APPLYING COGNITIVE LINGUISTICS AND TASK-SUPPORTED LANGUAGE TEACHING TO INSTRUCTION OF ENGLISH CONDITIONAL PHRASES

A Dissertation
submitted to the Faculty of the
Graduate School of Arts and Sciences
of Georgetown University
in partial fulfillment of the requirements for the
degree of
Doctor of Philosophy
in Linguistics

By

Natalia Dolgova Jacobsen, M.A.

Washington, DC
July 30, 2012
Due to their internal complexity, English conditional phrases (e.g., “If it rains tomorrow, we will cancel the picnic”; “If John had come to the party yesterday, he would have told you his favorite joke”; etc.) represent a great challenge for L2 learners. Researchers cannot agree on the unified conditional meaning or comprehensive classification of their forms, while most ESL grammar books lack precise explanations of conditionals as a category, relying largely on explanation of form rather than meaning, and ignoring conditional usage patterns in different contexts. On the other hand, cognitive linguistic research on conditionals (Dancygier, 1998; Dancygier and Sweetser, 2005) does address the intrinsic complexity of conditional constructions in a way that could potentially be very beneficial for L2 learners, as it highlights the conditional meaning and its functions in multiple usage contexts.

The aim of this dissertation is to address the existing problems in the current state of pedagogical representation and instruction of conditionals by developing and testing methodological solutions, informed both by cognitive linguistic theory and research in task-based pedagogy.
In this study, elements of cognitive linguistic analysis of English hypothetical conditionals (e.g., “If prices went up, I would sell my car,” (Werth, 1997) from Dancygier and Sweetser (2005) were incorporated into L2 learning materials. The design of the study was quasi-experimental, with three groups (total N=57) participating: two treatment groups (cognitive and task-supported) and one control group that did not receive any instruction on conditionals. The research questions explored the efficacy of different types of instruction (cognitive and task-supported as opposed to task-supported alone) for the L2 development of English conditional phrases, as measured by a posttest and a delayed posttest. Introspective data were collected using stimulated recall. T-test and ANOVA analyses were carried out to measure the progress made by subjects in acquisition of conditionals. Statistical findings ($p=0.001$) indicate that participants from the cognitive group outperformed the participants from the task-supported and control groups and demonstrated a higher degree of understanding of conditional usage contexts. The analysis provides support for the benefits of using cognitive linguistic analysis of English hypotheticals in L2 learning contexts.
Acknowledgements

First and foremost, this dissertation would not have been possible without the invaluable help from my wonderful committee members. I sincerely thank my advisor and dissertation chair, Dr. Andrea Tyler, for years of mentorship and support. Without your classes on cognitive linguistics and L2 writing and your careful guidance throughout the entire process, I would not have been able to advance my knowledge of cognitive linguistics and the various ways to apply it to second language contexts. Working for you as a research and teaching assistant, I learned first-hand the skills of doing cognitive linguistic analysis and preparing balanced lessons informed by both theory and practice. I am also very grateful for the experience working under your guidance with foreign LL.M students at the Georgetown Law Center. That experience had a profound significance for my development as an applied linguist, as it showed in very direct ways how theory can inform practice and that such connections between theory and practice can be immediately appreciated by learners. It gave a real-world reference for many subsequent projects. Thank you for all of your relentless support over the years.

I would not have been able to even think about going into an experimental direction for my dissertation, had it not been for the knowledge I gained from Dr. Alison Mackey. Taking your research methods class during my first semester at Georgetown shaped the way I look at second language research. Being one of your research assistants for a year gave me invaluable experience in data collection, more specifically in analyzing numerical data and in conducting and analyzing retrospective interviews. The whole experience was incredibly important for informing the study design of this dissertation. On a personal note, I appreciate your support and understanding during the hardest of times when my husband was losing his fight with cancer. If
you had not been so supportive to me during that incredibly difficult time, I doubt I would have been able to stay on track towards completing my degree.

**Dr. Andrea Révész** has been a source of inspiration for me both professionally and personally. I will never forget the “a-ha” moment I felt when I started your class in Task-Based Language Teaching in the fall of 2007. Your class was instrumental for my overall research orientation that theory should inform practice; learning about the whole range of task-based language teaching issues made me feel I finally found the knowledge about the necessary instruments of adapting theory to practical needs of learners. Your own research has been the example of utter precision in pedagogy. Our conversations at EuroSLA 2011 and your feedback on my tasks were invaluable for continuing with the process of my data collection. Personally, I greatly appreciated several of our Skype conversations when you were always encouraging me to not lose my spirits and try to move on both professionally and personally. Your support and kind guidance have meant the world to me.

