which has the potential to facilitate authentic communication in the target language.

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Appendix A

Informed Consent Form

Informed Consent to Participate in Research

Information to Consider Before Taking Part in this Research Study

IRB Study # 107737

Researchers at the University of South Florida (USF) study many topics. To do this, we need the help of people who agree to take part in a research study. This form tells you about this research study.
We are asking you to take part in a research study that is called:

The effects of processing instruction, structured input, and visual input enhancement on the acquisition of the subjunctive in adjectival clauses among intermediate-level distance learners of Spanish

The person who is in charge of this research study is Victoria Russell. This person is called the Principal Investigator. However, other research staff may be involved and can act on behalf of the person in charge.

The research will be done at the University of South Florida, College of Arts and Science, Hillsborough Community College, Brandon Campus, and at your homes as you work online.

Purpose of the study

The purpose of this study is to

- find out more about which methods are the most effective for web-based instruction of complex Spanish grammar
- complete the researcher's doctoral dissertation

Study Procedures

If you take part in this study, you will be asked to

- Provide some background information on your native-language and the languages that you have studied in the past, your age, and your gender (this information will be kept confidential). You will also be asked about your feelings regarding learning a language online.

- Take a pre-test, a posttest, a delayed posttest and a reading comprehension test. Each test will take approximately 15 minutes of your time.
- Complete an instructional activity package online that replaces the assignments that you would normally do for your class to learn the grammatical form (workbook, lab manual, and online activities). The instructional activity package contains ten activities related to a grammatical form that you will need to learn for your course. It should take no more time than you would normally spend to complete course-related activities when learning a new grammatical form or structure (about 2 hours).
- Complete an online reading activity while you take notes in a text box. This activity will take approximately 15 minutes.
- Complete a posttreatment questionnaire asking about your experiences while you worked online. This activity will take approximately 15 minutes.
- You will fill out the pretreatment questionnaire here today. All other materials will be delivered online. You may begin your activity package any day next week after you complete the pretest today or tomorrow, and you may complete the activity package any time of the day or night that suits your schedule. You will take the posttest the same day that you complete your activity package.
- The reading activity, reading comprehension test, and posttreatment questionnaire will be completed online one to three days after you submit your activity package.
- Finally, you will be asked to take a delayed posttest two weeks after you submit your online activity package. This test will take no more than 15 minutes of your time.

Alternatives

You have the alternative to choose not to participate in this research study.

Participants in the research study will receive bonus points added to their final average. If you choose not to participate in the research study, but you would like to earn the bonus points, you have the option of completing an alternative assignment. The alternative assignment consists of completing a package of worksheets, and completing a reading and writing assignment in Spanish. The alternative assignment will take approximately 3 ½ hours of your time.

Benefits

The potential benefits to you are:
It will help you to learn a particularly difficult aspect of Spanish grammar. In addition, participation in the study should help increase your performance on your final exam, as

vocabulary and grammatical structures that are tested on your exam will be practiced in the study-related materials.

Risks or Discomfort

This research is considered to be minimal risk. That means that the risks associated with this study are the same as what you face every day. There are no known additional risks to those who take part in this study.

Compensation

I will not pay you for the time you volunteer while being in this study

Confidentiality

We must keep your study records as confidential as possible.

- To ensure that your records are kept confidential, your background questionnaires and informed consent forms will be stored in a locked filing cabinet for five years. After that time, they will be destroyed.
- After you complete the study-related materials, they will be erased from Blackboard and your scores will be stored anonymously using an ID number rather than your name.

However, certain people may need to see your study records. By law, anyone who looks at your records must keep them completely confidential. The only people who will be allowed to see these records are:

The research team, including the Principal Investigator, study coordinator, and all other research staff.

Certain government and university people who need to know more about the study. For example, individuals who provide oversight on this study may need to look at your records. This is done to make sure that we are doing the study in the right way. They also need to make sure that we are protecting your rights and your safety.) These include:

- The University of South Florida Institutional Review Board (IRB) and the staff that work for the IRB. Other individuals who work for USF that provide other kinds of oversight may also need to look at your records.
- The Department of Health and Human Services (DHHS).

We may publish what we learn from this study. If we do, we will not let anyone know your name. We will not publish anything else that would let people know who you are.

Voluntary Participation / Withdrawal

You should only take part in this study if you want to volunteer. You should not feel that there is any pressure to take part in the study, to please the investigator or the research staff. You are free to participate in this research or withdraw at any time. There will be no penalty or loss of benefits you are entitled to receive if you stop taking part in this study. Your decision to participate or not to participate will not affect your student status, course grade, or job status.

Questions, concerns, or complaints

If you have any questions, concerns or complaints about this study, call Victoria Russell at 813 810-9885.

If you have questions about your rights as a participant in this study, general questions, or have complaints, concerns or issues you want to discuss with someone outside the research, call the Division of Research Integrity and Compliance of the University of South Florida at (813) 974-9343.

If you experience an unanticipated problem related to the research call Victoria Russell at 813 810-9885.

Consent to Take Part in this Research Study

It is up to you to decide whether you want to take part in this study. If you want to take part, please sign the form, if the following statements are true.

I freely give my consent to take part in this study. I understand that by signing this form I am agreeing to take part in research. I have received a copy of this form to take with me.

_____ _____

Signature of Person Taking Part in Study Date

_____

Printed Name of Person Taking Part in Study

Statement of Person Obtaining Informed Consent

I have carefully explained to the person taking part in the study what he or she can expect.

I hereby certify that when this person signs this form, to the best of my knowledge, he or she understands:

- What the study is about.
- What procedures/interventions/investigational drugs or devices will be used.
- What the potential benefits might be.
- What the known risks might be.

_____ _____

Signature of Person Obtaining Informed Consent Date

_____

Printed Name of Person Obtaining Informed Consent

Appendix B

Pretreatment Questionnaire

1. Name (first and last): _____

2. Age: _____ 3. Please check: Male____ Female____

4. What language(s) did you grow up speaking? _____

5. What language is spoken in your home? _____

6. Do you speak another language at least half of the time besides English?

If so, which language? _____

7. How many semesters have you studied Spanish in college? _____

8. Did you take Spanish in high school? If so, for how many years? _____

_____

9. Do you have daily or weekly contact with the Spanish language outside of class? If so, please explain. _____

10. Why did you choose to learn a language online? Circle the response that best applies to you:

a. Convenience b. I enjoy using computers and the Internet
c. Other _____

11. How would you rate your computer skills?

a. Highly proficient b. Fairly proficient
c. Not very proficient d. Using a computer is difficult for me

12. How easy is it to use Blackboard and Quia to access and complete your course materials?

a. Very Easy b. Easy c. Somewhat easy
d. Difficult e. Very Difficult

13. Would you take another language course online? a. Yes b. No c. Maybe

Appendix C

Forms A, B, and C of the Subjunctive Knowledge Test

Form A

Preview Assessment: Pretest

SPN1121.501S09: BEGINNING SPANISH II (SPN1121.501S09) > CONTROL PANEL > PREVIEW ASSESSMENT: PRETEST

Preview Assessment: Pretest

Name	Pretest
Instructions	PLEASE DO NOT CONSULT YOUR TEXTBOOK, GRAMMAR BOOK, OTHERS, OR THE WEB WHEN COMPLETING THIS TEST. YOU WILL HAVE A MAXIMUM OF 30 MINUTES TO TAKE THIS PRETEST PLEASE DO NOT LEAVE ANY ITEMS BLANK. PLEASE SAVE EACH ITEM AS YOU TAKE THE TEST. You may only listen to each sound file twice.
Timed Assessment	This Test has a 30 minute timer.The elapsed time appears at the top right of the window. A **1 minute** warning will be displayed. *[The timer does not appear when previewing this Test]*
Multiple Attempts	Not allowed. This Test can only be taken once.
Force Completion	This Test can be saved and resumed later.

▼ **Question Completion Status:**

Question 1 **1 points** Save

Test A. ACTIVITY 1:

Activity 1, Number 1: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_A_Listening1.wav

- ○ Sí
- ○ No

Question 2 **1 points** Save

Activity 1, Number 2: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_A_Listening2.wav

- ○ Sí
- ○ No

Question 3 **1 points** Save

Activity 1, Number 3: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_A_Listening3.wav

- Sí
- No

Question 4 **1 points** Save

Activity 1, Number 4: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_A_Listening4.wav

- Sí
- No

Question 5 **1 points** Save

Activity 1, Number 5: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_A_Listening5.wav

- Sí
- No

Question 6 **1 points** Save

Activity 1, Number 6: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_A_Listening6.wav

- Sí
- No

Question 7 **1 points** Save

Activity 1, Number 7: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_A_Listening7.wav

- Sí
- No

Question 8 **1 points** Save

Activity 1, Number 8: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Si"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_A_Listening8.wav

- ○ Sí
- ○ No

Question 9 **1 points** Save

Activity 1, Number 9: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Si"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_A_Listening9.wav

- ○ Sí
- ○ No

Question 10 **1 points** Save

Activity 1, Number 10: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Si"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_A_Listening10.wav

- ○ Sí
- ○ No

Question 11 **1 points** Save

ACTIVITY 2.

Marta will soon be graduating from her university. She has been thinking a lot about her current and future life. Below are some statements that Marta recently made about her life. For each statement, decide whether Marta is talking about her life as she would like it to be, or if she is describing her current life. Please select the most logical response:

Activity 2, Number 1. ...incluya viajes a paises extranjeros.

- ○ **Tengo un trabajo que...**
- ○ **Busco un trabajo que...**

Question 12 **1 points** Save

Marta will soon be graduating from her university. She has been thinking a lot about her current and future life. Below are some statements that Marta recently made about her life. For each statement, decide whether Marta is talking about her life as she would like it to be, or if she is describing her current life. **Please select the most logical response:**

Activity 2, Number 2. ...esté en el centro de la ciudad.

- ○ **Quiero trabajar en una oficina que...**
- ○ **Ahora, trabajo en una oficina que...**

Question 13 **1 points** Save

Marta will soon be graduating from her university. She has been thinking a lot about her current and future life. Below are some statements that Marta recently made about her life. For each statement, decide whether Marta is talking about her life as she would like it to be, or if she is describing her current life. **Please select the most logical response:**

Activity 2, Number 3. ...sea guapo y simpático.

- ○ **Quiero un esposo que...**
- ○ **Ya tengo un esposo que...**

Question 14 **1 points** Save

Marta will soon be graduating from her university. She has been thinking a lot about her current and future life. Below are some statements that Marta recently made about her life. For each statement, decide whether Marta is talking about her life as she would like it to be, or if she is describing her current life. **Please select the most logical response:**

Activity 2, Number 4. ...no sabe hablar español.

- ○ **Busco un novio que...**
- ○ **Ahora tengo un novio que...**

Question 15 **1 points** Save

Marta will soon be graduating from her university. She has been thinking a lot about her current and future life. Below are some statements that Marta recently made about her life. For each statement, decide whether Marta is talking about her life as she would like it to be, or if she is describing her current life. **Please select the most logical response:**

Activity 2, Number 5. ....hable español.

- ○ **Mi madre no habla inglés, por eso busco un esposo que...**
- **Mi madre no habla inglés y tengo un esposo que...**

Question 16 1 points Save

Marta will soon be graduating from her university. She has been thinking a lot about her current and future life. Below are some statements that Marta recently made about her life. For each statement, decide whether Marta is talking about her life as she would like it to be, or if she is describing her current life. **Please select the most logical response:**

Activity 2, Number 6. ....me traten bien.

- **Ahora mis suegros (in-laws)....**
- **Necesito suegros (in-laws) que...**

Question 17 1 points Save

Marta will soon be graduating from her university. She has been thinking a lot about her current and future life. Below are some statements that Marta recently made about her life. For each statement, decide whether Marta is talking about her life as she would like it to be, or if she is describing her current life. **Please select the most logical response:**

Activity 2, Number 7. ...toquen instrumentos musicales.

- **Los hijos de mi hermana...**
- **Quiero tener niños que...**

Question 18 1 points Save

Marta will soon be graduating from her university. She has been thinking a lot about her current and future life. Below are some statements that Marta recently made about her life. For each statement, decide whether Marta is talking about her life as she would like it to be, or if she is describing her current life. **Please select the most logical response:**

Activity 2, Number 8. ...tienen muchos talentos.

- **Quiero unos sobrinos que...**
- **Los hijos de mi hermana...**

Question 19 1 points Save

Marta will soon be graduating from her university. She has been thinking a lot about her current and future life. Below are some statements that Marta recently made about her life. For each statement, decide whether Marta is talking about her life as she would like it to be, or if she is describing her current life. **Please select the most**

logical response:

Activity 2, Number 9. ...saquen notas buenas.

- ○ **Quiero tener niños que...**
- ○ **Los hijos de mi hermana...**

Question 20 **1 points** Save

Marta will soon be graduating from her university. She has been thinking a lot about her current and future life. Below are some statements that Marta recently made about her life. For each statement, decide whether Marta is talking about her life as she would like it to be, or if she is describing her current life. **Please select the most logical response:**

Activity 2, Number 10. ...preparen la comida todos los días.

- ○ **No me gusta concinar, por eso tengo servientas que...**
- ○ **No me gusta concinar, por eso quiero servientas que...**

Question 21 **1 points** Save

ACTIVITY 3.

Written Test Part I. Conjugate the verbs in parentheses in either the present indicative or in the present subjunctive according to the context of each sentence.

Note: You do not have to type in written accent marks.

Activity 3, Number 1. ¿Hay alguien en el cuarto que _____ (hablar) alemán?

Question 22 **1 points** Save

Conjugate the verbs in parentheses in either the present indicative or in the present subjunctive according to the context of each sentence.

Note: You do not have to type in written accent marks.

Activity 3, Number 2. ¿Hay una heladería en esta calle? Sí, la heladería _____ (estar) enfrente del banco.

Question 23 **1 points** Save

Conjugate the verbs in parentheses in either the present indicative or in the present subjunctive according to the context of each sentence.

Note: You do not have to type in written accent marks.

Activity 3, Number 3. Busco a alguien que siempre _____ (decir) la verdad.

Question 24 1 points Save

Conjugate the verbs in parentheses in either the present indicative or in the present subjunctive according to the context of each sentence.

Note: You do not have to type in written accent marks.

Activity 3, Number 4. Busco una persona que _____ (querer) compartir un apartamento conmigo.

Question 25 1 points Save

Conjugate the verbs in parentheses in either the present indicative or in the present subjunctive according to the context of each sentence.

Note: You do not have to type in written accent marks.

Activity 3, Number 5. En mi barrio, hay un hombre que _____ (tocar) la guitarra en la esquina.

Question 26 2 points Save

ACTIVITY 4.

Complete each minidialogue with the correct verb form (either the present indicative or the present subjunctive) according to the context of each passage.

Note: You do not have to type in written accent marks.

Juan: ¿Hay un banco por aquí que 1. _____ (estar) abierto?

Paco: No, no hay ningún banco aquí que 2. _____ (abrir) a las seis de la mañana.

Question 27 2 points Save

Complete each minidialogue with the correct verb form (either the present indicative or the present subjunctive) according to the context of each passage.

Note: You do not have to type in written accent marks.

María: ¿Hay una tienda en este pueblo que 3. _____ (vender) zapatos?

Carla: Sí, tenemos tres tiendas que 4. _____ (vender) zapatos.

Question 28 2 points Save

Complete each minidialogue with the correct verb form (either the present

indicative or the present subjunctive) according to the context of each passage.

Note: You do not have to type in written accent marks.

Carmen: ¿Conoces a alguien que 5. [ ] (saber) tocar el piano?

José: Sí, mi hermano 6. [ ] (tocar) el piano muy bien.

Question 29 **2 points** Save

Complete each minidialogue with the correct verb form (either the present indicative or the present subjunctive) according to the context of each passage.

Note: You do not have to type in written accent marks.

Luis: Busco un restaurante en el centro de la ciudad que no 7. [ ] (cargar) tanto dinero.

Marcos: Lo siento, no hay ningún restaurante en el centro que 8. [ ] (ser) barato.

Question 30 **2 points** Save

Complete each minidialogue with the correct verb form (either the present indicative or the present subjunctive) according to the context of each passage.

Note: You do not have to type in written accent marks.

Igna: Quiero encontrar un apartamento que 9. [ ] (tener) dos dormitorios.

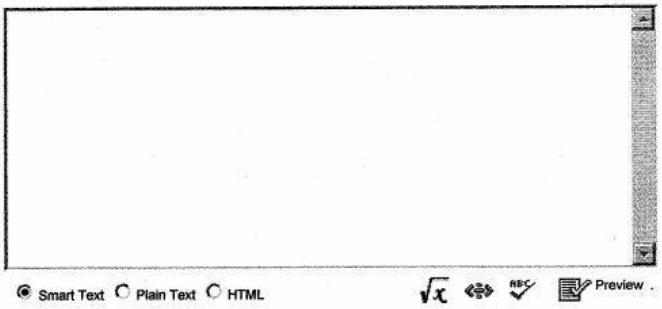
Rosa: Hay un apartamento en mi barrio que 10. [ ] (tener) dos dormitorios.

Question 31 **1 points** Save

ACTIVITY 5

Write a sentence in Spanish describing your ideal house and life. Use the elements that are provided to construct your sentence.

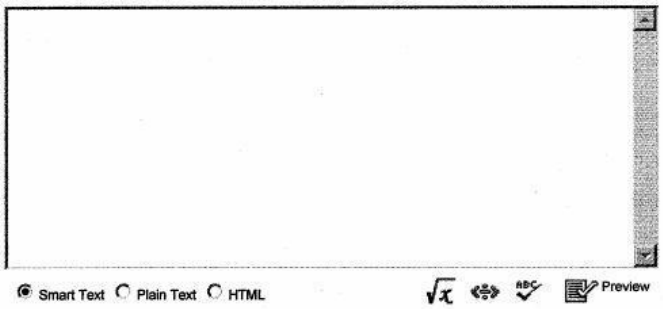
Activity 5, Number 1. Yo / buscar/ casa/ que / tener / ocho dormitorios



Question 32 **1 points** Save

Write a sentence in Spanish describing your ideal house and life. Use the elements that are provided to construct your sentence.

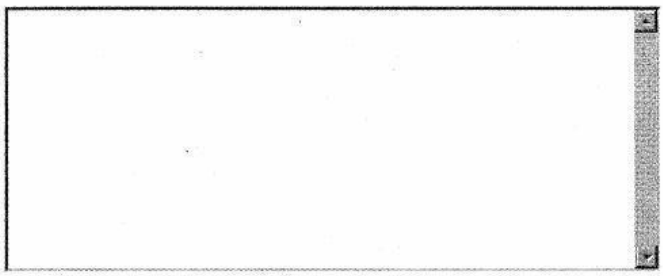
Activity 5, Number 2. Yo / buscar / casa /que /estar / barrio / exclusivo.

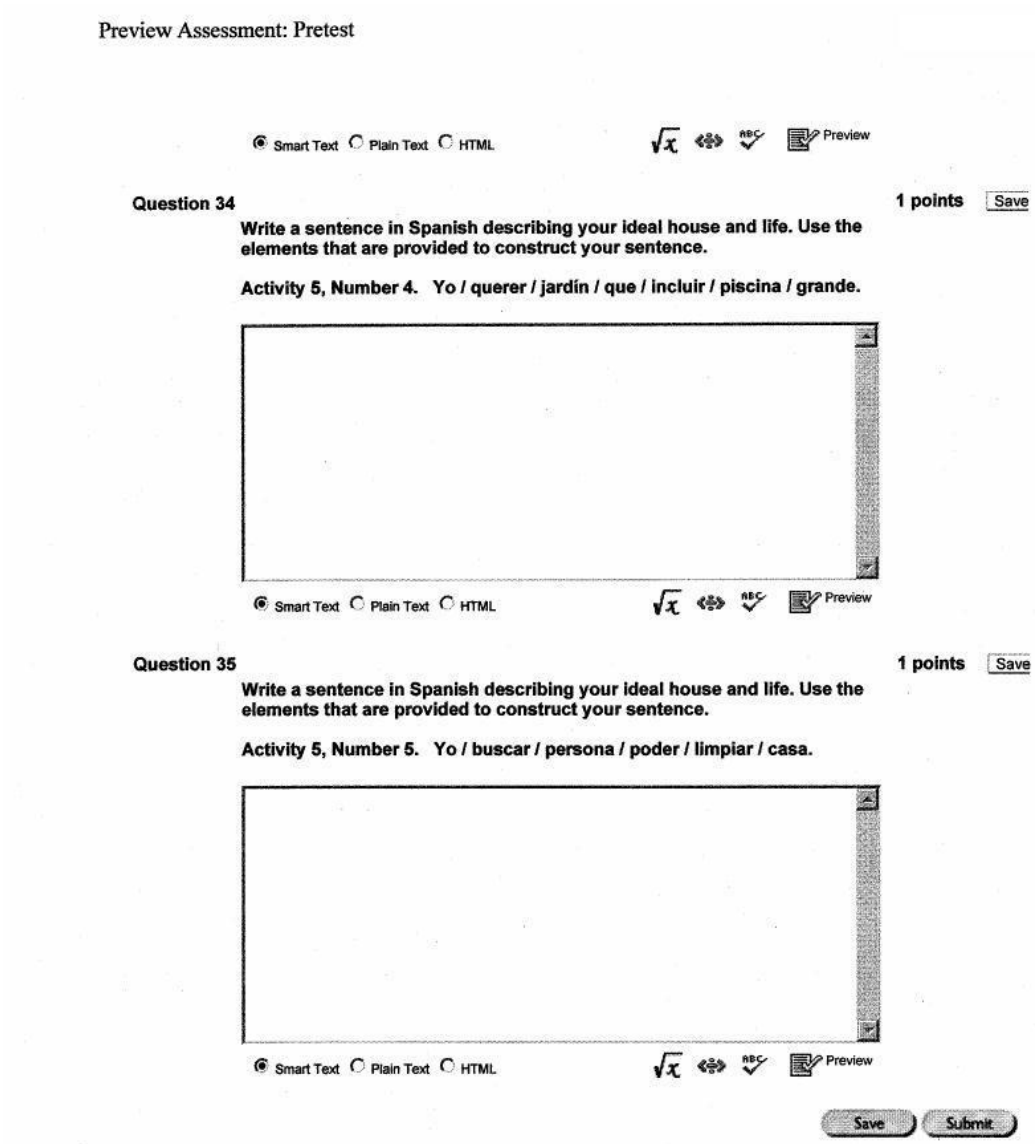


Question 33 **1 points** Save

Write a sentence in Spanish describing your ideal house and life. Use the elements that are provided to construct your sentence.

Activity 5, Number 3. Yo / querer/ vecinos / que / ser / famosos.





Note. Structured input activities were adapted from Farley (2002) with permission.

Form B

Preview Assessment: Posttest 1

SPN1121.501S09: BEGINNING SPANISH II (SPN1121.501S09) > CONTROL PANEL > PREVIEW ASSESSMENT: POSTTEST 1

Preview Assessment: Posttest 1

Name	Posttest 1
Instructions	PLEASE DO NOT CONSULT YOUR TEXTBOOK, GRAMMAR BOOK, OTHERS, OR THE WEB WHEN COMPLETING THIS TEST. YOU WILL HAVE A MAXIMUM OF 30 MINUTES TO TAKE THIS TEST. **PLEASE DO NOT LEAVE ANY ITEMS BLANK.** IF YOU ARE UNSURE OF AN ANSWER, PLEASE GIVE IT YOUR BEST GUESS. PLEASE SAVE EACH ITEM AS YOU TAKE THE TEST. YOU MAY ONLY LISTEN TO EACH SOUND FILE TWICE.
Timed Assessment	This Test has a 30 minute timer.The elapsed time appears at the top right of the window. A **1 minute** warning will be displayed. *[The timer does not appear when previewing this Test]*
Multiple Attempts	Not allowed. This Test can only be taken once.
Force Completion	This Test can be saved and resumed later.

▼ **Question Completion Status:**

Question 1 **1 points** Save

ACTIVITY 1.

José is looking for the perfect graduate degree program. He is currently in an undergraduate program that he really enjoys, but after graduation he wants to continue his studies elsewhere. For each statement, decide whether José is talking about his ideal program of studies or if he is talking about his current academic program. Please select the most logical response.

Activity 1, Number 1. ...dé muchas becas (scholarships).

- ○ **Busco un programa que...**
- ○ **Tengo un programa que...**

Question 2 **1 points** Save

José is looking for the perfect graduate degree program. He is currently in an undergraduate program that he really enjoys, but after graduation he wants to continue his studies elsewhere. For each statement, decide whether José is talking about his ideal program of studies or if he is talking about his current academic program. **Please select the most logical response.**

Activity 1, Number 2. ...son serios y muy trabajadores.

- ○ **Tengo colegas que...**
- ○ **Busco colegas que...**

Question 3 **1 points** Save

Smart Text Plain Text HTML Preview

Question 34 **1 points** Save

Write a sentence in Spanish describing your ideal house and life. Use the elements that are provided to construct your sentence.

Activity 5, Number 4. Yo / necesitar / trabajo / que / me / permitir / viajar / extranjero.

Smart Text Plain Text HTML Preview

Question 35 **1 points** Save

Write a sentence in Spanish describing your ideal house and life. Use the elements that are provided to construct your sentence.

Activity 5, Number 5. Yo / buscar / persona / que / cocinar / para / mi familia / todos / días.

Smart Text Plain Text HTML Preview

Save Submit

José is looking for the perfect graduate degree program. He is currently in an undergraduate program that he really enjoys, but after graduation he wants to continue his studies elsewhere. For each statement, decide whether José is talking about his ideal program of studies or if he is talking about his current academic program. **Please select the most logical response.**

Activity 1, Number 3. ...me gusten.

- ○ **Ahora, tengo clases que...**
- ○ **Busco clases que...**

Question 4 **1 points** Save

José is looking for the perfect graduate degree program. He is currently in an undergraduate program that he really enjoys, but after graduation he wants to continue his studies elsewhere. For each statement, decide whether José is talking about his ideal program of studies or if he is talking about his current academic program. **Please select the most logical response.**

Activity 1, Number 4. ...terminen antes de las seis de la noche.

- ○ **Tengo clases que...**
- ○ **Quiero clases que...**

Question 5 **1 points** Save

José is looking for the perfect graduate degree program. He is currently in an undergraduate program that he really enjoys, but after graduation he wants to continue his studies elsewhere. For each statement, decide whether José is talking about his ideal program of studies or if he is talking about his current academic program. **Please select the most logical response.**

Activity 1, Number 5. ...tenga much fama.

- ○ **Ahora, mi universidad...**
- ○ **Busco una universidad que...**

Question 6 **1 points** Save

José is looking for the perfect graduate degree program. He is currently in an undergraduate program that he really enjoys, but after graduation he wants to continue his studies elsewhere. For each statement, decide whether José is talking about his ideal program of studies or if he is talking about his current academic program. **Please select the most logical response.**

Activity 1, Number 6. ...escriban muchos artículos y textos.

- ○ **Busco profesores que....**

○ **Tengo profesores que...**

Question 7 **1 points** Save

José is looking for the perfect graduate degree program. He is currently in an undergraduate program that he really enjoys, but after graduation he wants to continue his studies elsewhere. For each statement, decide whether José is talking about his ideal program of studies or if he is talking about his current academic program. **Please select the most logical response.**

Activity 1, Number 7. ...empiezan temprano.