I would like to thank **Dr. Rusan Chen** of CNDSLs at Georgetown University and **Luke Amoroso** of the Georgetown Linguistics Department for their help with carrying out the statistical analyses for this dissertation. The data collection for this dissertation would not have been possible without the kind support of **Dr. Shoko Hamano**, the director of the Language Center at George Washington University. Her guidance and relentless support regarding the IRB process were truly invaluable for completion of this study. Thank you for taking the IRB training for the purpose of allowing my data collection to happen. I would not have been able to obtain my data without your assistance.
I would also like to thank other GWU colleagues who supported the data collection process in a number of ways: Dr. Charles Mueller, Sevtap Karaoglu, and Ikuko Turner.

Being a non-native speaker of English and dealing with teaching of English conditionals, I had to ensure my intuitions and decisions regarding the contents of materials would reflect authentic usage patterns and would appear sensible to native speakers. My colleagues at the Center for Applied Linguistics were instrumental in helping in that regard. I would like to express my sincere gratitude to all CAL folks who supported me throughout the dissertation process and/or provided valuable feedback regarding my materials: Carolyn Adger, Aileen Bach, Jim Bauman, Sophia Birdas, Annie Donovan, Annie Duguay, Daniel Ginsberg, Jen Himmel, Deborah Kennedy, David Macgregor, Lindsey Massoud, Sarah Moore, Joy Peyton, Francesca di Silvio, Olesya and Jeff Warner, Bryan Woerner, Tiffany Yanosky, Sarah Young, Annette Zehler.

And of course, I need to thank all former and current (as referenced by the time of data collection) students in the EAP program at George Washington University who helped pilot and conduct this study. This dissertation would not have been possible without your kind consent to participate in this study. Thank you!

On a personal note, this dissertation is dedicated to the memory of my late husband, Don. He always provided amazing support and help during my doctoral studies, encouraging me to keep working towards my goals and strive to be the best person and linguist I can possibly be. This dissertation would not have been possible without his paramount positive influence on my life and work.

I also want to express sincere gratitude to my family: in particular, to my mother, Valentina Dolgova, who has always been there for me during the darkest of times after losing my
husband, and to my sister and brother, Olga Dolgova and Sergey Dolgov. I am also incredibly lucky to have friends whose kind support and humor have inspired me to keep going despite my immense loss and who provided the much needed laughter and good times throughout the entire dissertation process. I would particularly like to thank Luke Amoroso, Sophia Birdas, Maria Bulgakova, Marcos Carvalho, Daniil Davydoff, Emily Evans Fanaeian, Marissa Fond, Mika Hama, Stephanie Gyamfi, Irina Kareva, Anup Mahajan, Natalia Mironova, Elena Muehlenbeck, Jennifer Novak, Yulia Richardson, Rebecca Sachs, Frankie Sanderson, Sheena Shah, Gulnaz Sharafutdinova, Kerstin Sondermann, Ana Taboada & Rusty Barber, Tatyana Vdovina.

I would not have been able to do this without all of you. Thank you.
This dissertation is dedicated to the memory of my husband Don Jacobsen.
# TABLE OF CONTENTS

INTRODUCTION: WHAT IS THE POINT OF THIS DISSERTATION? .......................... 1

CHAPTER 1: COGNITIVE LINGUISTICS: BASIC TENETS AND APPLICATIONS TO SECOND LANGUAGE CONTEXT .......................... 6

1.0. INTRODUCTION .................................................................................. 6
1.1. SYMBOLIC MEANING OF LINGUISTIC UNITS .................................. 10
1.2. HUMAN CATEGORY FORMATION AND CATEGORIZATION IN LANGUAGE .............................................. 11
1.3. USAGE-BASED VIEW OF LANGUAGE ................................................. 16
1.4. CONSTRUCTIONS ............................................................................. 18
1.5. SPEAKER CONSTRUAL AND TOOLS OF COGNITIVE GRAMMAR IN RELATION TO L2 LEARNING AND TEACHING ......................................................... 21
1.6. EXISTING APPLICATIONS OF COGNITIVE LINGUISTICS TO SECOND LANGUAGE PEDAGOGY ................................................................. 30
1.7. EXISTING CHALLENGES WITH ADAPTING COGNITIVE LINGUISTIC METHODOLOGY TO L2 CLASSROOM .................................................................. 47
1.8. WHY IS COGNITIVE LINGUISTICS USEFUL FOR L2 LEARNING AND TEACHING? .................. 51

CHAPTER 2: THE CATEGORY OF CONDITIONALS: AN OVERVIEW .................. 54

2.0. INTRODUCTION .................................................................................. 54
2.1. DEFINING AND CLASSIFYING CONDITIONALS .................................. 54
2.2. REPRESENTATION OF CONDITIONALS IN APPLIED LINGUISTIC SOURCES AND TEXTBOOKS: COMMON PROBLEMS .................................................. 63
2.3. WHY CONDITIONALS ARE PROBLEMATIC FOR L2 LEARNERS .......... 78
2.4. FORMAL SEMANTIC APPROACHES TO THE ANALYSIS OF CONDITIONALS ........................................... 81
2.5. NON-FORMAL LINGUISTIC APPROACHES TO THE ANALYSIS OF CONDITIONALS .......... 84
2.6. SUMMARY: EXPLICIT BENEFITS OF COGNITIVE LINGUISTIC ANALYSIS OF CONDITIONALS ................................................................. 97