○ **Quiero encontrar clases que...**

○ **Ahora, tengo clases que...**

Question 8 **1 points** Save

José is looking for the perfect graduate degree program. He is currently in an undergraduate program that he really enjoys, but after graduation he wants to continue his studies elsewhere. For each statement, decide whether José is talking about his ideal program of studies or if he is talking about his current academic program. **Please select the most logical response.**

Activity 1, Number 8. ...sean inteligentes e interesantes.

○ **Ahora, mis profesores...**

○ **Quiero profesores que...**

Question 9 **1 points** Save

José is looking for the perfect graduate degree program. He is currently in an undergraduate program that he really enjoys, but after graduation he wants to continue his studies elsewhere. For each statement, decide whether José is talking about his ideal program of studies or if he is talking about his current academic program. **Please select the most logical response.**

Activity 1, Number 9. ...ofrezca cursos interesantes.

○ **Busco un programa que...**

○ **Tengo un programa que...**

Question 10 **1 points** Save

José is looking for the perfect graduate degree program. He is currently in an undergraduate program that he really enjoys, but after graduation he wants to continue his studies elsewhere. For each statement, decide whether José is talking about his ideal program of studies or if he is talking about his current academic

program. **Please select the most logical response.**

Activity 1, Number 10. ...incluya oportunidades para estudiar al extranjero.

- ○ **Ahora mi programa...**
- ○ **Quiero encontrar un programa que...**

Question 11 **1 points** Save

Test B. ACTIVITY 2:

Activity 2, Number 1: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Int_Test_B_Listening1.wav

- ○ Sí
- ○ No

Question 12 **1 points** Save

Activity 2, Number 2: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Int_Test_B_Listening2.wav

- ○ Sí
- ○ No

Question 13 **1 points** Save

Activity 2, Number 3: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Int_Test_B_Listening3.wav

- ○ Sí
- ○ No

Question 14 **1 points** Save

Activity 2, Number 4: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Int_Test_B_Listening4.wav

- Sí
- No

Question 15 **1 points** Save

Activity 2, Number 5: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Int_Test_B_Listening5.wav

- Sí
- No

Question 16 **1 points** Save

Activity 2, Number 6: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Int_Test_B_Listening6.wav

- Sí
- No

Question 17 **1 points** Save

Activity 2, Number 7: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Int_Test_B_Listening7.wav

- Sí
- No

Question 18 **1 points** Save

Activity 2, Number 8: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Int_Test_B_Listening8.wav

- Sí
- No

Question 19 **1 points** Save

Activity 2, Number 9: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_B_Listening9.wav

- ○ Sí
- ○ No

Question 20 **1 points** Save

Activity 2, Number 10: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_B_Listening10.wav

- ○ Sí
- ○ No

Question 21 **1 points** Save

ACTIVITY 3.

Written Test Part I. Conjugate the verbs in parentheses in either the present indicative or in the present subjunctive according to the context of each sentence.

Note: You do not have to type in written accent marks.

Activity 3, Number 1. ¿Hay alguien en el cuarto que _____ (saber) hablar francés?

Question 22 **1 points** Save

Conjugate the verb in parentheses in either the present indicative or in the present subjunctive according to the context of the sentence.

Note: You do not have to type in written accent marks.

Activity 3, Number 2. ¿Hay una peluquería en esta calle? Sí, la peluquería _____ (estar) al lado del correo.

Question 23 **1 points** Save

Conjugate the verb in parentheses in either the present indicative or in the present subjunctive according to the context of the sentence.

Note: You do not have to type in written accent marks.

Activity 3, Number 3. Quiero encontrar un mecánico que no _____ (cargar) tanto dinero.

Question 24 1 points Save

Conjugate the verbs in parentheses in either the present indicative or in the present subjunctive according to the context of each sentence.

Note: You do not have to type in written accent marks.

Activity 3, Number 4. Busco a alguien que _____ (poder) reparar mi coche.

Question 25 1 points Save

Conjugate the verbs in parentheses in either the present indicative or in the present subjunctive according to the context of each sentence.

Note: You do not have to type in written accent marks.

Activity 3, Number 5. En mi barrio, hay una mujer que _____ (hacer) bocadillos en la esquina.

Question 26 2 points Save

ACTIVITY 4.

Complete each minidialogue with the correct verb form (either the present indicative or the present subjunctive) according to the context of each passage.

Note: You do not have to type in written accent marks.

Javier: ¿Hay un supermercado por aquí que 1. _____ (abrir) a las cinco de la mañana?

Paula: No, no hay ningún supermercado aquí que 2. _____ (abrir) antes de las seis.

Question 27 2 points Save

Complete each minidialogue with the correct verb form (either the present indicative or the present subjunctive) according to the context of each passage.

Note: You do not have to type in written accent marks.

María: ¿Hay una tienda en este pueblo que 3. _____ (vender) gafas del sol?

Carmen: Sí, hay una tienda en la esquina que 4. _____ (vender) gafas del sol.

Question 28 2 points Save

Complete each minidialogue with the correct verb form (either the present indicative or the present subjunctive) according to the context of each passage.

Note: You do not have to type in written accent marks.

Carmen: ¿Conoces a alguien que 5. [ ] (saber) programar computadoras?

Juan: Sí, mi hermana 6. [ ] (estudiar) informática.

Question 29 **2 points** Save

Complete each minidialogue with the correct verb form (either the present indicative or the present subjunctive) according to the context of each passage.

Note: You do not have to type in written accent marks.

Luis: Busco un autobús que 7. [ ] (ir) de Caracas a Maracaibo.

Manuel: Lo siento, no hay ningún autobús que 8. [ ] (ir) de Caracas a Maracaibo.

Question 30 **2 points** Save

Complete each minidialogue with the correct verb form (either the present indicative or the present subjunctive) according to the context of each passage.

Note: You do not have to type in written accent marks.

Igna: Quiero encontrar una casa que 9. [ ] (tener) dos pisos.

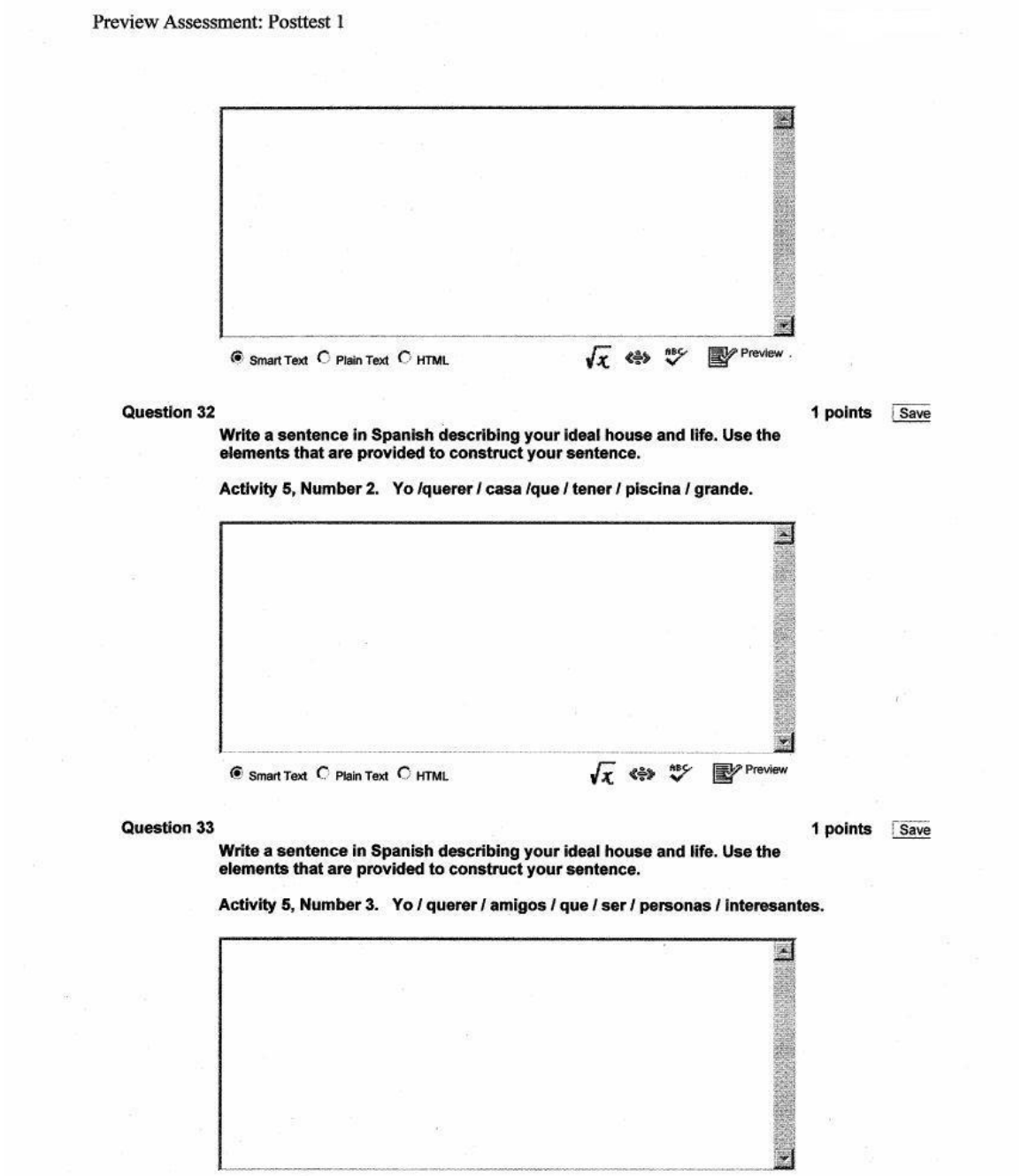
Elisa: Hay una casa en venta (for sale) en mi barrio que 10. [ ] (tener) dos pisos.

Question 31 **1 points** Save

ACTIVITY 5

Write a sentence in Spanish describing your ideal house and life. Use the elements that are provided to construct your sentence.

Activity 5, Number 1. Yo / buscar / trabajo/ que / pagar / mucho / dinero.



Note. Structured input activities were adapted from Farley (2002) with permission.

Form C

Preview Assessment: Posttest 2

SPN1121.501S09: BEGINNING SPANISH II (SPN1121.501S09) > CONTROL PANEL > PREVIEW ASSESSMENT: POSTTEST 2

Preview Assessment: Posttest 2

Name	Posttest 2
Instructions	PLEASE DO NOT CONSULT YOUR TEXTBOOK, GRAMMAR BOOK, OTHERS, OR THE WEB WHEN COMPLETING THIS TEST. YOU WILL HAVE A MAXIMUM OF 30 MINUTES TO TAKE THIS PRETEST PLEASE DO NOT LEAVE ANY ITEMS BLANK. PLEASE SAVE EACH ITEM AS YOU TAKE THE TEST. You may only listen to each sound file twice.
Timed Assessment	This Test has a 30 minute timer.The elapsed time appears at the top right of the window. A **1 minute** warning will be displayed. *[The timer does not appear when previewing this Test]*
Multiple Attempts	Not allowed. This Test can only be taken once.
Force Completion	This Test can be saved and resumed later.

▼ **Question Completion Status:**

Question 1 **1 points** Save

Test C. ACTIVITY 1: LISTENING

Activity 1, Number 1: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_A_Listening1.wav

- Sí
- No

Question 2 **1 points** Save

Activity 1, Number 2: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_A_Listening2.wav

- Sí
- No

Question 3 **1 points** Save

Activity 1, Number 3: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_A_Listening3.wav

- Sí
- No

Question 4 **1 points** Save

Activity 1, Number 4: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_A_Listening4.wav

- Sí
- No

Question 5 **1 points** Save

Activity 1, Number 5: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_A_Listening5.wav

- Sí
- No

Question 6 **1 points** Save

Activity 1, Number 6: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_A_Listening6.wav

- Sí
- No

Question 7 **1 points** Save

Activity 1, Number 7: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_B_Listening7.wav

- Sí
- No

Question 8 1 points Save

Activity 1, Number 8: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_B_Listening8.wav

- Sí
- No

Question 9 1 points Save

Activity 1, Number 9: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_B_Listening9.wav

- Sí
- No

Question 10 1 points Save

Activity 1, Number 10: Click on the following link to listen to the sentence in Spanish. If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**

Int_Test_B_Listening10.wav

- Sí
- No

Question 11 1 points Save

Activity 2: LA VIDA DE MARTA.

Marta will soon be graduating from her university. She has been thinking a lot about her current and future life. Below are some statements that Marta recently made about her life. For each statement, decide whether Marta is talking about her life as she would like it to be, or if she is describing her current life. **Please select the most logical response.**

Activity 2, Number 1. ...INCLUYA VIAJES A PAISES EXTRANJEROS.

- TENGO UN TRABAJO QUE...
- BUSCO UN TRABAJO QUE...

Question 12 1 points Save

Marta will soon be graduating from her university. She has been thinking a lot about her current and future life. Below are some statements that Marta recently made about

her life. For each statement, decide whether Marta is talking about her life as she would like it to be, or if she is describing her current life. **Please select the most logical response.**

Activity 2, Number 2. ...ESTÉ EN EL CENTRO DE LA CIUDAD

- ○ QUIERO TRABAJAR EN UNA OFICINA QUE...
- ○ AHORA, TRABAJO EN UNA OFICINA QUE...

Question 13 **1 points** Save

Marta will soon be graduating from her university. She has been thinking a lot about her current and future life. Below are some statements that Marta recently made about her life. For each statement, decide whether Marta is talking about her life as she would like it to be, or if she is describing her current life. **Please select the most logical response.**

Activity 2, Number 3. ...SEA GUAPO Y SIMPÁTICO.

- ○ QUIERO UN ESPOSO QUE...
- ○ YA TENGO UN ESPOSO QUE...

Question 14 **1 points** Save

Marta will soon be graduating from her university. She has been thinking a lot about her current and future life. Below are some statements that Marta recently made about her life. For each statement, decide whether Marta is talking about her life as she would like it to be, or if she is describing her current life. **Please select the most logical response.**

Activity 2, Number 4. ...NO SABE HABLAR ESPAÑOL.

- ○ BUSCO UN NOVIO QUE...
- ○ AHORA TENGO UN NOVIO QUE...

Question 15 **1 points** Save

Marta will soon be graduating from her university. She has been thinking a lot about her current and future life. Below are some statements that Marta recently made about her life. For each statement, decide whether Marta is talking about her life as she would like it to be, or if she is describing her current life. **Please select the most logical response.**

Activity 2, Number 5. ...HABLE ESPAÑOL.

- ○ MI MADRE NO HABLA INGLÉS, POR ESO BUSCO UN ESPOSO QUE...
- ○ MI MADRE NO HABLA INGLÉS Y TENGO UN ESPOSO QUE...

Question 16 **1 points** Save

Marta will soon be graduating from her university. She has been thinking a lot about her current and future life. Below are some statements that Marta recently made about her life. For each statement, decide whether Marta is talking about her life as she would like it to be, or if she is describing her current life. **Please select the most**

logical response.

Activity 2, Number 6. ...ME TRATEN BIEN.

- AHORA, MIS SUEGROS (IN-LAWS)...
- NECESITO SUEGROS (IN-LAWS) QUE...

Question 17 **1 points** Save

Marta will soon be graduating from her university. She has been thinking a lot about her current and future life. Below are some statements that Marta recently made about her life. For each statement, decide whether Marta is talking about her life as she would like it to be, or if she is describing her current life. **Please select the most logical response.**

Activity 2, Number 7. ...TOQUEN INSTRUMENTOS MUSICALES.

- LOS HIJOS DE MI HERMANA...
- QUIERO TENER HIJOS QUE...

Question 18 **1 points** Save

Marta will soon be graduating from her university. She has been thinking a lot about her current and future life. Below are some statements that Marta recently made about her life. For each statement, decide whether Marta is talking about her life as she would like it to be, or if she is describing her current life. **Please select the most logical response.**

Activity 2, Number 8. ...TIENEN MUCHOS TALENTOS.

- ESPERO TENER HIJOS QUE...
- MI HERMANA TIENE HIJOS QUE...

Question 19 **1 points** Save

Marta will soon be graduating from her university. She has been thinking a lot about her current and future life. Below are some statements that Marta recently made about her life. For each statement, decide whether Marta is talking about her life as she would like it to be, or if she is describing her current life. **Please select the most logical response.**

Activity 2, Number 9. ...SAQUEN NOTAS BUENAS.

- QUIERO TENER HIJOS QUE...
- MI AMIGA TIENE HIJOS QUE...

Question 20 **1 points** Save

Marta will soon be graduating from her university. She has been thinking a lot about her current and future life. Below are some statements that Marta recently made about her life. For each statement, decide whether Marta is talking about her life as she would like it to be, or if she is describing her current life. **Please select the most logical response.**

Activity 2, Number 10. ...PREPAREN LA COMIDA TODOS LOS DÍAS.

- NO ME GUSTA COCINAR, POR ESO TENGO SERVIENTAS QUE...
- NO ME GUSTA COCINAR, POR ESO QUIERO SERVIENTAS QUE...

Question 21 **1 points** Save

ACTIVITY 3. ¿SUBJUNTIVO O INDICATIVO? Conjugate the verbs in parentheses in either the present indicative or in the present subjunctive according to the context of each sentence.

NOTE: You do not have to type in written accent marks.

Activity 3, Number 1. ¿Hay alguien en el cuarto que _____ (saber) hablar francés?

Question 22 **1 points** Save

Conjugate the verb in parentheses in either the present indicative or in the present subjunctive according to the context of the sentence.

NOTE: You do not have to type in written accent marks.

Activity 3, Number 2. ¿Hay una peluquería en esta calle? Sí, la peluquería _____ (estar) al lado del correo.

Question 23 **1 points** Save

Conjugate the verb in parentheses in either the present indicative or in the present subjunctive according to the context of the sentence.

NOTE: You do not have to type in written accent marks.

Activity 3, Number 3. Quiero encontrar un mecánico que no _____ (cargar) tanto dinero.

Question 24 **1 points** Save

Conjugate the verb in parentheses in either the present indicative or in the present subjunctive according to the context of the sentence.

NOTE: You do not have to type in written accent marks.

Activity 3, Number 4. Busco a alguien que _____ (poder) reparar mi coche.

Question 25 **1 points** Save

Conjugate the verb in parentheses in either the present indicative or in the present subjunctive according to the context of the sentence.

NOTE: You do not have to type in written accent marks.

Activity 3, Number 5. En mi barrio, hay una mujer que _____ (hacer) bocadillos en la esquina.

Question 26 **2 points** Save

ACTIVITY 4. MINIDIÁLOGOS.

Complete each minidialogue with the correct verb form (either the present indicative or the present subjunctive) according to the context of each passage.

Note: You do not have to type in written accent marks.

Juan: ¿Hay un banco por aquí que 1. _____ (estar) abierto?

Paco: No, no hay ningún banco aquí que 2. _____ (abrir) a las seis de la mañana.

Question 27 **2 points** Save

Complete each minidialogue with the correct verb form (either the present indicative or the present subjunctive) according to the context of each passage.

Note: You do not have to type in written accent marks.

María: ¿Hay una tienda en este pueblo que 3. _____ (vender) zapatos?

Carla: Sí, tenemos tres tiendas que 4. _____ (vender) zapatos.

Question 28 **2 points** Save

Complete each minidialogue with the correct verb form (either the present indicative or the present subjunctive) according to the context of each passage.

Note: You do not have to type in written accent marks.

Carmen: ¿Conoces a alguien que 5. _____ (saber) tocar el piano?

José: Sí, mi hermano 6. _____ (tocar) el piano muy bien.

Question 29 **2 points** Save

Complete each minidialogue with the correct verb form (either the present indicative or the present subjunctive) according to the context of each passage.

Note: You do not have to type in written accent marks.

Luis: Busco un restaurante en el centro de la ciudad que no 7.

[ ] (cargar) tanto dinero.

Marcos: Lo siento, no hay ningún restaurante en el centro que 8.
[ ] **(ser) barato.**

Question 30 **2 points** Save

Complete each minidialogue with the correct verb form (either the present indicative or the present subjunctive) according to the context of each passage.

Note: You do not have to type in written accent marks.

Igna: Quiero encontrar un apartamento que 9. [ ] **(tener) dos dormitorios.**

Rosa: Hay un apartamento en mi barrio que 10. [ ] **(tener) dos dormitorios.**

Question 31 **1 points** Save

ACTIVITY 5. TU VIDA IDEAL. Write a complete sentence in Spanish describing your ideal house and life. Use the elements that are provided to construct each sentence.

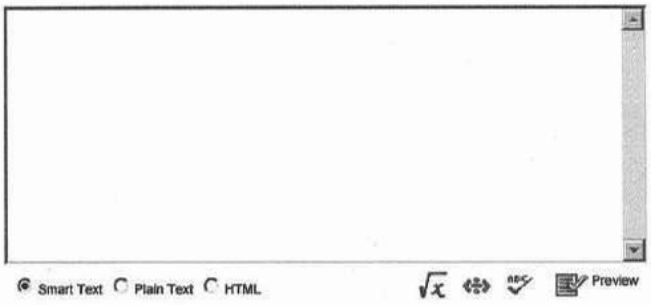
Activity 5, Number 1. Yo / buscar / casa/ que / tener / ocho dormitorios

◉ Smart Text ○ Plain Text ○ HTML Preview

Question 32 **1 points** Save

Write a complete sentence in Spanish describing your ideal house and life. Use the elements that are provided to construct each sentence.

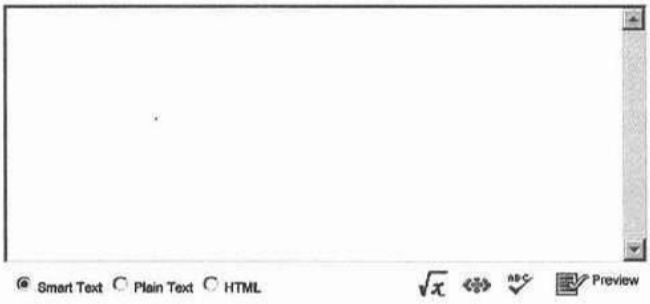
Activity 5, Number 2. Yo / querer / casa / que / estar / barrio / exclusivo.



Question 33 **1 points** Save

Write a complete sentence in Spanish describing your ideal house and life. Use the elements that are provided to construct each sentence.

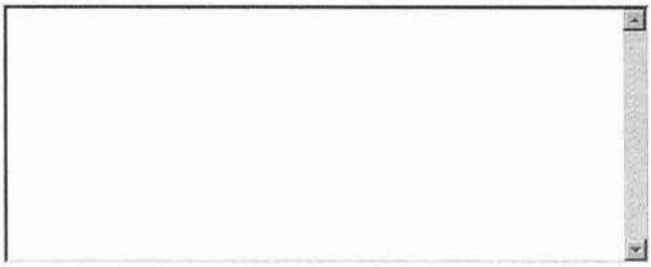
Activity 5, Number 3. Yo / querer / vecinos / que / ser / famosos.

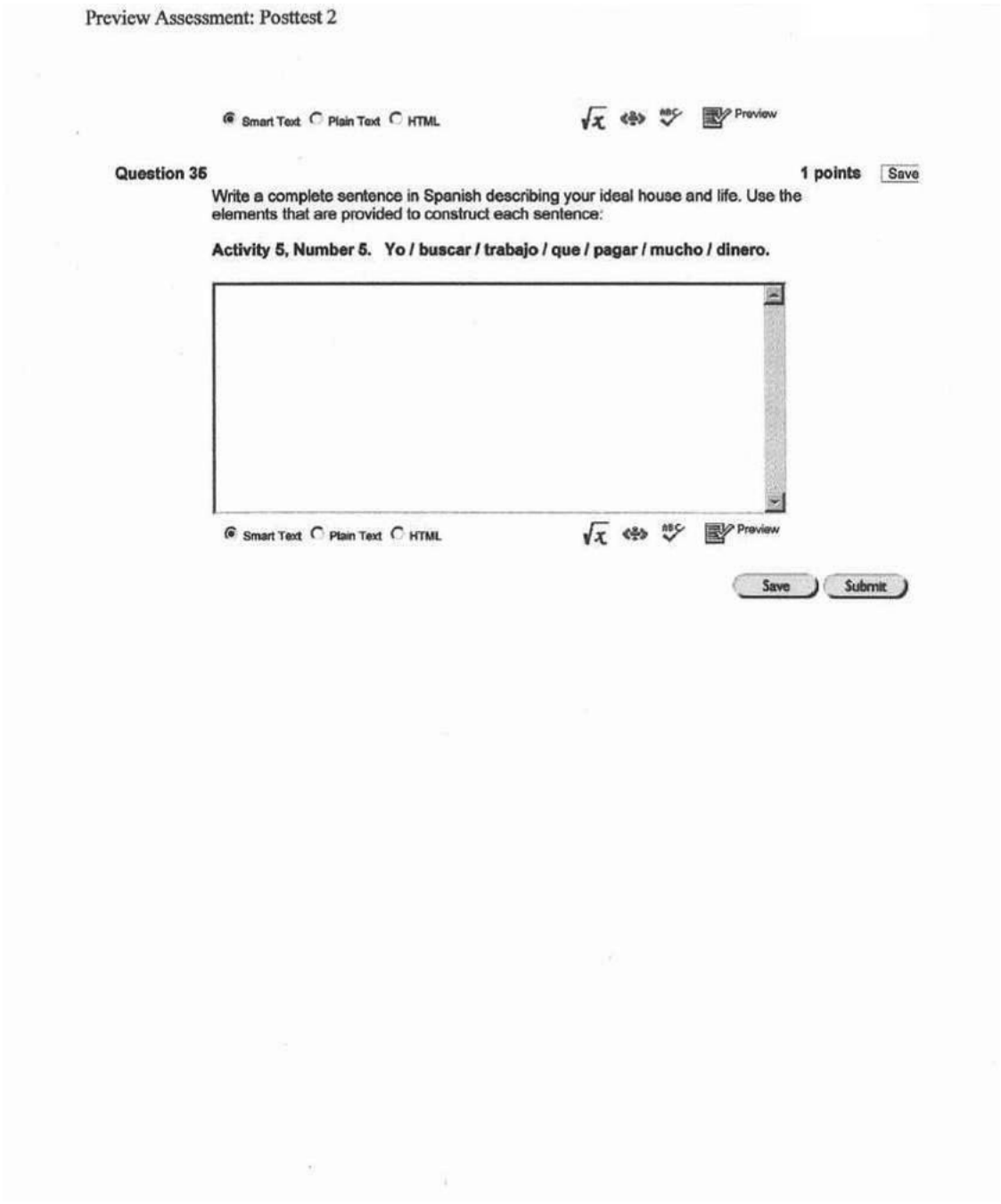


Question 34 **1 points** Save

Write a complete sentence in Spanish describing your ideal house and life. Use the elements that are provided to construct each sentence.

Activity 5, Number 4. Yo / necesitar / trabajo / que / me / permitir / viajar / extranjero.





Note. Structured input activities were adapted from Farley (2002) with permission.

Appendix D

Comprehension Test

SPN1121.501C09: BEGINNING SPANISH II (SPN1121.501C09) > CONTROL PANEL > PREVIEW ASSESSMENT: READING COMPREHENSION TEST

Preview Assessment: Reading Comprehension Test

Name	Reading Comprehension Test
Instructions	Please complete all of the test items, either multiple-choice or essay. The questions are based on the Spanish Want Ads that were in your reading activity. Please DO NOT use any resources such as a dictionary, grammar book, the web, or a friend to help you answer the questions. The score you receive on this test will not affect your grade. However, your best effort will help ensure the reliability of the results of this research study! You must spend a minimum of 10 minutes on this test, and you will have a maximum of 30 minutes.
Timed Assessment	This Test has a 30 minute timer. The elapsed time appears at the top right of the window. A **1 minute** warning will be displayed. *[The timer does not appear when previewing this Test]*
Multiple Attempts	Not allowed. This Test can only be taken once.
Force Completion	This Test can be saved and resumed later.

▼ **Question Completion Status:**

Question 1 **1 points** Save

1. What are the people looking for in the Spanish want ads that you just read?

- ○ Roommates
- ○ Pets
- ○ A place to live

Question 2 **1 points** Save

2. When the author of the ad states, **"QUE ACEPTEN MASCOTAS ES IMPRESCINDIBLE PARA MÍ."** What must be allowed?

- ○ Children
- ○ Pets
- ○ Collectables

Question 3 **1 points** Save

3. Read the following ad: **"BUSCO A ALGUIEN QUE TENGA APARTAMENTO Y DESEE COMPARTIRLO. NECESARIO QUE TENGA BAÑO PRIVADO PARA MÍ, COCINA, COMEDOR, SALA Y SI ES POSIBLE 2 CUARTOS Y UN PATIOCITO. EL PRECIO MÁS O MENOS TENDRÍA QUE SER ENTRE 20.000 HASTA 50.000 PESOS/MES."** What is a must have for the author of this Want Ad?

- ○ A private bath
- ○ Two bedrooms
- ○ A patio

Question 4 **1 points** Save

4. Read the following ad: **"Busco una casa que no esté alejado de la ciudad, sin problemas de agua, recolección de basura, sin vecinos problemáticos, casa o departamento que esté en buen estado, que tenga línea telefónica y enrejada."** What location is the author of this Want Ad looking for?

- A place far from the city
- A place near the city
- A place in the city

Question 5 **1 points** Save

5. In the following ad: **"Busco que me alquilen un apartamento para pareja sin niños, con cochera, entrada independiente, que tenga 1 o 2 habitaciones, en Guadalupe o alrededores. pago máximo 100.000/mes."** What should the apartment have?

- A garage
- A shared entrance
- A nursery

Question 6 **1 points** Save

6. In the following except from a Spanish want ad: **"Busco una casa ...que esté en buen estado."** The author of the ad says that he or she is looking for a house that is in good condition. **What form of the verb estar is used?**

- present indicative
- present subjunctive

Question 7 **2 points** Save

7. In the following except from a Spanish want ad: "Busco una casa ...que **esté** en buen estado." The author of the ad says that he or she is looking for a house that is in good condition.

Why does the author of the ad use this form of the verb **"estar"?** In other words, **what meaning does this form of the verb "estar" express when conjugated this way?**

Smart Text Plain Text HTML Preview

Preview Assessment: Reading Comprehension Test

Question 8 **1 points** Save

8. In the following excerpt from a Spanish Want Ad, what forms of the verbs **"tener"** and **"desear"** are used? **"BUSCO A ALGUIEN QUE TENGA APARTAMENTO Y DESEE COMPARTIRLO."**

- present indicative
- present subjunctive

Question 9 **2 points** Save

9. In the following Want Ad, "BUSCO A ALGUIEN QUE **TENGA** APARTAMENTO Y **DESEE** COMPARTIRLO":

Why does the author of the ad use these forms of the verbs **"tener"** and **"desear"**? In other words, **what meaning do these verbs express when conjugated this way?**

Smart Text Plain Text HTML Preview

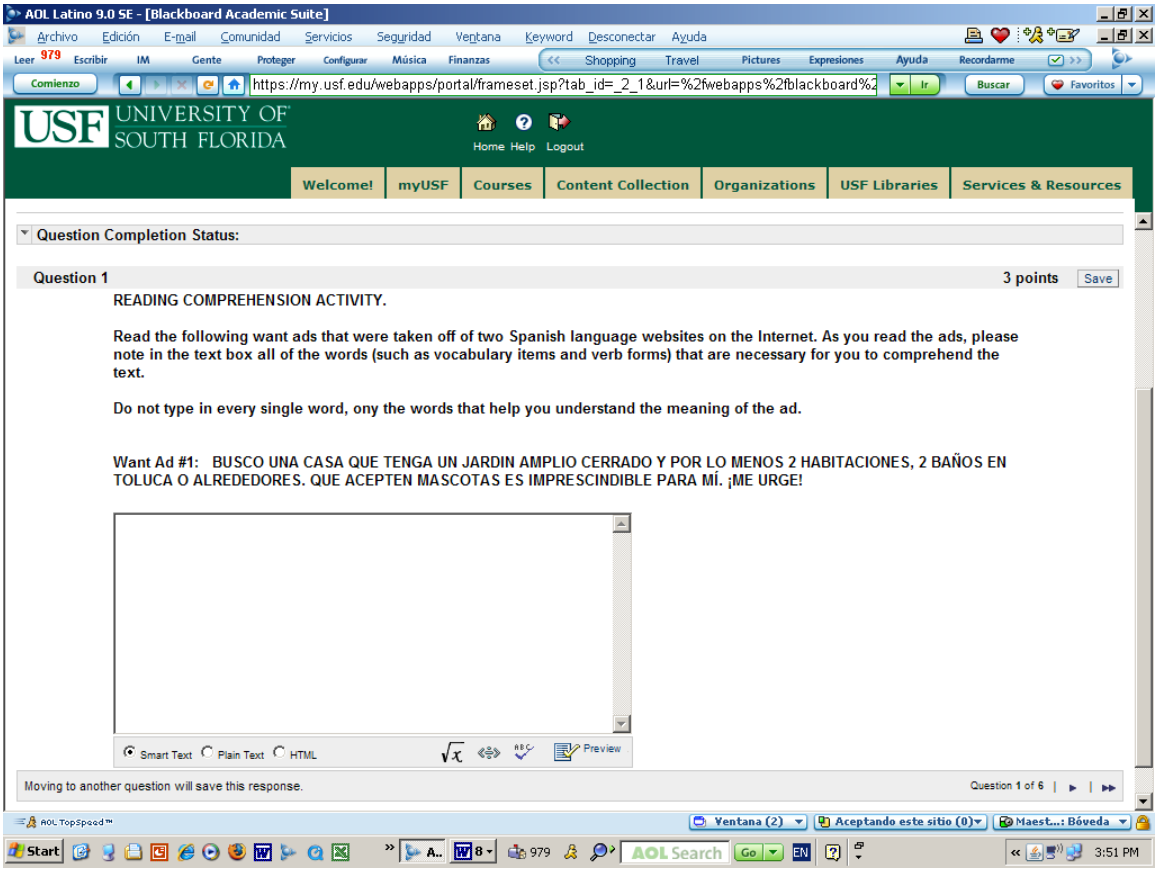
Save Submit

Appendix E

Note-Sheet

Read the following want ads that were taken off of two Spanish language websites on the Internet. As you read the ads, please note in the text box all of the words (such as vocabulary items and verb forms) that are necessary for you to comprehend the text. Do not type in every single word, only the words that help you understand the meaning of the ad.

Want Ad #1: BUSCO UNA CASA QUE TENGA UN JARDIN AMPLIO CERRADO Y POR LO MENOS 2 HABITACIONES, 2 BAÑOS EN TOLUCA O ALREDEDORES. QUE ACEPTEN MASCOTAS ES IMPRESCINDIBLE PARA MÍ. ¡ME URGE!



*The five want ads and note-sheets (text boxes) were delivered online one at a time. Participants were not permitted to back-track to a previous want ad once they filled in the text box.

Appendix F

Authentic Input Text

Reading Activity

Read the following want ads that were taken off of two websites on the Internet. As you read each ad, please note all of the words (such as vocabulary items and verbs) in the text box that you focus on to understand the Spanish want ad. Please do not write down every single word.

1. BUSCO UNA CASA QUE TENGA UN JARDIN AMPLIO CERRADO Y POR LO MENOS 2 HABITACIONES, 2 BAÑOS EN TOLUCA O ALREDEDORES. QUE ACEPTEN MASCOTAS ES IMPRESCINDIBLE PARA MÍ. ¡ME URGE!

2. Busco una casa que no esté alejado de la ciudad, sin problemas de agua, recolección de basura, sin vecinos problemáticos, casa o departamento que esté en buen estado, que tenga línea telefónica y enrejada.

3. Busco una casa que tenga 3 dormitorios y es muy urgente porque tengo que irme de donde vivo por problema de trabajo y el colegio. Lo único que pido que sea tranquilo y los vecinos sean buenas personas y esté un colegio cerca de la casa.

4. Busco un apartamento que me alquilen para pareja sin niños. Busco que me alquilen un apartamento para pareja sin niños, con cochera, entrada independiente, que tenga 1 o 2 habitaciones, en Guadalupe o alrededores. pago máximo 100.000/mes

5. BUSCO A ALGUIEN QUE TENGA APARTAMENTO Y DESEE COMPARTIRLO. NECESARIO QUE TENGA BAÑO PRIVADO PARA MÍ, COCINA, COMEDOR, SALA Y SI ES POSIBLE 2 CUARTOS Y UN PATIOCITO. EL PRECIO MÁS O MENOS TENDRÍA QUE SER ENTRE 20.000 HASTA 50.000

*The ads in the Authentic Input Passage were taken from two web sites that post free classified ads in Spanish. They can be found at: www.MundoAnuncio.com and www.adoos.com.mx All ads were retrieved from the web on December 10, 2008.

Appendix G

Posttreatment Questionnaire

SPN1121.501C09: BEGINNING SPANISH II (SPN1121.501C09) > CONTROL PANEL > PREVIEW ASSESSMENT: POSTTREATMENT QUESTIONNAIRE

Preview Assessment: Posttreatment Questionnaire

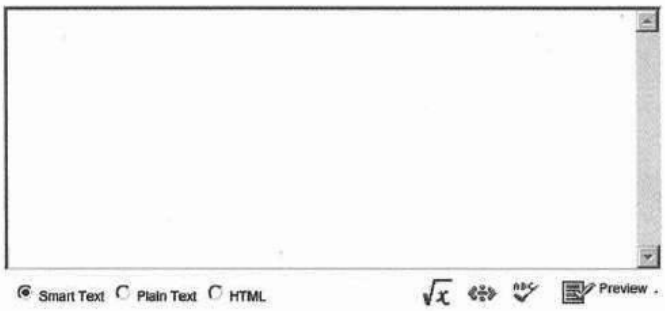
Name	Posttreatment Questionnaire
Instructions	PLEASE DO NOT CONSULT YOUR TEXTBOOK, A DICTIONARY, THE WEB, YOUR FRIENDS, OR ANY OTHER SOURCE WHEN COMPLETING THIS ITEM. You should spend at least 10 minutes on this activity. THANK YOU FOR PARTICIPATING IN THE RESEARCH STUDY!
Timed Assessment	This Test has a 30 minute timer. The elapsed time appears at the top right of the window. A **1 minute** warning will be displayed. *[The timer does not appear when previewing this Test]*
Multiple Attempts	Not allowed. This Test can only be taken once.
Force Completion	This Test can be saved and resumed later.

▼ **Question Completion Status:**

Question 1 **0 points** Save

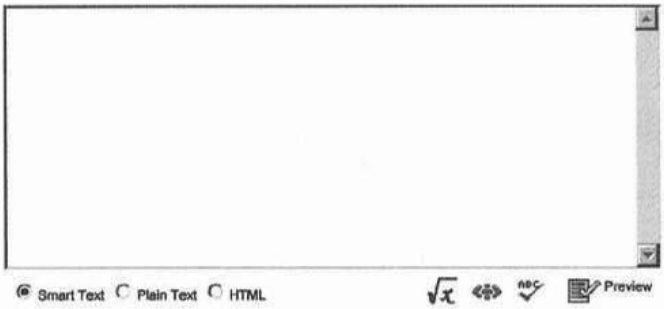
Please answer the following questions as honestly as possible. Your answers will remain confidential and anonymous. Please give your best effort at answering questions 5 and 6. Even if you are unsure of your answers, please attempt to write down what you think may be the correct response.

Question 1: Do you think that the grammar activity package that you received presented Spanish grammar in a new and insightful manner? If so, please explain



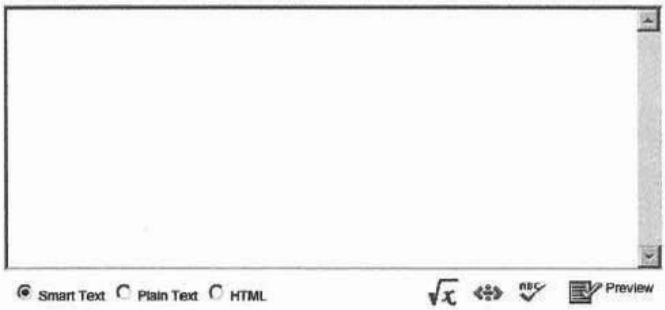
Question 2 **0 points** Save

2. Were the materials in your online activity package easier, harder, or about the same as the grammar activities that you normally complete for you Spanish language course?



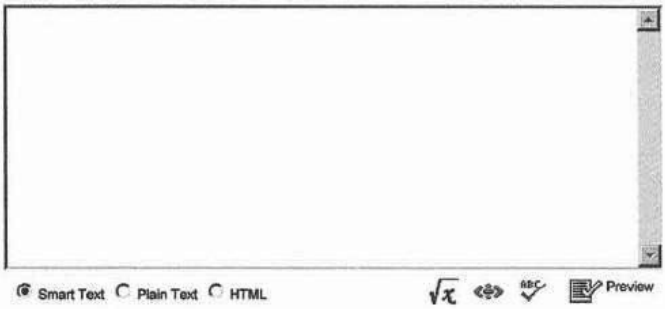
Question 3 **0 points** Save

3. Did you find the grammar activities in the study materials more helpful than the grammar activities that you normally complete for your Spanish language course? Please explain.



Question 4 **0 points** Save

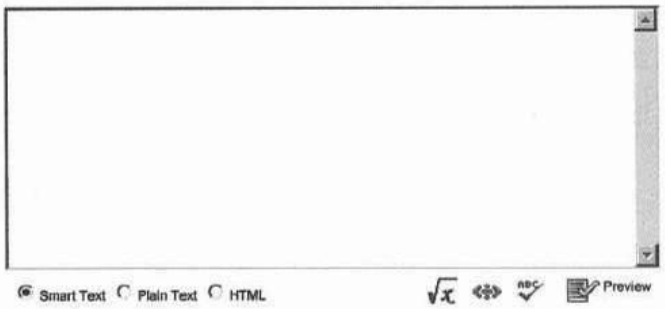
4. Did you find the grammar activities in the study materials more enjoyable than the grammar activities that you normally complete for your Spanish language course? Please explain.



Question 5 **1 points** Save

5. Can you recall a specific grammatical form or structure that was present in the reading activity (the Spanish Want Ads)? If so, can you give an example of the grammatical form or structure?

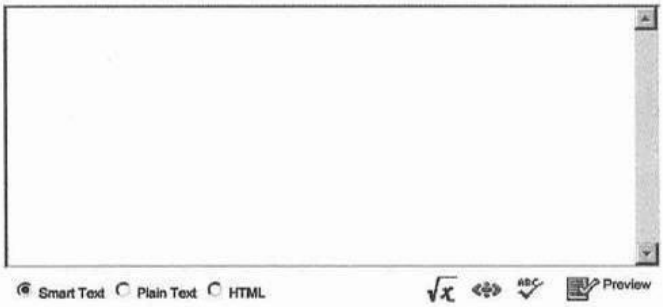
Please try to answer this question to the best of your ability.



Question 6 **2 points** Save

6. In your own words, can you state the grammatical rule for using the form or structure that you mentioned in the previous question?

Please try to answer this question to the best of your ability.



Question 7 **0 points** Save

7. When you completed Posttest 1 and the Comprehension Test online, did you seek any outside assistance such as the web or your grammar book?

- Yes
- No

Question 8 **0 points** Save

8. If you sought outside assistance when completing Posttest 1 and the Reading Comprehension Test, from where did you seek assistance? Please check all that apply:

- [ ] A grammar book
- [ ] En Linea course materials
- [ ] A dictionary
- [ ] A friend
- [ ] My teacher
- [ ] The Internet
- [ ] Other
- [ ] I did not seek outside assistance.

Question 9 **0 points** Save

What aspects of your grammar activity package were the MOST helpful to you? (check all that apply)

- [ ] the listening activities
- [ ] the written activities
- [ ] the speaking activities (this will not apply to everyone)
- [ ] the graphics (illustrations)
- [ ] the word animations (this will not apply to everyone)
- [ ] the grammar explanations (this will not apply to everyone)
- [ ] the information on processing strategeis (this will not apply to everyone)

Question 10 **0 points** Save

What aspects of your grammar activity package were the LEAST helpful?

- [ ] the listening activities
- [ ] the written activites
- [ ] the speaking activities (this will not apply to everyone)
- [ ] the graphics (illustrations)
- [ ] the word animations (this will not apply to everyone)
- [ ] the grammar explanations (this will not apply to everyone)
- [ ] the information on processing strategies (this will not apply to everyone)

Save Submit

Appendix H

Satisfaction Survey

Please indicate the degree to which you agree or disagree with the following statements. Mark 1 for statements with which you strongly agree and mark 5 for statements with which you strongly disagree.

1. The directions were clear and easy to follow.

5 4 3 2 1

2. I learned something from completing this activity package.

5 4 3 2 1

3. I preferred these types of activities to my regular classroom activities.

5 4 3 2 1

4. It was easy to complete the web based grammar activities.

5 4 3 2 1

5. I enjoyed learning Spanish grammar using the materials.

5 4 3 2 1

Comments: _____

_____

_____

Appendix I

Vocabulary Practice Activity

Preview Assessment: Vocabulary Practice

Name Vocabulary Practice

Instructions Please complete this practice as many times as necessary until you score 80% or higher. You must complete this before opening your grammar activity package.

Multiple Attempts This Test allows multiple attempts.

Force Completion This Test can be saved and resumed later.

Question Completion Status:

Question 1 **5 points** Save

What does the word "esquina" mean?

- block
- street
- gate
- corner

Question 2 **5 points** Save

What is a "piscina"?

- a lake
- a pool
- a fountain
- a well

Question 3 **15 points** Save

Match the Spanish infinitive with its English meaning:

- contribuir	A. to wish; to want
- desear	B. to contribute
- costar (o-ue)	C. to do; to make
- pagar	D. to cost
- enseñar	E. to teach; to show
- hacer	F. to pay

Question 4 **10 points** Save

In Spanish, the word "hay" has four possible meanings in English. Can you name one of them?

Preview Assessment: Vocabulary Practice

Question 5 **12.5 points** Save

Match the Spanish infinitive with its English equivalent.

- poder
- esperar
- prestar
- cargar
- dar

A. to charge
B. to hope; to wait for
C. to give
D. to be able; can
E. to loan

Question 6 **5 points** Save

What are "vecinos"?

- friends
- teachers
- neighbors
- children

Question 7 **12.5 points** Save

Match the Spanish infinitive to its English equivalent:

- cambiar
- encontrar (o-ue)
- descansar
- ofrecer
- decir

A. to say; to tell
B. to rest
C. to find
D. to change; to exchange
E. to offer

Question 8 **10 points** Save

What does the word "nadie" mean in Spanish?

Question 9 **5 points** Save

What is "paella"?

- A Tex-Mex dish with spicy meat and beans.
- A Spanish dish with shellfish and rice.
- A Mexican dish with rice and beans.
- A Venezualan dish with chicken and pork.

Question 10 **5 points** Save

What are "bocadillos" in Spanish?

Preview Assessment: Vocabulary Practice

- loaves
- appetizers
- desserts
- sandwiches

Question 11 **10 points** Save

What does the word "alguien" mean in Spanish?

Question 12 **5 points** Save

What is a "peluquería"?

- a hairdresser's
- a shoe store
- a retail store
- a butcher shop

Save Submit

Appendix J

Traditional Instruction Explicit Grammar Explanation: Subjunctive Formation

Formation of the Subjunctive

Recall the formation of the present subjunctive for regular verbs:

Take the "yo" form of the present indicative:

Estudiar → Estudio Comer → Como Escribir → Escribo

Then add the opposite ending:

For–ar verbs, add –e, -es, -e, -emos –éis, -en

For –er and –ir verbs, add –a, -as, -a, -amos, áis, -an

Estudio → Estudie, Estudies, Estudie, Estudiemos, Estudiéis, Estudien

Como → Coma, Comas, Coma, Comamos, Comáis, Coman

Escribo → Escriba, Escribas, Escriba, Escribamos, Escribáis, Escriban

Verbs that are irregular in the "yo" form of the present tense are regular in the present subjunctive:

Tener → Tengo

Tengo→ Tenga, Tengas, Tenga, Tengamos, Tengáis, Tengan

There are only five irregular subjunctive verbs; here are the 3rd person present subjunctive forms:

Dar Estar Ir Saber Ser

Dar: Dé, Des, Dé, Demos, Deis, Den

Estar: Esté, Estés, Esté, Estemos, Estéis, Esten

Ir: Vaya, Vayas, Vaya, Vayamos, Vayáis, Vayan

Saber: Sepa, Sepas, Sepa, Sepamos, Sepáis, Sepan

Ser: Sea, Seas, Sea, Seamos, Seáis, Sean

Some verbs take a spelling change in the subjunctive. Verbs that end in -gar, -zar, and -car take the following changes:

-gar verbs change from "g" to "gu", for example: pagar → pague

-car verbs change from "c" to "qu", for example: buscar → busque

-zar verbs change from "z" to "c", for example: empezar → empiece

Appendix K

Traditional Instruction Explicit Grammar Explanation: Subjunctive Use

To form the present subjunctive for regular verbs:

Take the "yo" form of the present indicative:

Estudiar → Estudio Escribir → Escribo

Then add the opposite ending:

For–ar verbs, add –e, -es, -e, -emos –éis, -en
For –er and –ir verbs, add –a, -as, -a, -amos, áis, -an

Estudio → Estudie, Estudies, Estudie, Estudiemos, Estudiéis, Estudien
Escribo → Escriba, Escribas, Escriba, Escribamos, Escribáis, Escriban

Verbs that are irregular in the "yo" form of the present tense are regular in the present subjunctive:

Tener → Tengo

Tengo→ Tenga, Tengas, Tenga, Tengamos, Tengáis, Tengan

There are only five irregular subjunctive verbs; here are the 3rd person present subjunctive forms:

Dar Estar Ir Saber Ser

Dar: Dé, Des, Dé, Demos, Deis, Den

Estar: Esté, Estés, Esté, Estemos, Estéis, Esten

Ir: Vaya, Vayas, Vaya, Vayamos, Vayáis, Vayan

Saber: Sepa, Sepas, Sepa, Sepamos, Sepáis, Sepan

Ser: Sea, Seas, Sea, Seamos, Seáis, Sean

In Lección 13, you learned that the subjunctive is used in adverbial clauses after certain conjunctions. You will now learn how the subjunctive can be used in adjective clauses to express that the existence of someone or something is uncertain or indefinite.

The subjunctive is used in an adjective (or subordinate) clause that refers to a person, place, thing, or idea that either does not exist or whose existence is uncertain or

indefinite. In the examples below, compare the differences in meaning between the statements using the indicative and those using the subjunctive.

Necesito el libro que tiene información sobre Venezuela.
I need the book that has information about Venezuela.

Quiero vivir en esta casa que tiene jardín.
I want to live in this house that has a garden.

En mi barrio, hay una heladería que vende helado de mango.
In my neighborhood, there's an ice cream store that sells mango ice cream.

…….

Necesito un libro que tenga información sobre Venezuela.
I need a book that has information about Venezuela.

Quiero vivir en una casa que tenga jardín.
I want to live in a house that has a garden.

En mi barrio no hay ninguna heladería que venda helado de mango.
In my neighborhood, there are no ice cream stores that sell mango ice cream

En mi barrio, hay una heladería que vende helado de mango.
In my neighborhood, there's an ice cream store that sells mango ice cream.

When the adjective clause refers to a person, place, thing, or idea that is clearly known, certain, or definite, the indicative is used.

Quiero ir al supermercado que vende productos venezolanos.
I want to go to the supermarket that
sells Venezuelan products.

Conozco a alguien que va a esa peluquería.
I know someone who goes to that beauty salon.

Busco al profesor que enseña japonés.
I'm looking for the professor who teaches Japanese.

Tengo un amigo que vive cerca de mi casa.
I have a friend who lives near my house

The personal a is not used with direct objects that are hypothetical people. However, as you learned in Lección 7, alguien and nadie are always preceded by the personal a when they function as direct objects.

Necesitamos un empleado que sepa usar computadoras.
We need an employee who knows how to use computers.

Necesitamos al empleado que sabe usar computadoras.
We need the employee who knows how to use computers.

Buscamos a alguien que pueda cocinar.
We're looking for someone who can cook

No conocemos a nadie que pueda cocinar.
We don't know anyone who can cook.

The subjunctive is commonly used in questions with adjective clauses when the speaker is trying to find out information about which he or she is uncertain. However, if the person who responds to the question knows the information, the indicative is used.

—¿Hay un parque que esté cerca de nuestro hotel?
Is there a park that's near our hotel?

—Sí, hay un parque que está muy cerca del hotel.
Yes, there's a park that's very near the hotel.

¡Atención! Here are some verbs that are commonly followed by adjective clauses in the subjunctive

buscar (no) conocer (no) haber necesitar querer

Adjective clauses are subordinate clauses that modify a noun or pronoun in the main clause of a sentence. That noun or pronoun is called the *antecedent.*

* Grammar Explanation from Vista Higher Learning's *En Línea 2.0* Spanish Language Course

Appendix L

Traditional Instruction Treatment Package

Preview Assessment: Grammar Activity Package 1

SPN1121.501C09: BEGINNING SPANISH II (SPN1121.501C09) > CONTROL PANEL > STUDY MATERIALS > PREVIEW ASSESSMENT: GRAMMAR ACTIVITY PACKAGE 1

Preview Assessment: Grammar Activity Package 1

Name	Grammar Activity Package 1
Instructions	Please be sure to click on all of the links that are provided. All of the links will open in a new window. Just click the "x" in the upper right hand corner of the window to return to the activity package. PLEASE DO NOT LEAVE ANY ITEMS BLANK. If you experience any technical difficulties, email the researcher at vrussell@mail.usf.edu Please DO NOT use all capital letters (the activities are case sensitive), and include punctuation where needed. You DO NOT have to type in accent marks. PLEASE CLICK "SAVE" AFTER YOU COMPLETE EACH ITEM. YOU MUST TAKE POSTTEST 1 IMMEDIATELY AFTER COMPLETING THIS GRAMMAR PACKAGE. You must spend a minumum of 1 hour on this activity, and you will have a maximum of two hours.
Timed Assessment	This Test has a 2 hour timer.The elapsed time appears at the top right of the window. A **1 minute** warning will be displayed. *[The timer does not appear when previewing this Test]*
Multiple Attempts	Not allowed. This Test can only be taken once.
Force Completion	This Test can be saved and resumed later.

Question Completion Status:

Question 1 **1 points** Save

Please click on the following link to briefly review the formation of the subjunctive in Spanish.
I have read the information in the link.

TI_Subjunctive_Review.doc

- ○ True
- ○ False

Question 2 **1 points** Save

Please read the information about how the subjunctive works in adjectival clauses in Spanish. You will not be able to complete the activities that follow without reading the information in this link. IT IS IMPORTANT THAT YOU READ THE INFORMATION IN THIS LINK BEFORE PROCEEDING WITH THE ACTIVITY PACKAGE.

I have read the link (mark true or false)

TI_Grammar_Explanation.doc

- ○ True
- ○ False

Question 3 **1 points** Save

I understand that the subjunctive is used to refer to people places and things that are uncertain, unknown, or hypothetical.

For example: Busco una persona que SEPA hablar 12 idiomas.

Rendered in English, "I'm looking for someone who speaks 12 languages."

The subjunctive is used because the speaker of the sentence is not sure if such a person exists.

On the other hand, the speaker may say, **"Busco a una persona que SABE hablar 3 idiomas."**

In the previous example, the indicative is used because the speaker knows of someone who speaks three langauges.

I understand the difference in usage between the subjunctive and the indicative in adjectival clauses in Spanish.

- ○ True
- ○ False

Question 4 **1 points** Save

ACTIVITY 1: SUBJUNCTIVE PRACTICE.

Conjugate the verb in parenthesis in the **present subjunctive**.

Activity 1, Number 1. Necesito una persona que _____ (poder) cantar bien.

Question 5 **1 points** Save

Conjugate the verb in parenthesis in the **present subjunctive**.

Activity 1, Number 2. Buscamos a alguien que _____ (tener) paciencia.

Question 6 **1 points** Save

Conjugate the verb in parenthesis in the **present subjunctive**.

Activity 1, Number 3. No vemos ningún apartamento que nos _____ (interesar).

Question 7 **1 points** Save

Conjugate the verb in parenthesis in the **present subjunctive**.

Activity 1, Number 4. ¿Hay alguien que _____ (decir) la verdad?

Question 8 **1 points** Save

Conjugate the verb in parenthesis in the **present subjunctive**.

Activity 1, Number 5. No conozco a nadie que _____ (sacar) fotografías profesionales.

Question 9 **1 points** Save

Conjugate the verb in parenthesis in the **present subjunctive**.

Activity 1, Number 6. No hay ninguna heladería que _____ (vender) helado de mango.

Question 10 **1 points** Save

ACTIVITY 2: EL FUTURO DE LAS COMPUTADORAS.

Complete each sentence by conjugating the verb in parenthesis in **the present subjunctive**.

1. ¿Alguna vez ha pensado en un programa de computadora que escribe las palabras que usted le (decir) _____?

Question 11 **1 points** Save

Complete each sentence by conjugating the verb in parenthesis in **the present subjunctive**.

Activity 2, Number 2. En nuestra compañía queremos desarollar un programa que (poder) _____reconocer la voz (voice) de las personas en varias lenguas. Así, todos van a poder escribir con la computadora ¡sin tocar el teclado (keyboard)!

Question 12 **1 points** Save

Complete each sentence by conjugating the verb in parenthesis in **the present subjunctive**.

Activity 2, Number 3. Para desarollar un programa de reconocimiento (recognition) del habla, primero hay que enseñarle algunas palabras que se (decir) _____ con mucha frecuencia en esa lengua.

Question 13 **1 points** Save

Complete each sentence by conjugating the verb in parenthesis in **the present subjunctive**.

Activity 2, Number 4. Luego el programa tiene que "aprender" a reconocer cualquier (any) tipo de pronunciación que (tener) _____ las

personas.

Question 14 **1 points** Save

Complete each sentence by conjugating the verb in parenthesis in **the present subjunctive**.

Activity 2, Number 5. En el futuro, va a ser normal tener una computadora que (reconocer) _____ el habla de su usuario (the speech of its user).

Question 15 **1 points** Save

Complete each sentence by conjugating the verb in parenthesis in **the present subjunctive**.

Activity 2, Number 6. Es posible que hasta (even) algunos aparatos domésticos (funcionar) _____ con la voz de su dueño.

Question 16 **1 points** Save

Complete each sentence by conjugating the verb in parenthesis in **the present subjunctive**.

Activity 2, Number 7. Nuestra compañía quiere desarollar (to develop) un programa que (comprender) _____ todos los idiomas.

Question 17 **1 points** Save

Complete each sentence by conjugating the verb in parenthesis in **the present subjunctive**.

Activity 2, Number 8. Y también queremos crear un programa que (traducir) _____ oraciones (sentences) de una lengua a otra.

Question 18 **1 points** Save

ACTIVITY 3. ANSWERING NEGATIVELY.

Rewrite the sentences to make them negative, use the subjunctive where appropriate. Be sure to type the **ENTIRE** sentence in the text box (include punctuation such as periods, but you do not have to type in accent marks)

MODELO: Ricardo conoce a un chico que ESTUDIA medicina.

ANSWER: Ricardo no conoce a nadie que ESTUDIE medicina.

OJO: BE SURE TO USE **A NADIE** IN YOUR ANSWER.

Activity 1, Number 1. Maribel conoce a una chica que habla alemán.

Preview Assessment: Grammar Activity Package 1

Question 19 **1 points** Save

Rewrite the entire sentence to make it negative.

OJO: BE SURE TO USE **A NADIE** IN YOUR ANSWER.

Activity 3, Number 2. Laura y Diego conocen a una persona que cocina bien.

Question 20 **1 points** Save

Rewrite the entire sentence to make it negative:

OJO: BE SURE TO USE **A NADIE** IN YOUR ANSWER.

Activity 3, Number 3. Maribel y Lina conocen a un hombre que escribe poemas.

Question 21 **1 points** Save

Rewrite the entire sentence to make it negative:

OJO: BE SURE TO USE **A NADIE** IN YOUR ANSWER.

Activity 3, Number 4. Luis conoce a una mujer que tiene un coche lujoso (luxurious).

Question 22 **1 points** Save

Rewrite the entire sentence to make it negative:

OJO: BE SURE TO USE **A NADIE** IN YOUR ANSWER.

Activity 3, Number 5. Gregorio conoce a un hombre que hace un plato delicioso.

Question 23 **1 points** Save

ACTIVITY 4: LISTENING.

You will hear five statements in Spanish. You will rewrite the sentences that you hear to make them negative. Use the subjunctive where appropriate. You may listen to each recording as many times necessary to answer each question.

MODELO: (You hear) Hay un restaurante que SIRVE comida francesa.

ANSWER: (You type) No hay ningún restaurante que SIRVA comida francesa.

PLEASE TYPE COMPLETE SENTENCES IN THE TEXT BOX.

Include punctuation; however, you DO NOT have to type accent marks.

OJO: PLEASE INCLUDE A FORM OF **NINGÚN OR NINGUNA** IN YOUR ANSWER.

Activity 4, Number 1. Listen to the following link:

Number1_Link

Question 24 **1 points** Save

Rewrite the sentence that you hear to make it negative. Please type a complete sentence in your text box. Include punctuation, but accent marks are not necessary.

OJO: PLEASE INCLUDE A FORM OF **NINGÚN OR NINGUNA** IN YOUR ANSWER.

Activity 4, Number 2. Listen to the following link:

Number2_Link

Question 25 **1 points** Save

Rewrite the sentence that you hear to make it negative. Use the subjunctive where appropriate. Please type a complete sentence in the text box. Include puntucation, but accent marks are not necessary.

OJO: PLEASE INCLUDE A FORM OF **NINGÚN OR NINGUNA** IN YOUR ANSWER.

Activity 4, Number 3. Listen to the following link:

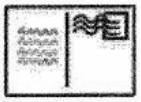
Number3_Link

Question 26 **1 points** Save

Rewrite the sentence that you hear to make it negative. Use the subjunctive where appropriate. Please type a complete sentence in the text box. Include punctuation, but accent marks are not necessary.

OJO: PLEASE INCLUDE A FORM OF **NINGÚN OR NINGUNA** IN YOUR ANSWER.

Activity 4, Number 4. Listen to the following link:



Number4_Link

Question 27 **1 points** Save

Rewrite the sentence that you hear to make it negative. Use the subjunctive where appropriate. Please type complete a sentence in the text box. Include punctuation, but accent marks are not necessary.

OJO: PLEASE INCLUDE A FORM OF **NINGÚN OR NINGUNA** IN YOUR ANSWER.

bocadillos = sandwiches

Activity 4, Number 5. Listen to the following link:

Number5_Link

Question 28 **1 points** Save

ACTIVITY 5.

Fill in the blank with the correct verb form (subjunctive or indicative).

MODELO: Quiero encontrar a alguien que _____ (decir) la verdad.

CORRECT ANSWER: diga

"Diga" is used because the speaker does not know if the person exists.

Activity 5, Number 1. Necesito encontrar una persona que _____ (poder) cantar bien.

Question 29 **1 points** Save

Fill in the blank with the correct verb form (subjunctive or indicative):

Activity 5, Number 2. Buscamos a alguien que _____ (tener) paciencia.

Question 30 **1 points** Save

Fill in the correct verb form (subjunctive or indicative):

Activity 5, Number 3. ¿Hay restaurantes por aquí que _____ (servir)

comida francesa?

Question 31 **1 points** Save

Fill in the blank with the correct verb form (subjunctive or indicative):

Activity 5, Number 4. Tengo una amiga que _____ (sacar) fotografías muy bonitas.

Question 32 **1 points** Save

Fill in the blank with the correct verb form (subjunctive or indicative):

Activity 5, Number 5. Hay una carnicería que _____ (estar) cerca de aquí.

Question 33 **1 points** Save

Fill in the blank with the correct verb form (subjunctive or indicative):

Activity 5, Number 6. La profesora enseña una clase que nos _____ (interesar).

Question 34 **1 points** Save

Fill in the blank with the correct verb form (subjunctive or indicative):

Activity 5, Number 7. ¿Hay alguien que _____ (decir) la verdad?

Question 35 **1 points** Save

Fill in the blank with the correct verb form (subjunctive or indicative):

Activity 5, Number 8. Conozco a un estudiante que _____ (comer) hamburguesas todos los días.

Question 36 **1 points** Save

ACTIVITY 6A. PREGUNTAS Y RESPUESTAS.

Fill in the blank with the correct verb form (subjunctive or indicative).

Activity 6, number 1. ¿Hay un supermercado que esté abierto en la calle Bolívar? Sí, hay un supermercado que _____ (estar) abierto en la calle Bolívar.

Question 37 **1 points** Save

Fill in the blank with the correct verb form (subjunctive or indicative).

Activity 6, number 2. ¿Conoces a alguien que sea abogado de inmigración (immigration attorney)? No, no conozco a nadie que _____ (ser) abogado de inmigración?

Question 38 **1 points** Save

Fill in the blank with the correct verb form (subjunctive or indicative):

Activity 6, number 3. ¿Ves a alguien aquí que estudie contigo en la universidad? Sí, veo a un amigo que _____ (estudiar) conmigo en la universidad.

Question 39 **1 points** Save

Fill in the blank with the correct verb form (subjunctive or indicative):

Activity 6, number 4: ¿Hay alguna panadería que venda pan caliente cerca de aquí? No, no hay ninguna panadería que _____ (vender) pan caliente cerca de aquí.

Question 40 **1 points** Save

Fill in the blank with the correct verb form (subjunctive or indicative):

Activity 6, number 5. ¿Tienes alguna compañera que vaya a ese gimnasio? Sí, tengo una amiga que _____ (ir) a ese gimnasio.

Question 41 **1 points** Save

ACTIVITY 6B. LISTENING: PREGUNTAS Y RESPUESTAS.

NOTE: THIS ACTIVITY HAS A NEW SET OF DIRECTIONS!

After listening to the question, fill in the blank with the correct verb form (subjunctive or indicative):

Activity 6, number 6. Listen to the following link, then fill in the blank:

Sí, tengo un pariente (relative) que _____ (viajar) mucho a Venezuela.
Act_6B_6.wav

Question 42 **1 points** Save

After listening to the question, fill in the blank with the correct verb form (subjunctive or indicative):

Activity 6, number 7. Listen to the following link, then fill in the blank:

No, no hay ningún banco que _____ (abrir) a las seis de la mañana en la ciudad.
Act_6B_7.wav

Question 43 **1 points** Save

After listening to the question, fill in the blank with the correct verb form (subjunctive or indicative):

Activity 6, number 8. Listen to the following link, then fill in the blank:

Sí, conozco a un profesor que _____ (hablar) hablar cinco idiomas.
Act_6B_8.wav

Question 44 **1 points** Save

After listening to the question, fill in the blank with the correct verb form (subjunctive or indicative):

Activity 6, number 9. Listen to the following link, then fill in the blank:

Sí, tengo varios amigos que _____ (tocar) el piano.
Act_6B_9.wav

Question 45 **1 points** Save

After listening to the question, fill in the blank with the correct verb form (subjunctive or indicative):

Activity 6, number 10. Listen to the following link, then fill in the blank:

No, no conozco a nadie que _____ (saber) programar computadoras.
Act_6B_10.wav

Question 46 **1 points** Save

ACTIVITY 7: ¿SUBJUNTIVO O INDICATIVO?

Conjugate the verb in parenthesis in either the **subjunctive or the indicative**, according to the context of each sentence:

Activity 7, Number 1. Quiero encontrar una falda que _____ (ser) larga y elegante.

Question 47 **1 points** Save

Conjugate the verb in parenthesis in either the **subjunctive or the indicative**, according to the context of each sentence:

Activity 7, Number 2. A Sonia le gusta la falda que _____ (ser) verde y negra.

Question 48 **1 points** Save

Conjugate the verb in parenthesis in either the **subjunctive or the indicative**, according to the context of each sentence:

cambiar = to change; to exchange

Activity 7, Number 3. Hay un banco en la esquina (corner) que _____ (cambiar) dinero.

Question 49 **1 points** Save

Conjugate the verb in parenthesis in either the **subjunctive or the indicative**, according to the context of each sentence.

cambiar = to change; to exchange

Activity 7, Number 4. Busco un banco que _____ (cambiar) dinero.

Question 50 **1 points** Save

Conjugate the verb in parenthesis in either the **subjunctive or the indicative**, according to the context of each sentence:

Activity 7, Number 5. Silvia busca un apartamento que _____ (tener) balcón y piscina.

Question 51 **1 points** Save

Conjugate the verb in parenthesis in either the **subjunctive or the indicative**,according to the context of each sentence:

Activity 7, Number 6. Ayer, ella vio un apartamento que _____ (tener) tres baños.

Question 52 **1 points** Save

Conjugate the verb in parenthesis in either the **subjunctive or the indicative**, according to the context of each sentence:

Activity 7, Number 7. Hay muchas personas que _____ (ir) a Venezuela de vacaciones.

Question 53 **1 points** Save

Conjugate the verb in parenthesis in either the **subjunctive or the indicative**, according to the context of each sentence:

Activity 7, Number 8. Raúl no conoce a nadie que _____ (ir) a Venezuela este verano.

Question 54 **1 points** Save

Conjugate the verb in parenthesis in either the **subjunctive or the indicative**, according to the context of each sentence:

Activity 7, Number 9. Quiero encontrar un amigo que _____ (ser) muy simpático

y gracioso.

Question 55 **1 points** Save

Conjugate the verb in parenthesis in either the **subjunctive or the indicative**, according to the context of each sentence:

Activity 7, Number 10. Tengo varios amigos que _____ (ser) chistosos (funny).

Question 56 **1 points** Save

ACTIVITY 8. FINISHING SENTENCES

Complete the sentences using the endings provided. Conjugate the verb in either the **subjunctive or the indicative** as appropriate.

DO NOT REWRITE THE ENTIRE SENTENCE, ONLY TYPE THE PART OF THE SENTENCE THAT FOLLOWS "QUE" IN THE TEXT BOX.

MODELO: Rolando busca un amigo que _____ (decirle la verdad).

ANSWER: le diga la verdad.

Activity 8, Number 1. Rolando tiene una novia que _____ (quererlo mucho).

Question 57 **1 points** Save

Complete the sentence using the ending provided. Conjugate the verb in either the **subjunctive or the indicative** as appropriate.

DO NOT REWRITE THE ENTIRE SENTENCE, ONLY TYPE THE PART OF THE SENTENCE THAT FOLLOWS "QUE" IN THE TEXT BOX.

mentiras = lies

Activity 8, Number 2. Tengo un amigo que _____ (siempre decirme mentiras).

Question 58 **1 points** Save

Complete the sentence using the ending provided. Conjugate the verb in either the **subjunctive or the indicative** as appropriate.

DO NOT REWRITE THE ENTIRE SENTENCE, ONLY TYPE THE PART OF THE SENTENCE THAT FOLLOWS "QUE" IN THE TEXT BOX.

Activity 8, Number 3. Todos buscamos amigos que _____ (decirnos la verdad).

Question 59 **1 points** Save

Complete the sentence using the ending provided. Conjugate the verb in either the **subjunctive or the indicative** as appropriate.

DO NOT REWRITE THE ENTIRE SENTENCE, ONLY TYPE THE PART OF THE SENTENCE THAT FOLLOWS "QUE" IN THE TEXT BOX.

Activity 8, Number 4. ¿Hay una farmacia que _____ (abrir a las seis)?

Question 60 **1 points** Save

Complete the sentence using the ending provided. Conjugate the verb in either the **subjunctive or the indicative** as appropriate.

DO NOT REWRITE THE ENTIRE SENTENCE, ONLY TYPE THE PART OF THE SENTENCE THAT FOLLOWS "QUE" IN THE TEXT BOX.

Activity 8, Number 5. Hay un supermercado en la ciudad que _____ (abrir 24 horas).

Question 61 **1 points** Save

Complete the sentence using the ending provided. Conjugate the verb in either the **subjunctive or the indicative** as appropriate.

DO NOT REWRITE THE ENTIRE SENTENCE, ONLY TYPE THE PART OF THE SENTENCE THAT FOLLOWS "QUE" IN THE TEXT BOX.

Activity 8, Number 6. María busca un apartamento que _____ (ser cómodo y barato).

Question 62 **1 points** Save

Complete the sentence using the ending provided. Conjugate the verb in either the **subjunctive or the indicative** as appropriate.

DO NOT REWRITE THE ENTIRE SENTENCE, ONLY TYPE THE PART OF THE SENTENCE THAT FOLLOWS "QUE" IN THE TEXT BOX.

Activity 8, Number 7. Carlos vive en un apartamento que _____ (ser grande y caro).

Question 63 **1 points** Save

Complete the sentence using the ending provided. Conjugate the verb in either the **subjunctive or the indicative** as appropriate.

DO NOT REWRITE THE ENTIRE SENTENCE, ONLY TYPE THE PART OF THE SENTENCE THAT FOLLOWS "QUE" IN THE TEXT BOX.

Activity 8, Number 8. Irene y José viven en una ciudad que _____ (tener muchos museos).

Question 64 **5 points** Save

ACTIVITY 9. YOUR IDEAL JOB.

Choose from the following items to complete the sentence and to describe your ideal job: 1. pagar bien; 2. ofrecer beneficios; 3. estar cerca de mi casa; 4. permitir muchas vacaciones; 5. incluir viajes a Europa.

YOU DO NOT HAVE TO ENTER THE ENTIRE SENTENCE IN THE TEXT BOX, JUST THE PART AFTER THE "QUE".

DO NOT REPEAT SENTENCES.

MODELO: Quiero un trabajo que...(permitir muchos viajes)

ANSWER: permita muchos viajes.

Number 1. Quiero un trabajo que... _____ **(conjugate one of the following to complete the sentence: pagar bien, ofrecer beneficios, estar cerca de mi casa, permitir muchas vacaciones, incluir viajes a Europa).**

Number 2. Quiero un trabajo que... _____ **(conjugate one of the following to complete the sentence: pagar bien, ofrecer beneficios, estar cerca de mi casa, permitir muchas vacaciones, incluir viajes a Europa).**

Number 3. Quiero un trabajo que... _____ **(conjugate one of the following to complete the sentence: pagar bien, ofrecer beneficios, estar cerca de mi casa, permitir muchas vacaciones, incluir viajes a Europa). Number**

4. Quiero un trabajo que... _____ **(conjugate one of the following to complete the sentence: pagar bien, ofrecer beneficios, estar cerca de mi casa, permitir muchas vacaciones, incluir viajes a Europa). Number**

5. Quiero un trabajo que... _____ **(conjugate one of the following to complete the sentence: pagar bien, ofrecer beneficios, estar cerca de mi casa, permitir muchas vacaciones, incluir viajes a Europa).**

Question 65 **1 points** Save

Activity 10. Complete the following sentence in a logical manner. Please form a complete Spanish sentence using the following prompt.

To use the audio drop box :

1. Type in your first and last name
2. click "OK"
3. click "allow"
4. click the record button and record your answer
5. click the stop button when you are finished recording,
6. click the check mark/save button.

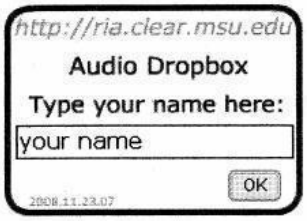
YOU DO NOT NEED A MICROPHONE IF YOU ARE USING A LAPTOP. IF YOU ARE USING A DESKTOP, PLEASE USE A MICROPHONE TO RECORD YOUR ANSWER.

Record your answer to the following prompt using the audio drop box:

Activity 10, Number 1. DESEO UN(A) AMIGO(A) QUE...

Click "True" if you think that the answer you recorded was correct and "False" if

you think that the answer you recorded was not correct.



- ○ True
- ○ False

Question 66 **1 points** Save

Complete the following sentence in a logical manner. Please form a complete Spanish sentence using the following prompt.

To use the audio drop box :

1. Type in your first and last name
2. click "OK"
3. click "allow"
4. click the record button and record your answer
5. click the stop button when you are finished recording,
6. click the check mark/save button.

YOU DO NOT NEED A MICROPHONE IF YOU ARE USING A LAPTOP. IF YOU ARE USING A DESKTOP, PLEASE USE A MICROPHONE TO RECORD YOUR ANSWER.

Record your answer to the following prompt using the audio drop box:

Activity 10, Number 2. ALGÚN DÍA (some day) ESPERO TENER UNA CASA QUE...

Click "True" if you think that the answer you recorded was correct and "False" if you think that the answer you recorded was not correct.

- ○ True
- ○ False

Question 67 **1 points** Save

Complete the following sentence in a logical manner. Please form a complete Spanish sentence using the following prompt.

To use the audio drop box :

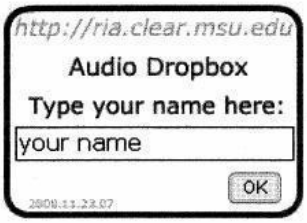
1. Type in your first and last name
2. click "OK"
3. click "allow"
4. click the record button and record your answer
5. click the stop button when you are finished recording,
6. click the check mark/save button.

YOU DO NOT NEED A MICROPHONE IF YOU ARE USING A LAPTOP. IF YOU ARE USING A DESKTOP, PLEASE USE A MICROPHONE TO RECORD YOUR ANSWER.

Record your answer to the following prompt using the audio drop box:

Activity 10, Number 3. MIS PADRES BUSCAN UN CARRO QUE...

Click "True" if you think that the answer you recorded was correct and "False" if you think that the answer you recorded was not correct.



- ○ True
- ○ False

Question 68 **1 points** Save

Complete the following sentence in a logical manner. Please form a complete Spanish sentence using the following prompt.

To use the audio drop box :

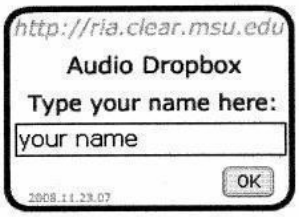
1. Type in your first and last name
2. click "OK"
3. click "allow"
4. click the record button and record your answer
5. click the stop button when you are finished recording,
6. click the check mark/save button.

YOU DO NOT NEED A MICROPHONE IF YOU ARE USING A LAPTOP. IF YOU ARE USING A DESKTOP, PLEASE USE A MICROPHONE TO RECORD YOUR ANSWER.

Record your answer to the following prompt using the audio drop box:

Activity 10, Number 4. ME GUSTARÍA CONOCER A ALGUIEN QUE...

Click "True" if you think that the answer you recorded was correct and "False" if you think that the answer you recorded was not correct.



- ○ True
- ○ False

Question 69 **1 points** Save

Complete the following sentence in a logical manner. Please form a complete Spanish sentence using the following prompt.

To use the audio drop box :

1. Type in your first and last name
2. click "OK"
3. click "allow"
4. click the record button and record your answer
5. click the stop button when you are finished recording,
6. click the check mark/save button.

YOU DO NOT NEED A MICROPHONE IF YOU ARE USING A LAPTOP. IF YOU ARE USING A DESKTOP, PLEASE USE A MICROPHONE TO RECORD YOUR ANSWER.

Record your answer to the following prompt using the audio drop box:

Activity 10, Number 5. QUIERO VISITAR UN PAÍS QUE...

Click "True" if you think that the answer you recorded was correct and "False" if you think that the answer you recorded was not correct.

- ○ True
- ○ False

Appendix M

Processing Instruction Explicit Grammar Explanation: Subjunctive Formation

To form the present subjunctive for regular verbs:

Take the "yo" form of the present indicative:

Estudiar → Estudio Escribir → Escribo Beber → Bebo

Then add the opposite ending:

For –ar verbs, add the following endings for the third person: -e, -en

Estudio → 3rd person singular (él, ella, usted) → Estudie

Estudio → 3rd person plural (ellos, ellas, ustedes) → Estudien

For –er and –ir verbs, add the following endings for the third person: -a, -an

Escribo → 3rd person singular (él, ella, usted) → Escriba
Escribo → 3rd person plural (ellos, ellas, ustedes) → Escriban

Bebo → 3rd person singular (él, ella, usted) → Beba
Bebo → 3rd person plural (ellos, ellas, ustedes) → Beban

Verbs that are irregular in the "yo" form of the present tense are regular in the present subjunctive:

Tener → Tengo

Tengo→ (3rd person singular) Tenga → (3rd person plural) Tengan

Poder → Puedo

Puedo → (3rd person singular) Pueda → (3rd person plural) Puedan

There are only a few irregular subjunctive verbs; here are the 3rd person singular and plural present subjunctive forms for the irregular verbs:

Dar (Dé / Den)
Estar (Esté / Estén)
Ir (Vaya / Vayan)
Saber (Sepa / Sepan)
Ser (Sea / Sean)

Appendix N

Processing Instruction Explicit Grammar Explanation: Subjunctive Use

WHAT DOES THE SUBJUNCTIVE LOOK LIKE?

The following are some –ar verbs conjugated in the third person singular of the present subjunctive. Notice that they take –er endings:

estudiar → estudie
hablar → hable
cantar → cante
tocar → toque

The following are some –er and –ir verbs conjugated in the third person singular of the present subjunctive. Notice that they take –ar endings:

beber → beba
tener → tenga
vivir → viva
escribir → escriba

Only a few verbs are irregular in the present subjunctive:

Dar → Dé
Estar → Esté
Ir → Vaya
Saber → Sepa
Ser → Sea

LOCATION OF THE SUBJUNCTIVE

The subjunctive occurs in subordinate clauses. A subordinate clause must be preceded by a main clause. Subordinate clauses are generally introduced by the word *que* in Spanish.

Example: *Busco una persona que pueda trabjar los fines de semana.*

Busco una persona is the main clause in the previous sentence

que pueda trabajar los fines de semana is the subordinate clause

WHEN IS IT USED?

1) The subjunctive is used in adjectival clauses when the referent is unknown, uncertain, or hypothetical.

servir = to serve

Example 1: Busco un restaurante que sirva comida francesa en la ciudad.
I'm looking for a restaurant that serves French cuisine in the city.

In the previous example, the present subjunctive is used in the subordinate clause because the speaker of the sentence is referring to a restaurant that is unknown, uncertain, or hypothetical. Although the speaker is looking for a restaurant that serves French cuisine, he or she is unsure if such a restaurant exists in the city.

Example 2: Busco un restaurante que sirve comida francesa en la ciudad.
I'm looking for a restaurant that serves French cuisine in the city.

In example 2, the present indicative (present tense) is used in the subordinate clause because the speaker of the sentence is referring to a restaurant that is certain or known. The speaker knows that there are restaurants in the city that serve French cuisine, but one of them has to be found.

2) The subjunctive is commonly used in questions with adjective clauses when the speaker is trying to find out information about which he or she is uncertain.

However, if the person who responds to the question knows the information, the indicative is used.

Example 1: ¿Hay un parque que esté cerca de nuestro hotel?
Is there a park that's near our hotel?

Sí, hay un parque que está muy cerca del hotel.
Yes, there's a park that's very near the hotel.

If the person who responds answers with a negative expression such as *ningún*, then the subjunctive is used in Spanish to express an element of uncertainty.

Example 2: ¿Hay un parque que esté cerca de nuestro hotel?
Is there a park that's near our hotel?

No, no hay ningún parque que esté cerca del hotel.
No, there's not a single park that's near the hotel.

BE CAREFUL!

It is important to pay attention to verb endings in order to detect this difference in meaning in Spanish. Adjectival clauses that contain the subjunctive refer to people, places, and/or things that are uncertain, hypothetical, or unknown, and adjectival clauses that contain the indicative refer to people, places, and/or things that are certain or known.

Appendix O

Information on Processing Strategies

Processing Strategies: How to Help Yourself Learn Spanish

The subjunctive is a particularly difficult aspect of Spanish grammar to master for native-speakers of English. One of the difficulties is that learners often have a hard time noticing the subjunctive forms in sentences because the present subjunctive endings are so similar to the present indicative endings:

For example:

the 3rd person singular (él, ella, usted) form of the verb *hablar* in the present indicative is *habla*

and the 3rd person singular (él, ella, usted) form of the verb *hablar* in the present subjunctive is *hable*

→ The subtle difference of the vowel switch from –a to –e is very difficult to notice when it occurs in sentences that contain other information. Spanish language learners, like yourself, tend to focus on vocabulary words rather than verb endings in order to comprehend the meaning of sentences.

→ Sometimes, however, it is important to focus on verb endings because a simple vowel shift can change the entire meaning of the sentence in Spanish. Take a look at the following two sentences:

1. *Busco a un hombre que VENDE bocadillos en la calle*.

(and)

1. *Busco un hombre que VENDA bocadillos en la calle.*

When you read the two previous sentences, which words did you focus to help you understand them? Did you focus on the words *hombre*, *bocadillos*, and *calle*? If so, you are not alone, as most Spanish language learners will focus on content words such as these to extract meaning from sentences.

However, the second verb in both of these sentences is the key to understanding the communicative intent of the speaker in Spanish. In the first sentence, the second verb, *vende*, is in the present indicative, which indicates that the speaker of the sentence is referring to something or someone that is known. <u>In other words, the speaker of the sentence knows of a man who sells sandwiches in the street.</u>

In the second sentence, the second verb, *venda,* is in the subjunctive, which indicates that the speaker of the sentence is referring to something or someone that is unknown or hypothetical. <u>In other words, the speaker of the sentence does not know of a man that sells sandwiches in the street, although he is looking for such a man.</u>

→ You may have noticed that English verbs don't work the same way. Look at the following sentence in English:

I'm looking for a man who sells sandwiches in the street.

In English, there is no way to tell if the speaker of the sentence is referring to a known or to an unknown referent. In other words, in English it is not clear if the speaker knows of a street vendor that sells sandwiches or not. In this instance, the Spanish language is more precise than English!

→ One thing you can do to help yourself understand Spanish sentences better is to closely examine the verbs in sentences. Try to pay attention to the ending of verbs to determine whether they are conjugated in the present subjunctive or in the present indicative.

→ Another reason that the subjunctive is difficult to notice is that it usually occurs in the middle of sentences. Information that occurs at the beginning of a sentence gets noticed and processed first, and interestingly, information that occurs at the end of sentences gets processed second. However, our brains process the information that occurs in the middle of sentences last!

Take a look at the following sentence:

Busco a alguien que hable español y chino.

The subjunctive almost always occurs in the middle of sentences in Spanish.

In the previous example, the second verb, *hable* is in the subjunctive. This verb indicates that the speaker of the sentence does not know of anyone who can speak both Spanish and Chinese. <u>In other words, the speaker of the sentence is referring to someone who is unknown or hypothetical.</u>

Now that you are aware of this, you can try to pay more attention to verbs and verb endings that occur in the middle of sentences. This strategy will help you notice the subjunctive more easily, which will enable you to interpret the meaning of Spanish sentences correctly.

Appendix P

Processing Instruction Treatment Package

Preview Assessment: Grammar Activity Package 2

Name	Grammar Activity Package 2
Instructions	Please be sure to click on all of the links that are provided. All of the links will open in a new window. Just click the "x" in the upper right hand corner of the window to return to the activity package. PLEASE CLICK "SAVE" AFTER YOU COMPLETE EACH ITEM. YOU MUST TAKE POSTTEST 1 IMMEDIATELY AFTER COMPLETING THIS GRAMMAR PACKAGE. You must spend a minumum of 1 hour on this activity, and you will have a maximum of two hours.
Timed Assessment	This Test has a 2 hour timer.The elapsed time appears at the top right of the window. A **1 minute** warning will be displayed. *[The timer does not appear when previewing this Test]*
Multiple Attempts	Not allowed. This Test can only be taken once.
Force Completion	This Test can be saved and resumed later.

Question Completion Status:

Question 1 **1 points** Save

I have read the review on how to form the subjunctive:

PI_Subjunctive_Formation.doc

- ○ True
- ○ False

Question 2 **1 points** Save

It is VERY IMPORTANT that you read the following link about how the subjunctive is used in adjectival clauses in Spanish.

I have read the link on the formation of the subjunctive.

PI_Subjunctive_Use.doc

- ○ True
- ○ False

Question 3 **1 points** Save

Have you noticed that it is very difficult to learn a foreign language as an adult? Please read the following information about how your brain processes foreign language input. The following link will give you some specific information about the language processing mechanisms that you engage in subconsciously that actually hinder your ability to learn Spanish. The link will give you some hints about how to process your linguistic input in Spanish more optimally.

I have read the link about language processing strategies The information in this link is VERY IMPORTANT, and may help you learn an aspect of complex Spanish grammar (the subjunctive) more easily!

Information_Processing Strategies.doc

- True
- False

Question 4 **1 points** Save

I understand that the subjunctive is used to refer to people places and things that are uncertain, unknown, or hypothetical.

For example: Busco una persona que SEPA hablar 12 idiomas.

Rendered in English, "I'm looking for someone who speaks 12 languages."

The subjunctive is used because the speaker of the sentence is not sure if such a person exists.

On the other hand, the speaker may say, **"Busco a una persona que SABE hablar 3 idiomas."**

In the previous example, the indicative is used because the speaker knows of someone who speaks three langauges.

I understand the difference in usage between the subjunctive and the indicative in adjectival clauses in Spanish.

- True
- False

Question 5 **1 points** Save

ACTIVITY 1:

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, DECIDE WHETHER LUÍS IS TALKING ABOUT A POSITION THAT HE WOULD LIKE TO FIND, OR IF HE IS DESCRIBING HIS CURRENT JOB.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is **HYPOTHETICAL (his ideal job), WHICH USES THE SUBJUNCTIVE,** or to a job that is **CERTAIN (his current job), WHICH USES THE INDICATIVE. Please select the most logical response.**

MODELO: ...ofreza beneficios.

a. Busco un trabajo que....

b. Tengo un trabajo que...

Answer: a. Busco un trabajo que...

"Ofrezca" is in the subjunctive in Spanish, which indicates that the job is hypothetical.

Activity 1, Number 1. ...PAGUE UN BUEN SUELDO (SALARY).

- BUSCO UN TRABAJO QUE...
- TENGO UN TRABAJO QUE...

Question 6 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Number 2. ...COMPRENDEN MI SITUACIÓN.

- AHORA, TENGO COLEGAS QUE...
- QUIERO UNOS COLEGAS QUE...

Question 7 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Number 3. ...ES MUY GRANDE.

- DESEO UNA OFICINA QUE...
- TENGO UNA OFICINA QUE...

Question 8 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

ofrecer = to offer

Activity 1, Question 4. ...OFREZCA LA OPORTUNIDAD DE AVANZAR.

- YA TENGO UN PUESTO (A POSITION) QUE...
- ESPERO ENCONTRAR UN PUESTO (A POSITION) QUE...

Question 9 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Question 5: ...ÉSTE CERCA DE MI CASA.

- NECESITO UN TRABAJO QUE...
- AHORA, TENGO UN TRABAJO QUE...

Question 10 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

contribuir = to contribute

Activity 1, Question 6: ...CONTRIBUYA ALGO A LA SOCIEDAD.

- TENGO UN TRABAJO EN EL QUE (YO)...
- DESEO OBTENER UN TRABAJO EN EL QUE (YO)...

Question 11 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Question 7: ...ES MUY SIMPÁTICO.

- QUIERO UN JEFE (A BOSS) QUE...
- TENGO UN JEFE (A BOSS) QUE...

Question 12 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current

job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Question 8: ...TENGA UNA VISTA BELLA.

- DESEO UNA OFICINA QUE...
- AHORA, TENGO UNA OFICINA QUE...

Question 13 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Question 9: ...SON MUY RICOS.

- BUSCO UNOS CLIENTES QUE...
- TENGO UNOS CLIENTES QUE...

Question 14 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Question 10: ...SABE HABLAR MUCHOS IDIOMAS.

- BUSCO UN ASISTENTE QUE...
- YA TENGO UN ASISTENTE QUE...

Question 15 **1 points** Save

ACTIVITY 2. LOOKING FOR PEOPLE AND PLACES.

You will hear 10 sentences in Spanish. Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the

second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

MODELO: (You hear) Busco a alguien que QUIERA viajar al extranjero cada mes.

A. The person exists or is known to the speaker.

B. The speaker does not know if such a person exists.

Correct Answer: B

The verb in the subordinate clause **"quiera"** is in the subjunctive, which indicates that the speaker is referring to something or someone that is uncertain, hypothetical, or unknown.

Activity 2, Number 1. Listen to the following link:
Listening_Activity_2.1.wav

- ○ The person exists or is known to the speaker.
- ○ The speaker does not know if such a person exists.

Question 16 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 2. Listen to the following link:
Listening_Activity_2.2.wav

- ○ The person exists or is known to the speaker.
- ○ The speaker does not know if such a person exists.

Question 17 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 3. Listen to the following link:
Listening_Activity_2.3.wav

The restaurant exists or is known to the speaker.

- The speaker does not know if such a restaurant exists.

Question 18 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 4. Listen to the following link:
Listening_Activity_2.4.wav

- The person exists or is known to the speaker.
- The speaker does not know if such a person exists.

Question 19 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 5. Listen to the following link:
Listening_Activity_2.5.wav

- The person exists or is known to the speaker.
- The speaker does not know if such a person exists.

Question 20 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 6. Listen to the following link:
Listening_Activity_2.6.wav

- The store exists or is known to the speaker.

- The speaker does not know of such a store.

Question 21 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 7. Listen to the following link:
Listening_Activity_2.7.wav

- The bank exists or is known to the speaker.
- The speaker does not know if such a bank exists.

Question 22 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 8. Listen to the following link:
Listening_Activity_2.8.wav

- The market exists or is known to the speaker.
- The speaker does not know of such a market.

Question 23 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 9. Listen to the following link:
Listening_Activity_2.9.wav

- The hairdresser's exists or is known to the speaker.
- The speaker does not know of such a hairdresser's.

Question 24 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 10. Listen to the following link:
Listening_Activity_2.10.wav

- ○ The person exists or is known to the speaker.
- ○ The speaker does not know if such a person exists.

Question 25 **1 points** Save

ACTIVITY 3.

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is **hypothetical (her dream house), which requires the subjunctive in Spanish, or to a house of whose existence she is certain (her current house), which uses the indicative in Spanish. Please select the most logical response.**

MODELO: ...tenga piscina.

A. Busco una casa que...

B. Tengo una casa que....

Answer: A. Busco una casa que....

"Tenga" is in the subjunctive in Spanish, which indicates that the house is hypothetical.

Activity 3, Number 1: ...ESTÉ EN UNA ZONA PACÍFICA..

- ○ BUSCO UNA CASA QUE...
- ○ TENGO UNA CASA QUE...

Question 26 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose

existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 2: ...TENGA SEIS DORMITORIOS

- AHORA, VIVO EN UNA CASA QUE...
- DESEO UNA CASA QUE...

Question 27 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 3: ...TIENE DOS BAÑOS.

- VIVO EN UNA CASA QUE...
- QUIERO ENCONTRAR UNA CASA QUE...

Question 28 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 4: ...ESTÁ EN LA ESQUINA (CORNER).

- DESEO UNA CASA QUE...
- AHORA TENGO UNA CASA QUE...

Question 29 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 5: ...TENGA TRES PISOS (FLOORS).

- VIVO EN UNA CASA QUE....
- BUSCO UNA CASA QUE...

Question 30 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 6: ...ESTÁ AMUEBLADO (FURNISHED).

- VIVO EN UNA CASA QUE...
- DESEO UNA CASA QUE...

Question 31 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 7: ...SEAN TRANQUILOS.

- BUSCO UNOS VECINOS QUE...
- AHORA TENGO UNOS VECINOS QUE...

Question 32 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 8: ...TIENE PISCINA.

- VIVO EN UNA CASA QUE...
- QUIERO UNA CASA QUE...

Question 33 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

costar = to cost

Activity 3, Number 9: ...NO CUESTE TANTO DINERO.

- VIVO EN UNA CASA QUE...
- QUIERO ENCONTRAR UNA CASA QUE...

Question 34 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 10: ...SON MUY SIMPÁTICOS.

- QUIERO ENCONTRAR VECINOS QUE...
- AHORA TENGO VECINOS QUE...

Question 35 **1 points** Save

ACTIVITY 4. LOOKING FOR A NEW MEMBER OF THE FACULTY.

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**.

MODELO: Buscamos a alguien que quiera enseñar español.

A. Sí

B. No

Answer: B

The verb **"quiera"** is in the subjunctive, which indicates that the speaker does not know of such a person.

Activity 4, Number 1. Buscamos una profesora que tenga mucha experiencia.

Sí

- ○
- ○ No

Question 36 **1 points** Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**.

Activity 4, Number 2: Nuestra profesora de inglés es muy inteligente y graciosa.

- ○ Sí
- ○ No

Question 37 **1 points** Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**.

enseñar = to teach

Activity 4, Number 3: Necesitamos a alguien que pueda enseñar francés también.

- ○ Sí
- ○ No

Question 38 **1 points** Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**.

Activity 4, Number 4: Los estudiantes de español en nuestra universidad son muy trabajadores.

- ○ Sí
- ○ No

Question 39 **1 points** Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**.

Activity 4, Number 5: Queremos encontrar a alguien que escriba muchos textos y artículos.

- ○ Sí
- ○ No

Question 40 1 points Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**.

Activity 4, Number 6: Ya tenemos varios profesores que son muy famosos.

- Sí
- No

Question 41 1 points Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí"**. If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No"**.

Activity 4, Number 7: Buscamos a alguien que quiera acompañar a los estudiantes a España en el verano.

- Sí
- No

Question 42 1 points Save

ACTIVITY 5: LOOKING FOR PEOPLE AND PLACES PART 2.

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."** You may listen to each audio file as many times as necessary to answer the question.

MODELO: (You Hear) Hay un restaurante aquí que SIRVE comida venezolana.

A. Sí

B. No

Correct Answer: Sí

The verb **"sirve"** is in the present indicative, which indicates that the speaker knows of such a restaurant.

Activity 5, Number 1. Listen to the following link:

Link_Activity_5.1

- Sí

○ No

Question 43 **1 points** Save

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."** You may listen to each audio file as many times as necessary to answer the question.

Activity 5, Number 2. Listen to the following link:

Link_Activity_5.2

○ Sí
○ No

Question 44 **1 points** Save

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."** You may listen to each audio file as many times as necessary to answer the question.

Activity 5, Number 3. Listen to the following link:

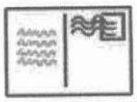
Link_Activity_5.3

○ Sí
○ No

Question 45 **1 points** Save

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**. You may listen to each audio file as many times as necessary to answer the question.

Activity 5, Number 4. Listen to the following link:



Link_Activity_5.4

- Sí
- No

Question 46 **1 points** Save

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."** You may listen to each audio file as many times as necessary to answer the question.

bocadillos = sandwiches

Activity 5, Number 5. Listen to the following link:

Link_Activity_5.5

- Sí
- No

Question 47 **1 points** Save

ACTIVITY 6. AN IDEAL JOB.

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Your instructor states, "Ahora me gusta mi trabajo mucho, pero a veces es muy difícil. Algún día (some day), me gustaría encontrar mi trabajo ideal..."

MODELO: Quiero un trabajo que me permita descansar los fines de semana.

Answer: me aplica

Activity 6, Number 1. QUIERO UN TRABAJO QUE PAGUE MUY BIEN.

Question 48 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Activity 6, Number 2: NECESITO UN TRABAJO QUE OFREZCA BENEFICIOS.

Question 49 1 points Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Activity 6, Number 3: DESEO UN TRABAJO QUE NO SEA DIFÍCIL.

Question 50 1 points Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Activity 6, Number 4: PREFIERO UN TRABAJO QUE REQUIERA SOLAMENTE 8 HORAS AL DÍA.

Question 51 1 points Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Activity 6, Number 5: BUSCO UN TRABAJO QUE PERMITA MUCHAS VACACIONES.

Question 52 1 points Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

paises extranjeros = foreign countries

Activity 6, Number 6: QUIERO UN TRABAJO QUE INCLUYA VIAJES A PAISES EXTRANJEROS.

Question 53 1 points Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

corregir = to correct

Activity 6, Number 7: DESEO UN TRABAJO QUE NO TENGA PAPELES PARA

CORREGIR

Question 54 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Activity 6, Number 8: NECESITO UN TRABAJO QUE ESTÉ CERCA DE MI CASA.

Question 55 **1 points** Save

ACTIVITY 7. WHAT WOULD YOU LIKE TO GET OUT OF YOUR UNIVERSITY EXPERIENCE?

NOTE: THIS ACTIVITY HAS A NEW SET OF DIRECTIONS!

Read the following statements and decide which ones are important to you. Rank the characteristics related to your classes from 1 (most important) to 3 (least important).

MODELO: Espero tomar clases que me gusten.

Answer: 1

Activity 7, Number 1: ESPERO TOMAR CLASES QUE ME PREPAREN BIEN PARA EL FUTURO. (Type your rank for this item in the text box).

Question 56 **1 points** Save

What would you like to get out of your univeristy experience? Read the following statement and decide if it is important to you. Rank the characteristics related to your classes from 1 (most important) to 3 (least important).

al extranjero = abroad

Activity 7, Number 2. ESPERO TOMAR CLASES QUE ME PERMITAN ESTUDIAR AL EXTRANJERO (Type your rank for this item in the text box).

Question 57 **1 points** Save

What would you like to get out of your univeristy experience? Read the following statement and decide if it is important to you. Rank the characteristics related to your classes from 1 (most important) to 3 (least important).

Activity 7, Number 3. ESPERO TOMAR CLASES QUE ME INTERESEN MUCHO. (Type your rank for this item in the text box).

Question 58 **1 points** Save

What would you like to get out of your univeristy experience? Read the following

statement and decide if it is important to you. Rank the characteristics related to your classes from 1 (most important) to 3 (least important).

Activity 7, Number 4: ESPERO TOMAR CLASES QUE ME REQUIERAN LEER MUCHOS LIBROS. (Type your rank for this item in the text box).

Question 59 **1 points** Save

What would you like to get out of your univeristy experience? Read the following statement and decide if it is important to you. Rank the characteristics related to your classes from 1 (most important) to 3 (least important).

Activity 7, Number 5: ESPERO TOMAR CLASES QUE ME HAGAN TRABAJAR TODOS LOS DÍAS. (Type your rank for this item in the text box).

Question 60 **5 points** Save

ACTIVITY 8: WHAT QUALITIES MAKE A GOOD PROFESSOR?

NOTE: THIS ACTIVITY HAS A NEW SET OF DIRECTIONS!

Read the following statements and decide which ones are important to you. PLACE THE STATEMENTS IN ORDER from 1, being the most important to you, to 5, being the least important. Type your numbers in the text box following each statement:

Busco profesores que siempre den notas buenas.
Busco profesores que puedan dar buenos consejos.
Busco profesores que sean personas interesantes.
Busco profesores que me escuchen.
Busco profesores que no den demasiada tarea.

Question 61 **1 points** Save

ACTIVITY 9: WHAT QUALITIES DO YOU LOOK FOR IN YOUR FRIENDS?

NOTE: THIS ACTIVITY HAS A NEW SET OF DIRECTIONS!

Read the following statements and decide which ones are important to you. If you agree with the statement, type **estoy de acuerdo** in the text box. If you do not agree with the statement, type **no estoy de acuerdo** in the text box.

estoy de acuerdo = I agree

no estoy de acuerdo = I disagree

MODELO: Espero encontrar amigos que tengan mucho dinero.

Answer: no estoy de acuerdo

Activity 9, Number 1. ESPERO ENCONTRAR AMIGOS QUE SEAN PERSONAS INTERESANTES.

Question 62 **1 points** Save

Read the following statement and decide if it is important to you. If you agree with the statement, type **estoy de acuerdo** in the text box. If you do not agree with the statement, type **no estoy de acuerdo** in the text box.

Activity 9, Number 2: ESPERO ENCONTRAR AMIGOS QUE ME AYUDEN CON MI TAREA.

Question 63 **1 points** Save

Read the following statement and decide if it is important to you. If you agree with the statement, type **estoy de acuerdo** in the text box. If you do not agree with the statement, type **no estoy de acuerdo** in the text box.

prestar = to loan

Activity 9, Number 3: ESPERO ENCONTRAR AMIGOS QUE ME PRESTEN DINERO.

Question 64 **1 points** Save

Read the following statement and decide if it is important to you. If you agree with the statement, type **estoy de acuerdo** in the text box. If you do not agree with the statement, type **no estoy de acuerdo** in the text box.

Activity 9, Number 4: ESPERO ENCONTRAR AMIGOS QUE ME INVITEN A SUS CASAS.

Question 65 **1 points** Save

Read the following statement and decide if it is important to you. If you agree with the statement, type **estoy de acuerdo** in the text box. If you do not agree with the statement, type **no estoy de acuerdo** in the text box.

Activity 9, Number 5: ESPERO ENCONTRAR AMIGOS QUE SIEMPRE ME DIGAN LA VERDAD.

Question 66 **1 points** Save

ACTIVITY 10. EL FUTURO.

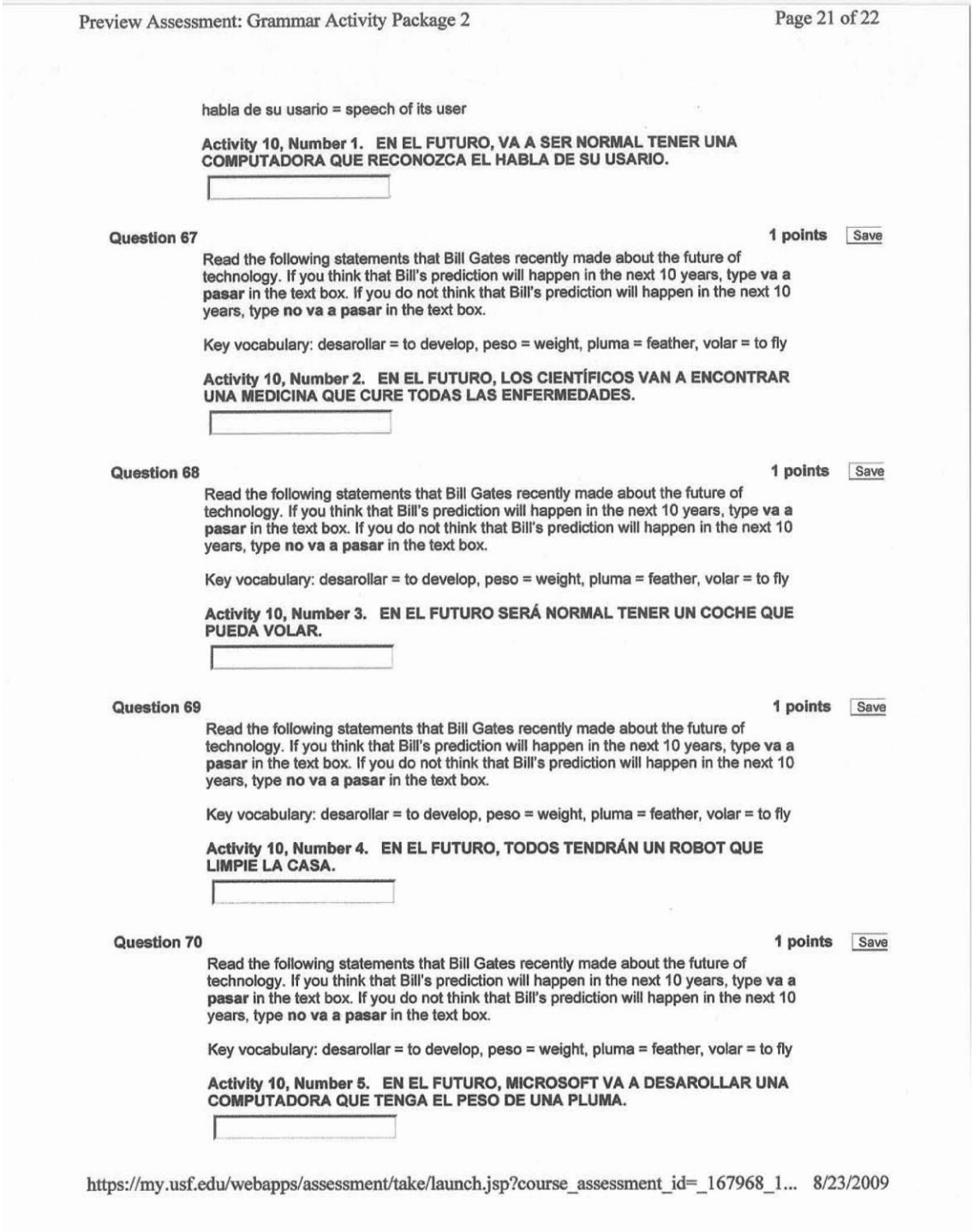
NOTE: THIS ACTIVITY HAS A NEW SET OF DIRECTIONS!

Read the following statements that Bill Gates recently made about the future of technology. If you think that Bill's prediction will happen in the next 10 years, type **va a pasar** in the text box. If you do not think that Bill's prediction will happen in the next 10 years, type **no va a pasar** in the text box.

Key vocabulary: desarollar = to develop, peso = weight, pluma = feather, volar = to fly

MODELO: En el futuro, será normal tener un robot que prepare la comida.

Answer: va a pasar



Preview Assessment: Grammar Activity Package 2 Page 21 of 22

habla de su usario = speech of its user

Activity 10, Number 1. EN EL FUTURO, VA A SER NORMAL TENER UNA COMPUTADORA QUE RECONOZCA EL HABLA DE SU USARIO.

Question 67 **1 points** Save

Read the following statements that Bill Gates recently made about the future of technology. If you think that Bill's prediction will happen in the next 10 years, type **va a pasar** in the text box. If you do not think that Bill's prediction will happen in the next 10 years, type **no va a pasar** in the text box.

Key vocabulary: desarollar = to develop, peso = weight, pluma = feather, volar = to fly

Activity 10, Number 2. EN EL FUTURO, LOS CIENTÍFICOS VAN A ENCONTRAR UNA MEDICINA QUE CURE TODAS LAS ENFERMEDADES.

Question 68 **1 points** Save

Read the following statements that Bill Gates recently made about the future of technology. If you think that Bill's prediction will happen in the next 10 years, type **va a pasar** in the text box. If you do not think that Bill's prediction will happen in the next 10 years, type **no va a pasar** in the text box.

Key vocabulary: desarollar = to develop, peso = weight, pluma = feather, volar = to fly

Activity 10, Number 3. EN EL FUTURO SERÁ NORMAL TENER UN COCHE QUE PUEDA VOLAR.

Question 69 **1 points** Save

Read the following statements that Bill Gates recently made about the future of technology. If you think that Bill's prediction will happen in the next 10 years, type **va a pasar** in the text box. If you do not think that Bill's prediction will happen in the next 10 years, type **no va a pasar** in the text box.

Key vocabulary: desarollar = to develop, peso = weight, pluma = feather, volar = to fly

Activity 10, Number 4. EN EL FUTURO, TODOS TENDRÁN UN ROBOT QUE LIMPIE LA CASA.

Question 70 **1 points** Save

Read the following statements that Bill Gates recently made about the future of technology. If you think that Bill's prediction will happen in the next 10 years, type **va a pasar** in the text box. If you do not think that Bill's prediction will happen in the next 10 years, type **no va a pasar** in the text box.

Key vocabulary: desarollar = to develop, peso = weight, pluma = feather, volar = to fly

Activity 10, Number 5. EN EL FUTURO, MICROSOFT VA A DESAROLLAR UNA COMPUTADORA QUE TENGA EL PESO DE UNA PLUMA.

https://my.usf.edu/webapps/assessment/take/launch.jsp?course_assessment_id=_167968_1... 8/23/2009

Note. Structured input activities were adapted from Farley (2002) with permission.

Appendix Q

Structured Input Treatment Package

Preview Assessment: Grammar Activity Package 3

Name	Grammar Activity Package 3
Instructions	Please be sure to click on all of the links that are provided. All of the links will open in a new window. Just click the "x" in the upper right hand corner of the window to return to the activity package. Please DO NOT leave any items blank. If you experience any technical difficulties, email the researcher at vrussell@mail.usf.edu ALL OF THE ACTIVITIES CONTAIN EXAMPLES. YOU WILL NEED TO EXAMINE THESE CLOSELY IN ORDER TO FIGURE OUT HOW TO ANSWER THE QUESTIONS CORRECTLY. PLEASE CLICK "SAVE" AFTER YOU COMPLETE EACH ITEM. You must spend a minimum of 1 hour on this activity, and you will have a maximum of 2 hours.
Timed Assessment	This Test has a 2 hour timer.The elapsed time appears at the top right of the window. A **1 minute** warning will be displayed. *[The timer does not appear when previewing this Test]*
Multiple Attempts	Not allowed. This Test can only be taken once.
Force Completion	This Test can be saved and resumed later.

Question Completion Status:

Question 1 **1 points** Save

ACTIVITY 1.

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, DECIDE WHETHER LUÍS IS TALKING ABOUT A POSITION THAT HE WOULD LIKE TO FIND, OR IF HE IS DESCRIBING HIS CURRENT JOB.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is **HYPOTHETICAL (his ideal job), WHICH USES THE SUBJUNCTIVE,** or to a job that is **CERTAIN (his current job), WHICH USES THE INDICATIVE. Please select the most logical response.**

MOLDELO: ...ofreza beneficios.

a. Busco un trabajo que....

b. Tengo un trabajo que...

Answer: a. Busco un trabajo que...

"Ofrezca" is in the subjunctive in Spanish, which indicates that the job is hypothetical.

Activity 1, Number 1. ...PAGUE UN BUEN SUELDO (SALARY).

- ○ BUSCO UN TRABAJO QUE...
- ○ TENGO UN TRABAJO QUE...

Question 2 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Number 2. ...COMPRENDEN MI SITUACIÓN.

- AHORA, TENGO COLEGAS QUE...
- QUIERO UNOS COLEGAS QUE...

Question 3 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Number 3. ...ES MUY GRANDE.

- DESEO UNA OFICINA QUE...
- TENGO UNA OFICINA QUE...

Question 4 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

ofrecer = to offer

Activity 1, Question 4. ...OFREZCA LA OPORTUNIDAD DE AVANZAR.

- YA TENGO UN PUESTO (A POSITION) QUE...
- ESPERO ENCONTRAR UN PUESTO (A POSITION) QUE...

Question 5 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is

referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Question 5: ...ÉSTE CERCA DE MI CASA.

- NECESITO UN TRABAJO QUE...
- AHORA, TENGO UN TRABAJO QUE...

Question 6 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

contribuir = to contribute

Activity 1, Question 6: ...CONTRIBUYA ALGO A LA SOCIEDAD.

- TENGO UN TRABAJO EN EL QUE (YO)...
- DESEO OBTENER UN TRABAJO EN EL QUE (YO)...

Question 7 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Question 7: ...ES MUY SIMPÁTICO.

- QUIERO UN JEFE (A BOSS) QUE...
- TENGO UN JEFE (A BOSS) QUE...

Question 8 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Question 8: ...TENGA UNA VISTA BELLA.

- DESEO UNA OFICINA QUE...
- AHORA, TENGO UNA OFICINA QUE...

Question 9 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Question 9: ...SON MUY RICOS.

- BUSCO UNOS CLIENTES QUE...
- TENGO UNOS CLIENTES QUE...

Question 10 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Question 10: ...SABE HABLAR MUCHOS IDIOMAS.

- BUSCO UN ASISTENTE QUE...
- YA TENGO UN ASISTENTE QUE...

Question 11 **1 points** Save

ACTIVITY 2. LOOKING FOR PEOPLE AND PLACES.

You will hear 10 sentences in Spanish. Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

MODELO: (You hear) Busco a alguien que QUIERA viajar al extranjero cada mes.

A. The person exists or is known to the speaker.

B. The speaker does not know if such a person exists.

Correct Answer: B

The verb in the subordinate clause "quiera" is in the subjunctive, which indicates that the speaker is referring to something or someone that is uncertain, hypothetical, or unknown.

Activity 2, Number 1. Listen to the following link:
Listening_Activity_2.1.wav

- The person exists or is known to the speaker.
- The speaker does not know if such a person exists.

Question 12 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 2. Listen to the following link:
Listening_Activity_2.2.wav

- The person exists or is known to the speaker.
- The speaker does not know if such a person exists.

Question 13 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 3. Listen to the following link:
Listening_Activity_2.3.wav

- The restaurant exists or is known to the speaker.
- The speaker does not know if such a restaurant exists.

Question 14 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 4. Listen to the following link:
Listening_Activity_2.4.wav

- ○ The person exists or is known to the speaker.
- ○ The speaker does not know if such a person exists.

Question 15 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 5. Listen to the following link:
Listening_Activity_2.5.wav

- ○ The person exists or is known to the speaker.
- ○ The speaker does not know if such a person exists.

Question 16 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 6. Listen to the following link:
Listening_Activity_2.6.wav

- ○ The store exists or is known to the speaker.
- ○ The speaker does not know of such a store.

Question 17 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the

second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 7. Listen to the following link:
Listening_Activity_2.7.wav

- The bank exists or is known to the speaker.
- The speaker does not know if such a bank exists.

Question 18 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 8. Listen to the following link:
Listening_Activity_2.8.wav

- The market exists or is known to the speaker.
- The speaker does not know of such a market.

Question 19 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 9. Listen to the following link:
Listening_Activity_2.9.wav

- The hairdresser's exists or is known to the speaker.
- The speaker does not know of such a hairdresser's.

Question 20 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the**

correct response.

Activity 2, Number 10. Listen to the following link:
Listening_Activity_2.10.wav

- The person exists or is known to the speaker.
- The speaker does not know if such a person exists.

Question 21 **1 points** Save

ACTIVITY 3.

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to **a house that is hypothetical (her dream house), which requires the subjunctive in Spanish, or to a house of whose existence she is certain (her current house), which uses the indicative in Spanish. Please select the most logical response.**

MODELO: ...tenga piscina.

A. Busco una casa que...

B. Tengo una casa que....

Answer: A. Busco una casa que....

"Tenga" is in the subjunctive in Spanish, which indicates that the house is hypothetical.

Activity 3, Number 1: ...ESTÉ EN UNA ZONA PACÍFICA..

- BUSCO UNA CASA QUE...
- TENGO UNA CASA QUE...

Question 22 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 2: ...TENGA SEIS DORMITORIOS

- AHORA, VIVO EN UNA CASA QUE...
- DESEO UNA CASA QUE...

Question 23 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 3: ...TIENE DOS BAÑOS.

- VIVO EN UNA CASA QUE...
- QUIERO ENCONTRAR UNA CASA QUE...

Question 24 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 4: ...ESTÁ EN LA ESQUINA (CORNER).

- DESEO UNA CASA QUE...
- AHORA TENGO UNA CASA QUE...

Question 25 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 5: ...TENGA TRES PISOS (FLOORS).

- VIVO EN UNA CASA QUE....
- BUSCO UNA CASA QUE...

Question 26 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 6: ...ESTÁ AMUEBLADO (FURNISHED).

- VIVO EN UNA CASA QUE...
- DESEO UNA CASA QUE...

Question 27 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 7: ...SEAN TRANQUILOS.

- BUSCO UNOS VECINOS QUE...
- AHORA TENGO UNOS VECINOS QUE...

Question 28 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 8: ...TIENE PISCINA.

- VIVO EN UNA CASA QUE...
- QUIERO UNA CASA QUE...

Question 29 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

costar = to cost

Activity 3, Number 9: ...NO CUESTE TANTO DINERO.

- VIVO EN UNA CASA QUE...
- QUIERO ENCONTRAR UNA CASA QUE...

Question 30 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response** .

Activity 3, Number 10: ...SON MUY SIMPÁTICOS.

- QUIERO ENCONTRAR VECINOS QUE...
- AHORA TENGO VECINOS QUE...

Question 31 **1 points** Save

ACTIVITY 4. LOOKING FOR NEW MEMBERS OF THE FACULTY.

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

MODELO: Buscamos a alguien que QUIERA enseñar español.

A. Sí

B. No

Answer: B

The verb "quiera" is in the subjunctive, which indicates that the speaker does not know of such a person.

Activity 4, Number 1. Buscamos una profesora que tenga mucha experiencia.

- Sí
- No

Question 32 **1 points** Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Activity 4, Number 2: Nuestra profesora de inglés es muy inteligente y graciosa.

- Sí
- No

Question 33 **1 points** Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

enseñar = to teach

Activity 4, Number 3: Necesitamos a alguien que pueda enseñar francés también.

- Sí
- No

Question 34 **1 points** Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Activity 4, Number 4: Los estudiantes de español en nuestra universidad son muy trabajadores.

- Sí
- No

Question 35 **1 points** Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Activity 4, Number 5: Queremos encontrar a alguien que escriba muchos textos y artículos.

- Sí
- No

Question 36 **1 points** Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Activity 4, Number 6: Ya tenemos varios profesores que son muy famosos.

- Sí
- No

Question 37 1 points Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Activity 4, Number 7: Buscamos a alguien que quiera acompañar a los estudiantes a España en el verano.

- Sí
- No

Question 38 1 points Save

ACTIVITY 5: LOOKING FOR PEOPLE AND PLACES PART 2.

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."** You may listen to each audio file as many times as necessary to answer the question.

MODELO: (You Hear) Hay un restaurante aquí que SIRVE comida venezolana.

A. Sí

B. No

Correct Answer: Sí

The verb **"sirve"** is in the present indicative, which indicates that the speaker knows of such a restaurant.

Activity 5, Number 1. Listen to the following link:

Link_Activity_5.1

- Sí
- No

Question 39 1 points Save

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does

not exist, or whose existence is uncertain, mark **"No."** You may listen to each audio file as many times as necessary to answer the question.

Activity 5, Number 2. Listen to the following link:

Link_Activity_5.2

- Sí
- No

Question 40 **1 points** Save

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."** You may listen to each audio file as many times as necessary to answer the question.

Activity 5, Number 3. Listen to the following link:

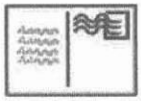
Link_Activity_5.3

- Sí
- No

Question 41 **1 points** Save

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."** You may listen to each audio file as many times as necessary to answer the question.

Activity 5, Number 4. Listen to the following link:



Link_Activity_5.4

- Sí
- No

○

Question 42 **1 points** Save

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."** You may listen to each audio file as many times as necessary to answer the question.

bocadillos = sandwiches

Activity 5, Number 5. Listen to the following link:

Link_Activity_5.5

○ Sí
○ No

Question 43 **1 points** Save

ACTIVITY 6. AN IDEAL JOB.

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Your instructor states, "Ahora me gusta mi trabajo mucho, pero a veces es muy difícil. Algún día (some day), me gustaría encontrar mi trabajo ideal..."

MODELO: Quiero un trabajo que me permita descansar los fines de semana.

Answer: me aplica

Activity 6, Number 1. QUIERO UN TRABAJO QUE PAGUE MUY BIEN.

Question 44 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Activity 6, Number 2: NECESITO UN TRABAJO QUE OFREZCA BENEFICIOS.

Question 45 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Activity 6, Number 3: DESEO UN TRABAJO QUE NO SEA DIFÍCIL.

Question 46 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Activity 6, Number 4: PREFIERO UN TRABAJO QUE REQUIERA SOLAMENTE 8 HORAS AL DÍA.

Question 47 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Activity 6, Number 5: BUSCO UN TRABAJO QUE PERMITA MUCHAS VACACIONES.

Question 48 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

paises extranjeros = foreign countries

Activity 6, Number 6: QUIERO UN TRABAJO QUE INCLUYA VIAJES A PAÍSES EXTRANJEROS.

Question 49 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

corregir = to correct

Activity 6, Number 7: DESEO UN TRABAJO QUE NO TENGA PAPELES PARA CORREGIR

Question 50 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Activity 6, Number 8: NECESITO UN TRABAJO QUE ESTÉ CERCA DE MI CASA.

Question 51 **1 points** Save

ACTIVITY 7. WHAT WOULD YOU LIKE TO GET OUT OF YOUR UNIVERSITY EXPERIENCE?

NOTE: THIS ACTIVITY HAS A NEW SET OF DIRECTIONS!

Read the following statements and decide which ones are important to you. Rank the characteristics related to your classes from 1 (most important) to 3 (least important).

MODELO: Espero tomar clases que me gusten.

Answer: 1

Activity 7, Number 1: ESPERO TOMAR CLASES QUE ME PREPAREN BIEN PARA EL FUTURO. (Type your rank for this item in the text box.)

Question 52 **1 points** Save

What would you like to get out of your univeristy experience? Read the following statement and decide if it is important to you. Rank the characteristics related to your classes from 1 (most important) to 3 (least important).

al extranjero = abroad

Activity 7, Number 2. ESPERO TOMAR CLASES QUE ME PERMITAN ESTUDIAR AL EXTRANJERO (Type your rank for this item in the text box.)

Question 53 **1 points** Save

What would you like to get out of your univeristy experience? Read the following statement and decide if it is important to you. Rank the characteristics related to your classes from 1 (most important) to 3 (least important).

Activity 7, Number 3. ESPERO TOMAR CLASES QUE ME INTERESEN MUCHO. (Type your rank for this item in the text box.)

Question 54 **1 points** Save

What would you like to get out of your univeristy experience? Read the following statement and decide if it is important to you. Rank the characteristics related to your classes from 1 (most important) to 3 (least important).

Activity 7, Number 4: ESPERO TOMAR CLASES QUE ME REQUIERAN LEER MUCHOS LIBROS. (Type your rank for this item in the text box.)

Question 55 **1 points** Save

What would you like to get out of your univeristy experience? Read the following statement and decide if it is important to you. Rank the characteristics related to your classes from 1 (most important) to 3 (least important).

Activity 7, Number 5: ESPERO TOMAR CLASES QUE ME HAGAN TRABAJAR TODOS LOS DÍAS. (Type your rank for this item in the text box.)

Question 56 **5 points** Save

ACTIVITY 8: WHAT QUALITIES MAKE A GOOD PROFESSOR?

NOTE: THIS ACTIVITY HAS A NEW SET OF DIRECTIONS!

Read the following statements and decide which ones are important to you. PLACE THE STATEMENTS IN ORDER from 1, being the most important to you, to 5, being the least important. Type your numbers in the text box following each statement:

Busco profesores que siempre den notas buenas.
Busco profesores que puedan dar buenos consejos.
Busco profesores que sean personas interesantes.
Busco profesores que me escuchen.
Busco profesores que no den demasiada tarea.

Question 57 **1 points** Save

ACTIVITY 9: WHAT QUALITIES DO YOU LOOK FOR IN YOUR FRIENDS?

NOTE: THIS ACTIVITY HAS A NEW SET OF DIRECTIONS!

Read the following statements and decide which ones are important to you. If you agree with the statement, type **estoy de acuerdo** in the text box. If you do not agree with the statement, type **no estoy de acuerdo** in the text box.

estoy de acuerdo = I agree

no estoy de acuerdo = I disagree

MODELO: Espero encontrar amigos que tengan mucho dinero.

Answer: no estoy de acuerdo

Activity 9, Number 1. ESPERO ENCONTRAR AMIGOS QUE SEAN PERSONAS INTERESANTES.

Question 58 **1 points** Save

Read the following statement and decide if it is important to you. If you agree with the statement, type **estoy de acuerdo** in the text box. If you do not agree with the statement, type **no estoy de acuerdo** in the text box.

Activity 9, Number 2: ESPERO ENCONTRAR AMIGOS QUE ME AYUDEN CON MI TAREA.

Question 59 1 points Save

Read the following statement and decide if it is important to you. If you agree with the statement, type **estoy de acuerdo** in the text box. If you do not agree with the statement, type **no estoy de acuerdo** in the text box.

prestar = to loan

Activity 9, Number 3: ESPERO ENCONTRAR AMIGOS QUE ME PRESTEN DINERO.

Question 60 1 points Save

Read the following statement and decide if it is important to you. If you agree with the statement, type **estoy de acuerdo** in the text box. If you do not agree with the statement, type **no estoy de acuerdo** in the text box.

Activity 9, Number 4: ESPERO ENCONTRAR AMIGOS QUE ME INVITEN A SUS CASAS.

Question 61 1 points Save

Read the following statement and decide if it is important to you. If you agree with the statement, type **estoy de acuerdo** in the text box. If you do not agree with the statement, type **no estoy de acuerdo** in the text box.

Activity 9, Number 5: ESPERO ENCONTRAR AMIGOS QUE SIEMPRE ME DIGAN LA VERDAD.

Question 62 1 points Save

ACTIVITY 10: EL FUTURO.

NOTE: THIS ACTIVITY HAS A NEW SET OF DIRECTIONS!

Read the following statements that Bill Gates recently made about the future of technology. If you think that Bill's prediction will happen in the next 10 years, type **va a pasar** in the text box. If you do not think that Bill's prediction will happen in the next 10 years, type **no va a pasar** in the text box.

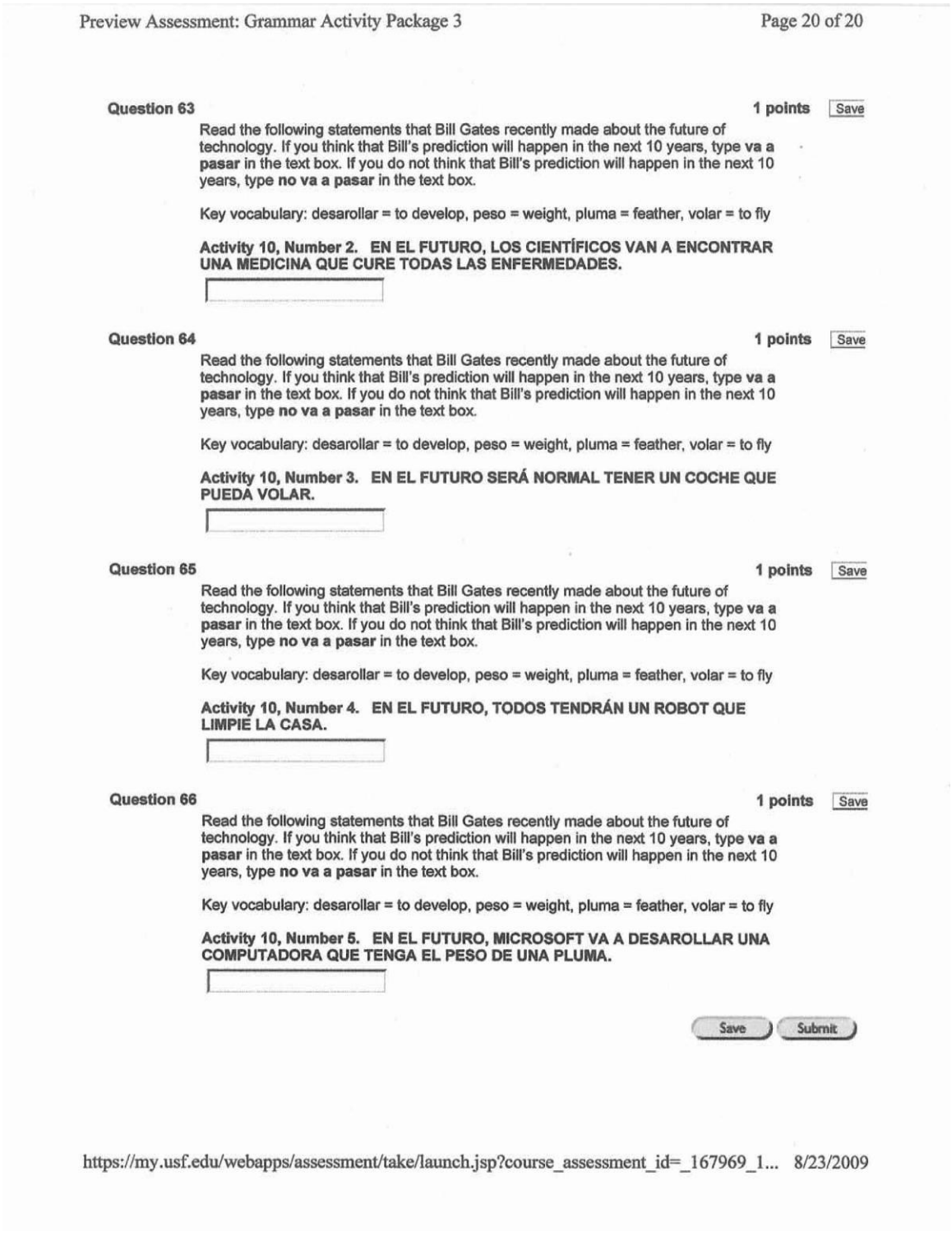
Key vocabulary: desarollar = to develop, peso = weight, pluma = feather, volar = to fly

MODELO: En el futuro, será normal tener un robot que prepare la comida.

Answer: va a pasar

habla de su usario = speech of its user

Activity 10, Number 1. EN EL FUTURO, VA A SER NORMAL TENER UNA COMPUTADORA QUE RECONOZCA EL HABLA DE SU USARIO.



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Question 63 1 points Save

Read the following statements that Bill Gates recently made about the future of technology. If you think that Bill's prediction will happen in the next 10 years, type **va a pasar** in the text box. If you do not think that Bill's prediction will happen in the next 10 years, type **no va a pasar** in the text box.

Key vocabulary: desarollar = to develop, peso = weight, pluma = feather, volar = to fly

Activity 10, Number 2. EN EL FUTURO, LOS CIENTÍFICOS VAN A ENCONTRAR UNA MEDICINA QUE CURE TODAS LAS ENFERMEDADES.

Question 64 1 points Save

Read the following statements that Bill Gates recently made about the future of technology. If you think that Bill's prediction will happen in the next 10 years, type **va a pasar** in the text box. If you do not think that Bill's prediction will happen in the next 10 years, type **no va a pasar** in the text box.

Key vocabulary: desarollar = to develop, peso = weight, pluma = feather, volar = to fly

Activity 10, Number 3. EN EL FUTURO SERÁ NORMAL TENER UN COCHE QUE PUEDA VOLAR.

Question 65 1 points Save

Read the following statements that Bill Gates recently made about the future of technology. If you think that Bill's prediction will happen in the next 10 years, type **va a pasar** in the text box. If you do not think that Bill's prediction will happen in the next 10 years, type **no va a pasar** in the text box.

Key vocabulary: desarollar = to develop, peso = weight, pluma = feather, volar = to fly

Activity 10, Number 4. EN EL FUTURO, TODOS TENDRÁN UN ROBOT QUE LIMPIE LA CASA.

Question 66 1 points Save

Read the following statements that Bill Gates recently made about the future of technology. If you think that Bill's prediction will happen in the next 10 years, type **va a pasar** in the text box. If you do not think that Bill's prediction will happen in the next 10 years, type **no va a pasar** in the text box.

Key vocabulary: desarollar = to develop, peso = weight, pluma = feather, volar = to fly

Activity 10, Number 5. EN EL FUTURO, MICROSOFT VA A DESAROLLAR UNA COMPUTADORA QUE TENGA EL PESO DE UNA PLUMA.

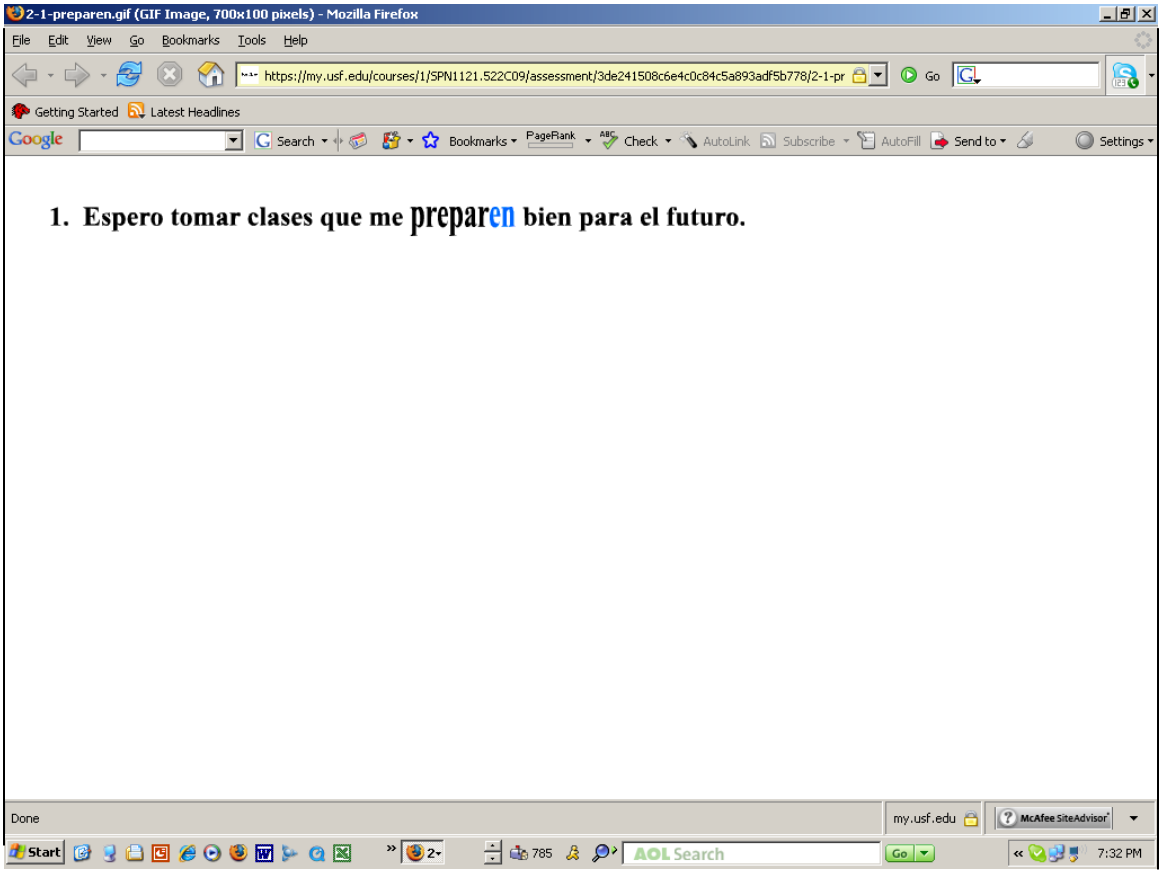
Save Submit

https://my.usf.edu/webapps/assessment/take/launch.jsp?course_assessment_id=_167969_1... 8/23/2009

Note. Structured input activities were adapted from Farley (2002) with permission.

Appendix R

Example of Computerized Visual Input Enhancement


2-1-preparen.gif (GIF Image, 700x100 pixels) - Mozilla Firefox
File Edit View Go Bookmarks Tools Help
https://my.usf.edu/courses/1/SPN1121.522C09/assessment/3de241508c6e4c0c84c5a893adf5b778/2-1-pr
Go
Getting Started Latest Headlines
Google Search Bookmarks PageRank Check AutoLink Subscribe AutoFill Send to Settings
1. Espero tomar clases que me preparen bien para el futuro.
Done
my.usf.edu
McAfee SiteAdvisor
Start
AOL Search
Go
7:32 PM

Appendix S

Processing Instruction with Visual Input Enhancement Treatment Package

SPN1121.501C09: BEGINNING SPANISH II (SPN1121.501C09) > CONTROL PANEL > STUDY MATERIALS > PREVIEW ASSESSMENT: GRAMMAR ACTIVITY PACKAGE 4

Preview Assessment: Grammar Activity Package 4

Name	Grammar Activity Package 4
Instructions	Please be sure to click on all of the links that are provided. All of the links will open in a new window. Just click the "x" in the upper right hand corner of the window to return to the activity package. Please DO NOT leave any items blank. If you experience any technical difficulties, email the researcher at vrussell@mail.usf.edu PLEASE CLICK "SAVE" AS YOU COMPLETE EACH ITEM. YOU MUST TAKE POSTTEST 1 IMMEDIATELY AFTER COMPLETING THIS GRAMMAR PACKAGE. You must spend a minimum of 1 hour on this activity, and you will have a maximum of 2 hours.
Timed Assessment	This Test has a 2 hour timer.The elapsed time appears at the top right of the window. A **1 minute** warning will be displayed. *[The timer does not appear when previewing this Test]*
Multiple Attempts	Not allowed. This Test can only be taken once.
Force Completion	This Test can be saved and resumed later.

Question Completion Status:

Question 1 **1 points** Save

I have read the review on how to form the subjunctive:

PI_Subjunctive_Formation.doc

- ○ True
- ○ False

Question 2 **1 points** Save

It is VERY IMPORTANT that you read the following link about how the subjunctive is used in adjectival clauses in Spanish.

I have read the link on the formation of the subjunctive.

PI_Subjunctive_Use.doc

- ○ True
- ○ False

Question 3 **1 points** Save

Have you noticed that it is very difficult to learn a foreign language as an adult? Please read the following information about how your brain processes foreign language input. The following link will give you some specific information about the language processing mechanisms that you engage in subconsciously that actually hinder your ability to learn Spanish. The link will give you some hints about how to process your linguistic input in Spanish more optimally.

I have read the link about language processing strategies The information in this

link is VERY IMPORTANT, and may help you learn an aspect of complex Spanish grammar (the subjunctive) more easily!

Information_Processing Strategies.doc

- True
- False

Question 4 **1 points** Save

I understand that the subjunctive is used to refer to people places and things that are uncertain, unknown, or hypothetical.

For example: Busco una persona que SEPA hablar 12 idiomas.

Rendered in English, "I'm looking for someone who speaks 12 languages."

The subjunctive is used because the speaker of the sentence is not sure if such a person exists.

On the other hand, the speaker may say, **"Busco a una persona que SABE hablar 3 idiomas."**

In the previous example, the indicative is used because the speaker knows of someone who speaks three langauges.

I understand the difference in usage between the subjunctive and the indicative in adjectival clauses in Spanish.

- True
- False

Question 5 **1 points** Save

ACTIVITY 1.

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, DECIDE WHETHER LUÍS IS TALKING ABOUT A POSITION THAT HE WOULD LIKE TO FIND, OR IF HE IS DESCRIBING HIS CURRENT JOB.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is **HYPOTHETICAL (his ideal job), WHICH USES THE SUBJUNCTIVE**, or to a job that is **CERTAIN (his current job), WHICH USES THE INDICATIVE. Please select the most logical response.**

MODELO: ...ofrezca beneficios.

a. Busco un trabajo que....

b. Tengo un trabajo que...

Answer: a. Busco un trabajo que...

"Ofrezca" is in the subjunctive in Spanish, which indicates that the job is hypothetical.

Activity 1, Number 1. ...PAGUE UN BUEN SUELDO (SALARY).

- BUSCO UN TRABAJO QUE...
- TENGO UN TRABAJO QUE...

Question 6 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Number 2. ...COMPRENDEN MI SITUACIÓN.

- AHORA, TENGO COLEGAS QUE...
- QUIERO UNOS COLEGAS QUE...

Question 7 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Number 3. ...ES MUY GRANDE.

- DESEO UNA OFICINA QUE...
- TENGO UNA OFICINA QUE...

Question 8 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

ofrecer = to offer

Activity 1, Question 4. ...OFREZCA LA OPORTUNIDAD DE AVANZAR.

- YA TENGO UN PUESTO (A POSITION) QUE...
- ESPERO ENCONTRAR UN PUESTO (A POSITION) QUE...

Question 9 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job. **Please select the most logical response.**

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Question 5: ...ÉSTE CERCA DE MI CASA.

- NECESITO UN TRABAJO QUE...
- AHORA, TENGO UN TRABAJO QUE...

Question 10 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

contribuir = to contribute

Activity 1, Question 6: ...CONTRIBUYA ALGO A LA SOCIEDAD.

- TENGO UN TRABAJO EN EL QUE (YO)...
- DESEO OBTENER UN TRABAJO EN EL QUE (YO)...

Question 11 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Question 7: ...ES MUY SIMPÁTICO.

- QUIERO UN JEFE (A BOSS) QUE...
- TENGO UN JEFE (A BOSS) QUE...

Question 12 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements

that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Question 8: ...TENGA UNA VISTA BELLA.

- DESEO UNA OFICINA QUE...
- AHORA, TENGO UNA OFICINA QUE...

Question 13 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Question 9: ...SON MUY RICOS.

- BUSCO UNOS CLIENTES QUE...
- TENGO UNOS CLIENTES QUE...

Question 14 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Question 10: ...SABE HABLAR MUCHOS IDIOMAS.

- BUSCO UN ASISTENTE QUE...
- YA TENGO UN ASISTENTE QUE...

Question 15 **1 points** Save

ACTIVITY 2. LOOKING FOR PEOPLE AND PLACES.

You will hear 10 sentences in Spanish. Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

MODELO: (You hear) Busco a alguien que QUIERA viajar al extranjero cada mes.

A. The person exists or is known to the speaker.

B. The speaker does not know if such a person exists.

Correct Answer: B

The verb in the subordinate clause **"quiera"** is in the subjunctive, which indicates that the speaker is referring to something or someone that is uncertain, hypothetical, or unknown.

Activity 2, Number 1. Listen to the following link:
Listening_Activity_2.1.wav

- ○ The person exists or is known to the speaker.
- ○ The speaker does not know if such a person exists.

Question 16 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 2. Listen to the following link:
Listening_Activity_2.2.wav

- ○ The person exists or is known to the speaker.
- ○ The speaker does not know if such a person exists.

Question 17 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 3. Listen to the following link:
Listening_Activity_2.3.wav

- The restaurant exists or is known to the speaker.
- The speaker does not know if such a restaurant exists.

Question 18 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 4. Listen to the following link:
Listening_Activity_2.4.wav

- The person exists or is known to the speaker.
- The speaker does not know if such a person exists.

Question 19 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 5. Listen to the following link:
Listening_Activity_2.5.wav

- The person exists or is known to the speaker.
- The speaker does not know if such a person exists.

Question 20 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 6. Listen to the following link:
Listening_Activity_2.6.wav

- The store exists or is known to the speaker.

- The speaker does not know of such a store.

Question 21 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 7. Listen to the following link:
Listening_Activity_2.7.wav

- The bank exists or is known to the speaker.
- The speaker does not know if such a bank exists.

Question 22 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 8. Listen to the following link:
Listening_Activity_2.8.wav

- The market exists or is known to the speaker.
- The speaker does not know of such a market.

Question 23 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 9. Listen to the following link:
Listening_Activity_2.9.wav

- The hairdresser's exists or is known to the speaker.

○ The speaker does not know of such a hairdresser's.

Question 24 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 10. Listen to the following link:
Listening_Activity_2.10.wav

○ The person exists or is known to the speaker.

○ The speaker does not know if such a person exists.

Question 25 **1 points** Save

ACTIVITY 3.

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is **hypothetical (her dream house), which requires the subjunctive in Spanish, or to a house of whose existence she is certain (her current house), which uses the indicative in Spanish. Please select the most logical response.**

MODELO: ...tenga piscina.

A. Busco una casa que...

B. Tengo una casa que....

Answer: A. Busco una casa que....

"Tenga" is in the subjunctive in Spanish, which indicates that the house is hypothetical.

Activity 3, Number 1: ...ESTÉ EN UNA ZONA PACÍFICA..

○ BUSCO UNA CASA QUE...

○ TENGO UNA CASA QUE...

Question 26 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 2: ...TENGA SEIS DORMITORIOS

- AHORA, VIVO EN UNA CASA QUE...
- DESEO UNA CASA QUE...

Question 27 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 3: ...TIENE DOS BAÑOS.

- VIVO EN UNA CASA QUE...
- QUIERO ENCONTRAR UNA CASA QUE...

Question 28 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 4: ...ESTÁ EN LA ESQUINA (CORNER).

- DESEO UNA CASA QUE...
- AHORA TENGO UNA CASA QUE...

Question 29 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 5: ...QUE TENGA TRES PISOS (FLOORS).

- VIVO EN UNA CASA QUE....
- BUSCO UNA CASA QUE...

Question 30 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 6: ...ESTÁ AMUEBLADO (FURNISHED).

- VIVO EN UNA CASA QUE...
- DESEO UNA CASA QUE...

Question 31 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 7: ...SEAN TRANQUILOS.

- BUSCO UNOS VECINOS QUE...
- AHORA TENGO UNOS VECINOS QUE...

Question 32 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 8: ...TIENE PISCINA.

- VIVO EN UNA CASA QUE...

○ QUIERO UNA CASA QUE...

Question 33 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

costar = to cost

Activity 3, Number 9: ...NO CUESTE TANTO DINERO.

○ VIVO EN UNA CASA QUE...

○ QUIERO ENCONTRAR UNA CASA QUE...

Question 34 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 10: ...SON MUY SIMPÁTICOS.

○ QUIERO ENCONTRAR VECINOS QUE...

○ AHORA TENGO VECINOS QUE...

Question 35 **1 points** Save

ACTIVITY 4. LOOKING FOR A NEW MEMBER OF THE FACULTY

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

MODELO: Buscamos a alguien que QUIERA enseñar español.

A. Sí

B. No

Answer: B

The verb **"quiera"** is in the subjunctive, which indicates that the speaker does not know of such a person.

Activity 4, Number 1. Buscamos una profesora que tenga mucha experiencia.

- Sí
- No

Question 36 **1 points** Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Activity 4, Number 2: Nuestra profesora de inglés es muy inteligente y graciosa.

- Sí
- No

Question 37 **1 points** Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

enseñar = to teach

Activity 4, Number 3: Necesitamos a alguien que pueda enseñar francés también.

- Sí
- No

Question 38 **1 points** Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Activity 4, Number 4: Los estudiantes de español en nuestra universidad son muy trabajadores.

- Sí
- No

Question 39 **1 points** Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Activity 4, Number 5: Queremos encontrar a alguien que escriba muchos textos y artículos.

- Sí
- No

Question 40 1 points Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Activity 4, Number 6: Ya tenemos varios profesores que son muy famosos.

- Sí
- No

Question 41 1 points Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark "Sí". If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark "No".

Activity 4, Number 7: Buscamos a alguien que quiera acompañar a los estudiantes a España en el verano.

- Sí
- No

Question 42 1 points Save

ACTIVITY 5. LOOKING FOR PEOPLE AND PLACES PART 2.

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."** You may listen to each audio file as many times as necessary to answer the question.

MODELO: (You Hear) Hay un restaurante aquí que SIRVE comida venezolana.

A. Sí

B. No

Correct Answer: Sí

The verb **"sirve"** is in the present indicative, which indicates that the speaker knows of such a restaurant.

Activity 5, Number 1. Listen to the following link:

Link_Activity_5.1

- Sí

○ No

Question 43 **1 points** Save

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."** You may listen to each audio file as many times as necessary to answer the question.

Activity 5, Number 2. Listen to the following link:

Link_Activity_5.2

○ Sí
○ No

Question 44 **1 points** Save

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."** You may listen to each audio file as many times as necessary to answer the question.

Activity 5, Number 3. Listen to the following link:

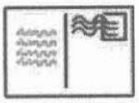
Link_Activity_5.3

○ Sí
○ No

Question 45 **1 points** Save

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."** You may listen to each audio file as many times as necessary to answer the question.

Activity 5, Number 4. Listen to the following link:



Link_Activity_5.4

- Sí
- No

Question 46 **1 points** Save

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí"** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."** You may listen to each audio file as many times as necessary to answer the question.

bocadillos = sandwiches

Activity 5, Number 5. Listen to the following link:

Link_Activity_5.5

- Sí
- No

Question 47 **1 points** Save

ACTIVITY 6. AN IDEAL JOB.

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Your instructor states, "Ahora me gusta mi trabajo mucho, pero a veces es muy difícil. Algún día (some day), me gustaría encontrar mi trabajo ideal..."

MODELO: Quiero un trabajo que me permita descansar los fines de semana.

Answer: me aplica

Activity 6, Number 1. Please click on the following link to view your instructor's statement.
1-1-pague.gif

Question 48 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Activity 6, Number 2: Please click on the following link to view your instructor's statement.
1-2-ofrezca.gif

Question 49 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Activity 6, Number 3: Please click on the following link to view your instructor's statement.
1-3-sea.gif

Question 50 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Activity 6, Number 4: Please click on the following link to view your instructor's statement.
1-4-requiera.gif

Question 51 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Activity 6, Number 5: Please click on the following link to view your instructor's statement.
1-5-permita.gif

Question 52 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

paises extranjeros = foreign countries

Activity 6, Number 6: Please click on the following link to view your instructor's statement.
1-6-incluya.gif

Question 53 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

corregir = to correct

Activity 6, Number 7: Please click on the following link to view your instructor's statement.
1-7-tenga.gif

Question 54 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Activity 6, Number 8: Please click on the following link to view your instructor's statement.
1-8-este.gif

Question 55 **1 points** Save

ACTIVITY 7. WHAT WOULD YOU LIKE TO GET OUT OF YOUR UNIVERSITY EXPERIENCE?

NOTE: THIS ACTIVITY HAS A NEW SET OF DIRECTIONS!

Read the following statements and decide which ones are important to you. Rank the characteristics related to your classes from 1 (most important) to 3 (least important).

MODELO: Espero tomar clases que me gusten.

Answer: 1

Activity 7, Number 2: Please read the following link and type your rank for this item in the text box.
2-1-preparen.gif

Question 56 **1 points** Save

What would you like to get out of your univeristy experience? Read the following statement and decide if it is important to you. Rank the characteristics related to your classes from 1 (most important) to 3 (least important).

al extranjero = abroad

Activity 7, Number 2. Please read the following link and type your rank for this item in the text box.
2-2-permitan.gif

Question 57 **1 points** Save

What would you like to get out of your univeristy experience? Read the following statement and decide if it is important to you. Rank the characteristics related to your classes from 1 (most important) to 3 (least important).

Activity 7, Number 3. Please read the following link and type your rank for this item in the text box.
2-3-interesen.gif

Question 58 **1 points** Save

What would you like to get out of your univeristy experience? Read the following statement and decide if it is important to you. Rank the characteristics related to your classes from 1 (most important) to 3 (least important).

Activity 7, Number 4: Please read the following link and type your rank for this item in the text box.
2-4-requieran.gif

Question 59 **1 points** Save

What would you like to get out of your univeristy experience? Read the following statement and decide if it is important to you. Rank the characteristics related to your classes from 1 (most important) to 3 (least important).

Activity 7, Number 5: Please read the following link and type your rank for this item in the text box.
2-5-hagan.gif

Question 60 **1 points** Save

ACTIVITY 8: WHAT QUALITIES MAKE A GOOD PROFESSOR?

Read the following statements and decide which ones are important to you. Rank the characteristics related to your professors from 1 (most important) to 3 (least important).

MODELO: Busco profesores que hablen de cosas interesantes.

Answer: 2

Activity 8, Number 1. Please read the following link and type your rank for this item in the text box.
3-1-den.gif

Question 61 **1 points** Save

What qualities make a good professor? Read the following statements and decide which ones are important to you. Rank the characteristics related to your professors from 1 (most important) to 3 (least important).

Activity 8, Number 2. Please read the following link and type your rank for this item in the text box.
3-2-puedan.gif

Question 62 1 points Save

What qualities make a good professor? Read the following statements and decide which ones are important to you. Rank the characteristics related to your professors from 1 (most important) to 3 (least important).

Activity 8, Number 3. Please read the following link and type your rank for this item in the text box.
3-3-sean.gif

Question 63 1 points Save

What qualities make a good professor? Read the following statements and decide which ones are important to you. Rank the characteristics related to your professors from 1 (most important) to 3 (least important).

Activity 8, Number 4. Please read the following link and type your rank for this item in the text box.
3-4-escuchen.gif

Question 64 1 points Save

What qualities make a good professor? Read the following statements and decide which ones are important to you. Rank the characteristics related to your professors from 1 (most important) to 3 (least important).

Activity 8, Number 5. Please read the following link and type your rank for this item in the text box.
3-5-den.gif

Question 65 1 points Save

ACTIVITY 9: WHAT QUALITIES DO YOU LOOK FOR IN YOUR FRIENDS?

NOTE: THIS ACTIVITY HAS A NEW SET OF DIRECTIONS!

Read the following statements and decide which ones are important to you. IF YOU AGREE WITH THE STATEMENT, type **estoy de acuerdo** in the text box. IF YOU DO NOT AGREE WITH THE STATEMENT, type **no estoy de acuerdo** in the text box.

estoy de acuerdo = I agree

no estoy de acuerdo = I disagree

MODELO: Espero encontrar amigos que tengan mucho dinero.

Answer: no estoy de acuerdo

Activity 9, Number 1. Read the link and type your response in the text box.
4-1-sean.gif

Question 66 **1 points** Save

What qualities do you look for in your friends? Read the following statements and decide which ones are important to you. If you agree with the statement, type **estoy de acuerdo** in the text box. If you do not agree with the statement, type **no estoy de acuerdo** in the text box.

Activity 9, Number 2. Read the link and type your response in the text box.
4-2-ayuden.gif

Question 67 **1 points** Save

What qualities do you look for in your friends? Read the following statements and decide which ones are important to you. If you agree with the statement, type **estoy de acuerdo** in the text box. If you do not agree with the statement, type **no estoy de acuerdo** in the text box.

prestar = to loan

Activity 9, Number 3. Read the link and type your response in the text box.
4-3-presten.gif

Question 68 **1 points** Save

What qualities do you look for in your friends? Read the following statements and decide which ones are important to you. If you agree with the statement, type **estoy de acuerdo** in the text box. If you do not agree with the statement, type **no estoy de acuerdo** in the text box.

Activity 9, Number 4. Read the link and type your response in the text box.
4-4-inviten.gif

Question 69 **1 points** Save

What qualities do you look for in your friends? Read the following statements and decide which ones are important to you. If you agree with the statement, type **estoy de acuerdo** in the text box. If you do not agree with the statement, type **no estoy de acuerdo** in the text box.

Activity 9, Number 5. Read the link and type your response in the text box.
4-5-digan.gif

Question 70 **1 points** Save

ACTIVITY 10: EL FUTURO.

NOTE: THIS ACTIVITY HAS A NEW SET OF DIRECTIONS!

Read the following statements that Bill Gates recently made about the future of technology. If you think that Bill's prediction will happen in the next 10 years, type **va a pasar** in the text box. If you do not think that Bill's prediction will happen in the next 10 years, type **no va a pasar** in the text box.

Key vocabulary: desarollar = to develop, peso = weight, pluma = feather, volar = to fly

MODELO: En el futuro, será normal tener un robot que prepare la comida.

Answer: va a pasar

habla de su usario = speech of its user

Activity 10, Number 1. Read the link and type your response in the text box.
5-1-reconozca-long.gif

Question 71 **1 points** Save

Read the following statements that Bill Gates recently made about the future of technology. If you think that Bill's prediction will happen in the next 10 years, type **va a pasar** in the text box. If you do not think that Bill's prediction will happen in the next 10 years, type **no va a pasar** in the text box.

Key vocabulary: desarollar = to develop, peso = weight, pluma = feather, volar = to fly

Activity 10, Number 2. Read the link and type your response in the text box.
5-2-cure-long.gif

Question 72 **1 points** Save

Read the following statements that Bill Gates recently made about the future of technology. If you think that Bill's prediction will happen in the next 10 years, type **va a pasar** in the text box. If you do not think that Bill's prediction will happen in the next 10 years, type **no va a pasar** in the text box.

Key vocabulary: desarollar = to develop, peso = weight, pluma = feather, volar = to fly

Activity 10, Number 3. Read the link and type your response in the text box.
5-3-pueda.gif

Question 73 **1 points** Save

Read the following statements that Bill Gates recently made about the future of technology. If you think that Bill's prediction will happen in the next 10 years, type **va a pasar** in the text box. If you do not think that Bill's prediction will happen in the next 10 years, type **no va a pasar** in the text box.

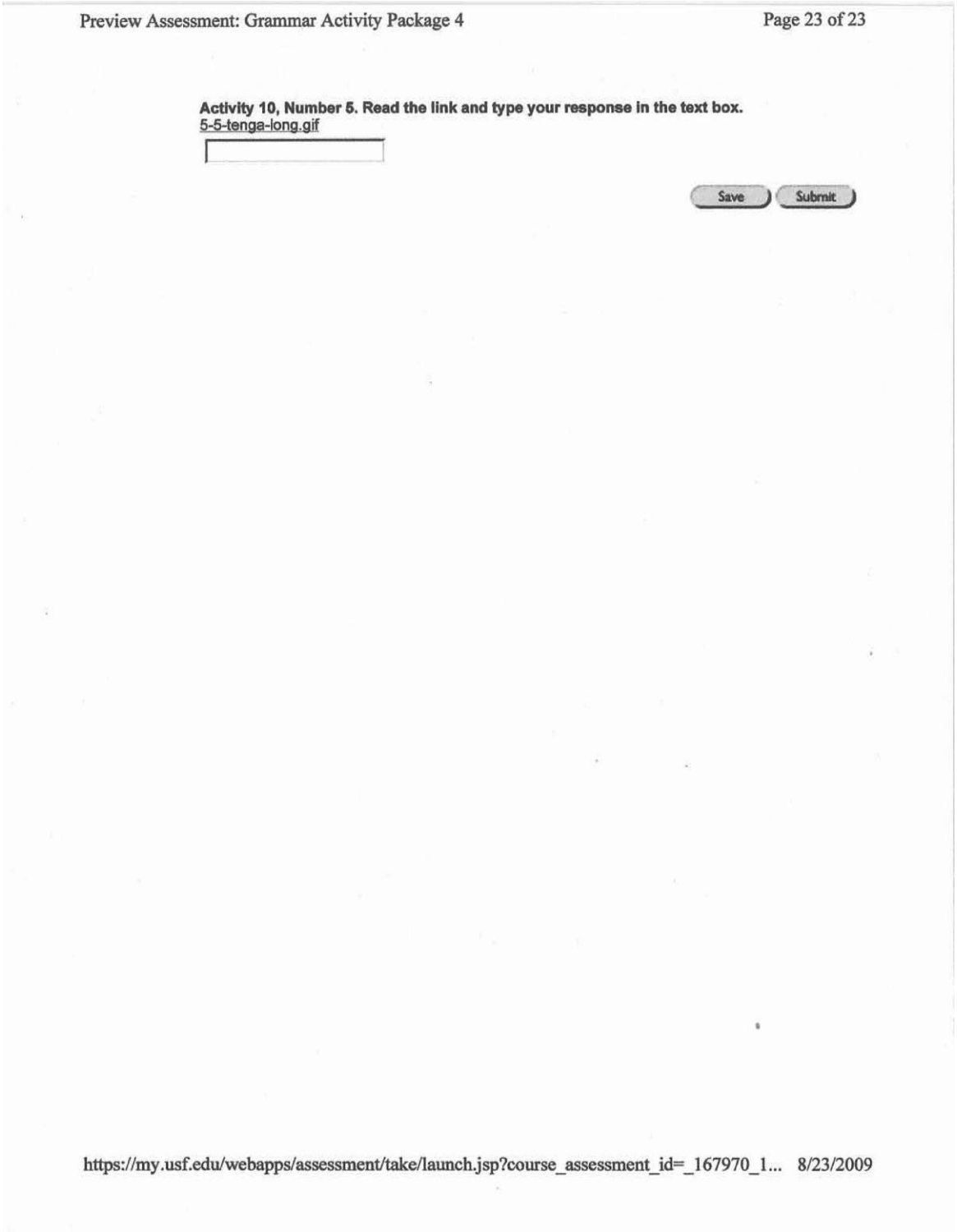
Key vocabulary: desarollar = to develop, peso = weight, pluma = feather, volar = to fly

Activity 10, Number 4. Read the link and type your response in the text box.
5-4-limpie.gif

Question 74 **1 points** Save

Read the following statements that Bill Gates recently made about the future of technology. If you think that Bill's prediction will happen in the next 10 years, type **va a pasar** in the text box. If you do not think that Bill's prediction will happen in the next 10 years, type **no va a pasar** in the text box.

Key vocabulary: desarollar = to develop, peso = weight, pluma = feather, volar = to fly



Note. Structured input activities were adapted from Farley (2002) with permission.

Appendix T

Structured Input with Visual Input Enhancement Treatment Package

Preview Assessment: Grammar Activity Package 5

Name	Grammar Activity Package 5
Instructions	Please be sure to click on all of the links that are provided. All of the links will open in a new window. Just click the "x" in the upper right hand corner of the window to return to the activity package. Please DO NOT leave any items blank. If you experience any technical difficulties, email the researcher at vrussell@mail.usf.edu ALL OF THE ACTIVITIES CONTAIN EXAMPLES. YOU WILL NEED TO EXAMINE THESE CLOSELY IN ORDER TO FIGURE OUT HOW TO ANSWER THE QUESTIONS CORRECTLY. PLEASE CLICK "SAVE" AS YOU COMPLETE EACH ITEM. YOU MUST TAKE POSTTEST 1 IMMEDIATELY AFTER COMPLETING THIS GRAMMAR PACKAGE. You must spend a minimum of 1 hour on this activity, and you will have a maximum of 2 hours.
Timed Assessment	This Test has a 2 hour timer.The elapsed time appears at the top right of the window. A **1 minute** warning will be displayed. *[The timer does not appear when previewing this Test]*
Multiple Attempts	Not allowed. This Test can only be taken once.
Force Completion	This Test can be saved and resumed later.

Question Completion Status:

Question 1 **1 points** Save

ACTIVITY 1: Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, DECIDE WHETHER LUÍS IS TALKING ABOUT A POSITION THAT HE WOULD LIKE TO FIND, OR IF HE IS DESCRIBING HIS CURRENT JOB.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is **HYPOTHETICAL (his ideal job), WHICH USES THE SUBJUNCTIVE**, or to a job that is **CERTAIN (his current job), WHICH USES THE INDICATIVE. Please select the most logical response.**

MODELO: ...ofreza beneficios.

a. Busco un trabajo que....

b. Tengo un trabajo que...

Answer: a. Busco un trabajo que...

"Ofrezca" is in the subjunctive in Spanish, which indicates that the job is hypothetical.

Activity 1, Number 1. ...PAGUE UN BUEN SUELDO (SALARY).

- ○ BUSCO UN TRABAJO QUE...
- ○ TENGO UN TRABAJO QUE...

Question 2 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Number 2. ...COMPRENDEN MI SITUACIÓN.

- AHORA, TENGO COLEGAS QUE...
- QUIERO UNOS COLEGAS QUE...

Question 3 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Number 3. ...ES MUY GRANDE.

- DESEO UNA OFICINA QUE...
- TENGO UNA OFICINA QUE...

Question 4 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

ofrecer = to offer

Activity 1, Question 4. ...OFREZCA LA OPORTUNIDAD DE AVANZAR.

- YA TENGO UN PUESTO (A POSITION) QUE...
- ESPERO ENCONTRAR UN PUESTO (A POSITION) QUE...

Question 5 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is

referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Question 5: ...ÉSTE CERCA DE MI CASA.

- NECESITO UN TRABAJO QUE...
- AHORA, TENGO UN TRABAJO QUE...

Question 6 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

contribuir = to contribute

Activity 1, Question 6: ...CONTRIBUYA ALGO A LA SOCIEDAD.

- TENGO UN TRABAJO EN EL QUE (YO)...
- DESEO OBTENER UN TRABAJO EN EL QUE (YO)...

Question 7 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Question 7: ...ES MUY SIMPÁTICO.

- QUIERO UN JEFE (A BOSS) QUE...
- TENGO UN JEFE (A BOSS) QUE...

Question 8 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Question 8: ...TENGA UNA VISTA BELLA.

- DESEO UNA OFICINA QUE...
- AHORA, TENGO UNA OFICINA QUE...

Question 9 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Question 9: ...SON MUY RICOS.

- BUSCO UNOS CLIENTES QUE...
- TENGO UNOS CLIENTES QUE...

Question 10 **1 points** Save

Luís is a young professional with a big future ahead of him. Although his current job is fairly satisfying, he is always looking for something better. Below are some statements that Luís recently made about his work life. For each statement, decide whether Luís is talking about a position that he would like to find, or if he is describing his current job.

¡Ojo! You will need to pay attention to the verb form in order to determine if Luis is referring to a job that is hypothetical (his ideal job) or to a job that is certain (his current job). **Please select the most logical response.**

Activity 1, Question 10: ...SABE HABLAR MUCHOS IDIOMAS.

- BUSCO UN ASISTENTE QUE...
- YA TENGO UN ASISTENTE QUE...

Question 11 **1 points** Save

ACTIVITY 2. LOOKING FOR PEOPLE AND PLACES.

You will hear 10 sentences in Spanish. Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question. Please select the correct response.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

MODELO: (You hear) Busco a alguien que QUIERA viajar al extranjero cada mes.

A. The person exists or is known to the speaker.

B. The speaker does not know if such a person exists.

Correct Answer: B

The verb in the subordinate clause **"quiera"** is in the subjunctive, which indicates that the speaker is referring to something or someone that is uncertain, hypothetical, or unknown.

Activity 2, Number 1. Listen to the following link:
Listening_Activity_2.1.wav

- ○ The person exists or is known to the speaker.
- ○ The speaker does not know if such a person exists.

Question 12 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 2. Listen to the following link:
Listening_Activity_2.2.wav

- ○ The person exists or is known to the speaker.
- ○ The speaker does not know if such a person exists.

Question 13 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 3. Listen to the following link:
Listening_Activity_2.3.wav

- ○ The restaurant exists or is known to the speaker.
- ○ The speaker does not know if such a restaurant exists.

Question 14 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 4. Listen to the following link:
Listening_Activity_2.4.wav

- ○ The person exists or is known to the speaker.
- ○ The speaker does not know if such a person exists.

Question 15 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 5. Listen to the following link:
Listening_Activity_2.5.wav

- ○ The person exists or is known to the speaker.
- ○ The speaker does not know if such a person exists.

Question 16 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 6. Listen to the following link:
Listening_Activity_2.6.wav

- ○ The store exists or is known to the speaker.
- ○ The speaker does not know of such a store.

Question 17 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the

second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 7. Listen to the following link:
Listening_Activity_2.7.wav

- ○ The bank exists or is known to the speaker.
- ○ The speaker does not know if such a bank exists.

Question 18 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 8. Listen to the following link:
Listening_Activity_2.8.wav

- ○ The market exists or is known to the speaker.
- ○ The speaker does not know of such a market.

Question 19 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the correct response.**

Activity 2, Number 9. Listen to the following link:
Listening_Activity_2.9.wav

- ○ The hairdresser's exists or is known to the speaker.
- ○ The speaker does not know of such a hairdresser's.

Question 20 **1 points** Save

Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

¡OJO!...you will have to listen carefully to the verb in the subordinate clause (the second verb that you hear) to determine if the referent is certain /known or uncertain /unknown to the speaker. **After listening to each sound file, select the**

correct response.

Activity 2, Number 10. Listen to the following link:
Listening_Activity_2.10.wav

- The person exists or is known to the speaker.
- The speaker does not know if such a person exists.

Question 21 **1 points** Save

ACTIVITY 3.

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is **hypothetical (her dream house), which requires the subjunctive in Spanish, or to a house of whose existence she is certain (her current house), which uses the indicative in Spanish. Please select the most logical response.**

MODELO: ...tenga piscina.

A. Busco una casa que...

B. Tengo una casa que....

Answer: A. Busco una casa que...

"Tenga" is in the subjunctive in Spanish, which indicates that the house is hypothetical.

Activity 3, Number 1: ...ESTÉ EN UNA ZONA PACÍFICA..

- BUSCO UNA CASA QUE...
- TENGO UNA CASA QUE...

Question 22 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 2: ...TENGA SEIS DORMITORIOS

- AHORA, VIVO EN UNA CASA QUE...
- DESEO UNA CASA QUE...

Question 23 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 3: ...TIENE DOS BAÑOS.

- VIVO EN UNA CASA QUE...
- QUIERO ENCONTRAR UNA CASA QUE...

Question 24 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 4: ...ESTÁ EN LA ESQUINA (CORNER).

- DESEO UNA CASA QUE...
- AHORA TENGO UNA CASA QUE...

Question 25 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the correct response.**

Activity 3, Number 5: ...TENGA TRES PISOS (FLOORS).

- VIVO EN UNA CASA QUE....
- BUSCO UNA CASA QUE...

Question 26 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 6: ...ESTÁ AMUEBLADO (FURNISHED).

- VIVO EN UNA CASA QUE...
- DESEO UNA CASA QUE...

Question 27 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 7: ...SEAN TRANQUILOS.

- BUSCO UNOS VECINOS QUE...
- AHORA TENGO UNOS VECINOS QUE...

Question 28 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 8: ...TIENE PISCINA.

- VIVO EN UNA CASA QUE...
- QUIERO UNA CASA QUE...

Question 29 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

costar = to cost

Activity 3, Number 9: ...NO CUESTE TANTO DINERO.

- ○ VIVO EN UNA CASA QUE...
- ○ QUIERO ENCONTRAR UNA CASA QUE...

Question 30 **1 points** Save

Amalia currently lives in a nice home, but she is planning to look for her ideal house. Below are some statements that Amalia recently made to her real-estate agent. For each statement, decide whether Amalia is talking about a house that she would like to find, or if she is describing her current home.

¡Ojo! You will need to pay attention to the verb form in order to determine if Amalia is referring to a house that is hypothetical (her dream house) or to a house of whose existence she is certain (her current house). **Please select the most logical response.**

Activity 3, Number 10: ...SON MUY SIMPÁTICOS.

- ○ QUIERO ENCONTRAR VECINOS QUE...
- ○ AHORA TENGO VECINOS QUE...

Question 31 **1 points** Save

ACTIVITY 4. LOOKING FOR A NEW MEMBER OF THE FACULTY.

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

MODELO: Buscamos a alguien que QUIERA enseñar español.

A. Sí

B. No

Answer: B

The verb **"quiera"** is in the subjunctive, which indicates that the speaker does not know of such a person.

Activity 4, Number 1. Buscamos una profesora que tenga mucha experiencia.

- ○ Sí
- ○ No

Question 32 **1 points** Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Activity 4, Number 2: Nuestra profesora de inglés es muy inteligente y graciosa.

- Sí
- No

Question 33 **1 points** Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

enseñar = to teach

Activity 4, Number 3: Necesitamos a alguien que pueda enseñar francés también.

- Sí
- No

Question 34 **1 points** Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Activity 4, Number 4: Los estudiantes de español en nuestra universidad son muy trabajadores.

- Sí
- No

Question 35 **1 points** Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Activity 4, Number 5: Queremos encontrar a alguien que escriba muchos textos y artículos.

- Sí
- No

Question 36 **1 points** Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Activity 4, Number 6: Ya tenemos varios profesores que son muy famosos.

- Sí
- No

Question 37 **1 points** Save

Read the following statement, and if the sentence refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."**

Activity 4, Number 7: Buscamos a alguien que quiera acompañar a los estudiantes a España en el verano.

- Sí
- No

Question 38 **1 points** Save

ACTIVITY 5: LOOKING FOR PEOPLE AND PLACES PART 2.

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."** You may listen to each audio file as many times as necessary to answer the question.

MODELO: (You Hear) Hay un restaurante aquí que SIRVE comida venezolana.

A. Sí

B. No

Correct Answer: Sí

The verb **"sirve"** is in the present indicative, which indicates that the speaker knows of such a restaurant.

Activity 5, Number 1. Listen to the following link:

Link_Activity_5.1

- Sí
- No

Question 39 **1 points** Save

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."** You may listen to each audio file as many times as necessary to answer the question.

Activity 5, Number 2. Listen to the following link:

Link_Activity_5.2

- Sí
- No

Question 40 **1 points** Save

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."** You may listen to each audio file as many times as necessary to answer the question.

Activity 5, Number 3. Listen to the following link:

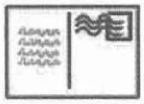
Link_Activity_5.3

- Sí
- No

Question 41 **1 points** Save

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does not exist, or whose existence is uncertain, mark **"No."** You may listen to each audio file as many times as necessary to answer the question.

Activity 5, Number 4. Listen to the following link:



Link_Activity_5.4

- Sí
- No

Question 42 **1 points** Save

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark **"Sí."** If the sentence refers to a person, place, or thing that either does

not exist, or whose existence is uncertain, mark **"No."** You may listen to each audio file as many times as necessary to answer the question.

bocadillos = sandwiches

Activity 5, Number 5. Listen to the following link:

Link_Activity_5.5

- Sí
- No

Question 43 **1 points** Save

ACTIVITY 6. AN IDEAL JOB.

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Your instructor states, "Ahora me gusta mi trabajo mucho, pero a veces es muy difícil. Algún día (some day), me gustaría encontrar mi trabajo ideal..."

MODELO: Quiero un trabajo que me permita descansar los fines de semana.

Answer: me aplica

Activity 6, Number 1: Please click on the following link to view your instructor's statement.
1-1-pague.gif

Question 44 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Activity 6, Number 2: Please click on the following link to view your instructor's statement.
1-2-ofrezca.gif

Question 45 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Activity 6, Number 3: Please click on the following link to view your instructor's statement.

1-3-sea.gif

Question 46 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Activity 6, Number 4: Please click on the following link to view your instructor's statement.
1-4-requiera.gif

Question 47 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Activity 6, Number 5: Please click on the following link to view your instructor's statement.
1-5-permita.gif

Question 48 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

paises extranjeros = foreign countries

Activity 6, Number 6: Please click on the following link to view your instructor's statement.
1-6-incluya.gif

Question 49 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

corregir = to correct

Activity 6, Number 7: Please click on the following link to view your instructor's statement.
1-7-tenga.gif

Question 50 **1 points** Save

Your instructor recently made some statements about her ideal job. Read her statements and decide if they also apply to you. If a statement that your instructor made about her ideal job also applies to your ideal job, type **me aplica** in the text box. If the statement does not apply to your ideal job, type **no me aplica** in the text box.

Activity 6, Number 8: Please click on the following link to view your instructor's statement.
1-8-este.gif

Question 51 **1 points** Save

ACTIVITY 7. WHAT WOULD YOU LIKE TO GET OUT OF YOUR UNIVERSITY EXPERIENCE?

NOTE: THIS ACTIVITY HAS A NEW SET OF DIRECTIONS!

Read the following statements and decide which ones are important to you. Rank the characteristics related to your classes from 1 (most important) to 3 (least important).

MODELO: Espero tomar clases que me gusten.

Answer: 1

Activity 7, Number 1: Please read the following link and type your rank for this item in the text box.
2-1-preparen.gif

Question 52 **1 points** Save

What would you like to get out of your univeristy experience? Read the following statement and decide if it is important to you. Rank the characteristics related to your classes from 1 (most important) to 3 (least important).

al extranjero = abroad

Activity 7, Number 2: Please read the following link and type your rank for this item in the text box.
2-2-permitan.gif

Question 53 **1 points** Save

What would you like to get out of your univeristy experience? Read the following statement and decide if it is important to you. Rank the characteristics related to your classes from 1 (most important) to 3 (least important).

Activity 7, Number 3: Please click on the following link to view your instructor's statement.
2-3-interesen.gif

Question 54 **1 points** Save

What would you like to get out of your univeristy experience? Read the following statement and decide if it is important to you. Rank the characteristics related to your classes from 1 (most important) to 3 (least important).

Activity 7, Number 4: Please read the following link and type your rank for this item in the text box.
2-4-requieran.gif

Question 55 **1 points** Save

What would you like to get out of your univeristy experience? Read the following statement and decide if it is important to you. Rank the characteristics related to your classes from 1 (most important) to 3 (least important).

Activity 7, Number 5: Please read the following link and type your rank for this item in the text box.
2-5-hagan.gif

Question 56 **1 points** Save

ACTIVITY 8: WHAT QUALITIES MAKE A GOOD PROFESSOR?

Read the following statements and decide which ones are important to you. Rank the characteristics related to your professors from 1 (most important) to 3 (least important).

MODELO: Busco profesores que HABLEN de cosas interesantes.

Answer: 2

Activity 8, Number 1. Please read the following link and type your rank for this item in the text box.
3-1-den.gif

Question 57 **1 points** Save

What qualities make a good professor? Read the following statement and decide if it is important to you. Rank the characteristics related to your professors from 1 (most important) to 3 (least important).

Activity 8, Number 2. Please read the following link and type your rank for this item in the text box.
3-2-puedan.gif

Question 58 **1 points** Save

What qualities make a good professor? Read the following statement and decide if it is important to you. Rank the characteristics related to your professors from 1 (most important) to 3 (least important).

Activity 8, Number 3. Please read the following link and type your rank for this item in the text box.
3-3-sean.gif

Question 59 1 points Save

What qualities make a good professor? Read the following statement and decide if it is important to you. Rank the characteristics related to your professors from 1 (most important) to 3 (least important).

Activity 8, Number 4. Please read the following link and type your rank for this item in the text box.
3-4-escuchen.gif

Question 60 1 points Save

What qualities make a good professor? Read the following statement and decide if it is important to you. Rank the characteristics related to your professors from 1 (most important) to 3 (least important).

Activity 8, Number 5. Please read the following link and type your rank for this item in the text box.
3-5-den.gif

Question 61 1 points Save

ACTIVITY 9: WHAT QUALITIES DO YOU LOOK FOR IN YOUR FRIENDS?

NOTE: THIS ACTIVITY HAS A NEW SET OF DIRECTIONS!

Read the following statements and decide which ones are important to you. If you agree with the statement, type **estoy de acuerdo** in the text box. If you do not agree with the statement, type **no estoy de acuerdo** in the text box.

estoy de acuerdo = I agree

no estoy de acuerdo = I disagree

MODELO: Espero encontrar amigos que tengan mucho dinero.

Answer: no estoy de acuerdo

Activity 9, Number 1: Read the link and type your response in the text box.
4-1-sean.gif

Question 62 1 points Save

Read the following statement and decide if it is important to you. If you agree with the statement, type **estoy de acuerdo** in the text box. If you do not agree with the statement, type **no estoy de acuerdo** in the text box.

Activity 9, Number 2: Please read the following link and type your rank for this item in the text box.
4-2-ayuden.gif

Question 63 1 points Save

Read the following statement and decide if it is important to you. If you agree with the statement, type **estoy de acuerdo** in the text box. If you do not agree with the

statement, type **no estoy de acuerdo** in the text box.

prestar = to loan

Activity 9, Number 3: Please read the following link and type your rank for this item in the text box.
4-3-presten.gif

Question 64 **1 points** Save

Read the following statement and decide if it is important to you. If you agree with the statement, type **estoy de acuerdo** in the text box. If you do not agree with the statement, type **no estoy de acuerdo** in the text box.

Activity 9, Number 4: Please read the following link and type your rank for this item in the text box.
4-4-inviten.gif

Question 65 **1 points** Save

Read the following statement and decide if it is important to you. If you agree with the statement, type **estoy de acuerdo** in the text box. If you do not agree with the statement, type **no estoy de acuerdo** in the text box.

Activity 9, Number 5: Please read the following link and type your rank for this item in the text box.
4-5-digan.gif

Question 66 **1 points** Save

ACTIVITY 10: EL FUTURO.

NOTE: THIS ACTIVITY HAS A NEW SET OF DIRECTIONS!

Read the following statements that Bill Gates recently made about the future of technology. If you think that Bill's prediction will happen in the next 10 years, type **va a pasar** in the text box. If you do not think that Bill's prediction will happen in the next 10 years, type **no va a pasar** in the text box.

Key vocabulary: desarollar = to develop, peso = weight, pluma = feather, volar = to fly

MODELO: En el futuro, será normal tener un robot que prepare la comida.

Answer: va a pasar

habla de su usario = speech of its user

Activity 10, Number 1: Read the link and type your response in the text box.
5-1-reconozca-long.gif

Question 67 **1 points** Save

Read the following statements that Bill Gates recently made about the future of technology. If you think that Bill's prediction will happen in the next 10 years, type **va a**

Note. Structured input activities were adapted from Farley (2002) with permission.

Appendix U

Listening Scripts for the Instructional Treatments and the Subjunctive Knowledge Test: Forms A, B, & C

Listening Script for the Traditional Instruction Grammar Activity Package:

Activity 4: Listening

You will hear five statements in Spanish. You will rewrite the sentences that you hear to make them negative. Use the subjunctive where appropriate. You may listen to each recording as many times as necessary to answer each question.

MODELO: (You hear) Hay un restaurante que sirve comida francesa
ANSWER: (You type) No hay ningún restaurante que sirva comida francesa.

4.1. Hay un restaurante que sirve comida japonesa

4.2. Hay una mujer que habla cuatro idiomas

4.3. Hay un hombre sabe programar computadoras.

4.4. Hay una tienda que vende tarjetas postales.

4.5. Hay una mujer que prepara bocadillos cubanos.

Activity 6b: Listening (Preguntas y Respuestas)

After listening to the question, fill in the blank with the correct verb form (subjunctive or indicative). You may listen to the sound files as many times as necessary.

6.6. ¿Conoces a alguien que viaje mucho a Venezuela?
6.7. ¿Hay un banco que abra a las seis de la mañana en la ciudad?
6.8. ¿Conoces a alguien que hable cinco idiomas?
6.9. ¿Tienes algún amigo que toque el piano?
6.10. ¿Conoces a alguien que sabe programmar computadoras?

N.B. Students in the traditional instruction group also had an activity with five open-ended speaking items. The students in the processing instruction and structured input groups had five additional listening items; however, they did not have any speaking activities.

Listening Script for the Processing Instruction and Structured Input Grammar Packages with and without Computerized Visual Input Enhancement

Activity 2: Looking for People and Places

You will hear 10 sentences in Spanish. Listen carefully to determine if the speaker of each sentence is referring to something or someone that she knows, or if she is referring to something or someone of whose existence is unknown or uncertain to her. You may play the audio files as many times as necessary to answer each question.

MODELO: (You hear) Busco a alguien que quiera viajar al extranjero cade mes.

A. The person exists and is known to the speaker.
B. The speaker does not know if such a person exists.

Correct Answer: B

2.1. Busco una mujer que sepa hacer paella.
2.2. Quiero encontrar a un hombre que sabe reparar computadoras
2.3. Hay un restaurante por aquí que sirve comida francesa.
2.4. Hay un restaurante por aquí que sirve comida francesa.
2.5. Necesito encontrar a alguien que sabe hablar español.
2.6. Quiero encontrar una tienda que venda trajes de baño.
2.7. Busco un banco que cambia dinero.
2.8. Quiero encontrar un mercado que vende fruta fresca.
2.9. Busco una peluquería que no cargue tanto dinero.
2.10 Busco a alguien que hable tres idiomas.

Activity 5: Looking for People and Places Part 2

If the sentence you hear refers to a person, place, or thing that clearly exists or is known, mark "Sí." If the sentence refers to a person, place, or thing that either does not exist or whose existence is uncertain, mark "No." You may listen to each audio file as many times as necessary to answer the question.

MODELO: (You hear) Hay un restaurante aquí que sirve comida venezolana.

A. Sí
B. No

Correct Answer: Sí

5.1. Buscamos a alguien que hable italiano y francés.
5.2. Busco un restaurante que sirva comida japonesa.
5.3. Buscamos a un hombre que sabe programar computadoras.
5.4. Buscamos una tienda que vende tarjetas postales.
5.5. Busco a una mujer que prepara bocadillos cubanos.

Listening Scripts for the Subjunctive Knowledge Test (Forms A, B, & C)

Students were only permitted to listen to each sound file twice.

Test A. Listening Script

1. Busco una mujer que vende bocadillos en la calle.
2. Quiero ir a un restaurante que sirva comida francesa.
3. Quiero comprar una casa que tenga dos pisos.
4. Busco a alguien que pueda reparar mi computadora.
5. Necesito un coche que no use mucha gasolina.
6. Quiero ir al restaurante que está en la esquina.
7. Necesito un empleado que hable italiano.
8. Busco un apartamento que esté en el centro.
9. Busco a un hombre que trabaja con computadoras.
10. Busco una peluquera que no cargue tanto dinero.

Test B. Listening Script

1. Busco a persona que sabe tocar el piano.
2. Quiero encontrar una tienda que venda gafas del sol.
3. Busco a alguien que quiera compartir el apartamento.
4. Vivo en una casa que tiene tres baños.
5. Busco una persona que enseñe inglés y francés.
6. Quiero encontrar a alguien que diga la verdad.
7. Necesito encontrar un trabajo que ofrezca beneficios.
8. Tengo un amigo que es simpático y gracioso.
9. Quiero un jefe que sea inteligente y justo.
10. Necesito un empleado que haga buenas decisiones.

Test C. Listening Script

1. Busco una mujer que vende bocadillos en la calle.
2. Quiero ir a un restaurante que sirva comida francesa.
3. Quiero comprar una casa que tenga dos pisos.
4. Busco a alguien que pueda reparar mi computadora.
5. Necesito un coche que no use mucha gasolina.
6. Quiero ir al restaurante que está en la esquina.
7. Necesito encontrar un trabajo que ofrezca beneficios.
8. Tengo un amigo que es simpático y gracioso.
9. Quiero un jefe que sea inteligente y justo.
10. Necesito un empleado que haga buenas decisiones.

About the Author

Victoria Russell has been a foreign language educator for the past twenty years; she has taught Spanish to students of every age from the elementary through post-secondary levels. In the late 1990s, she lived abroad in Spain and the United Kingdom, where she taught Spanish at the regional college level. More recently, Victoria has taught ESOL courses and has supervised foreign language students in their final teaching internships. At present, she is directing a large-scale Spanish distance learning program that enrolls half of the basic language students at her university, and she is also responsible for training graduate teaching assistants in the basic Spanish and French language programs.

Victoria earned a B.S in Business Administration with a major in International Business and a Specialization in Spanish from Auburn University in 1990, and she earned a Master of Arts in Teaching Spanish Language and Literature in 1994 from Jacksonville University.