CHAPTER 3: FOCUS ON FORM AND TASK-BASED LANGUAGE TEACHING ................................................................. 100

3.1. EXPLICIT INSTRUCTION AND FOCUS ON FORM ................................ 100
3.2. TASK-BASED LANGUAGE TEACHING AND TASK SEQUENCING ........ 105
3.3. TASK-SUPPORTED INSTRUCTION AND CONSCIOUSNESS-RAISING TASKS ........................................... 114
3.4. CONDITIONALS AS TARGET OF CONSCIOUSNESS-RAISING TASK ...................................................... 121
3.5. WHY USE COGNITIVE LINGUISTIC RESEARCH IN COMBINATION WITH TASKS? ........ 123

CHAPTER 4: RESEARCH DESIGN, METHODOLOGY, PROCEDURE, AND MATERIALS ................................................................. 125

4.0. INTRODUCTION: WHAT EXACTLY DOES THIS STUDY AIM TO ACCOMPLISH? ........ 125
CHAPTER 5: STUDY RESULTS .................................................................................. 175

5.0. INTRODUCTION ................................................................................................. 175
5.1. QUANTITATIVE RESULTS .................................................................................. 175
 Test scores: descriptive statistics ........................................................................... 176
 Cognitive group: descriptive statistics ................................................................. 177
 Task-supported group: descriptive statistics ......................................................... 178
 Control group: descriptive statistics .................................................................... 180
 Summary of descriptive statistics for all three groups ........................................... 181
 ANOVA comparison among all three groups ......................................................... 184
 ANOVA for controlled production ......................................................................... 191
 ANOVA for free production .................................................................................... 192
 ANOVA for ‘comprehension: pictures’ ................................................................. 193
 ANOVA for ‘comprehension: sentences’ ............................................................... 193
 Comparison between cognitive and task-supported groups on production test scores ........................................................................................................... 194
 T-test comparison between cognitive and task-supported groups on overall test gain scores ................................................................................................ 196
 Summary ............................................................................................................... 197

5.2. QUALITATIVE RESULTS .................................................................................... 198
 Introduction ........................................................................................................... 198
 Findings from the cognitive group ......................................................................... 199
 Findings from task-supported group ..................................................................... 207
 Summary of qualitative results .............................................................................. 213

CHAPTER 6: DISCUSSION ......................................................................................... 214

6.1. ANSWERS TO RESEARCH QUESTIONS ............................................................. 214
6.2. HOW THE FINDINGS ELUCIDATE THE PROCESS OF ACQUIRING CONDITIONALS BY ADVANCED ADULT LEARNERS OF ENGLISH .......................... 227
6.3. HOW THE FINDINGS FIT WITH PATTERNS IN APPLIED COGNITIVE LINGUISTIC LITERATURE ........................................................................... 237
6.4. HOW THE FINDINGS FIT WITH LITERATURE ON TASK-SUPPORTED LANGUAGE TEACHING .................................................................................... 249
6.5. Limitations ........................................................................................................................................... 252

Conclusion: Why We Should Bring Cognitive Linguistics into the Classroom.......................................................... 256

Appendix A: Free Online Learner Data Corpora.......................................................... 262

Appendix B: Consent Form for the Experiment ...................................................... 263

Appendix C: Sample Test Materials Used in the Experiment ................. 268

Appendix D: Sample PPT Presentation for the Cognitive Group . 277

Appendix E: Cognitive Chart ......................................................................................... 284

Appendix F: Pedagogic Tasks....................................................................................... 285

References .............................................................................................................................................. 297
LIST OF TABLES

Table 1. Cross-classification of Conditionals by Typological Parameter ..................62
Table 2. Formal Terminology (ESL/Traditional) of Conditionals .............................64
Table 3. Representation of Conditionals in Recent ESL/EFL Textbooks ...................73
Table 4. A Semantic Hierarchy of Conditional Sentence Types .............................76
Table 5. Traditional Classification/Terminology of Conditionals ............................79
Table 6. Participant Information ........................................................................131
Table 7. Study Design ......................................................................................135
Table 8. Pedagogic Tasks Used in the Study ....................................................167
Table 9. Descriptive Statistics by Testing Task: Cognitive Group .......................177
Table 10. Summary of Overall Mean Test Scores of Cognitive Group Participants ....178
Table 11. Descriptive Statistics by Testing Task: Task-Supported Group ..............178
Table 12. Summary of Overall Test Scores of Task-Supported Group Participants ....179
Table 13. Descriptive Statistics by Testing Task: Control Group .......................180
Table 14. Summary of Overall Test Scores of Control Group Participants ..........181
Table 15. Descriptive Statistics by Testing Task: All Groups ............................182
Table 16. Descriptive Statistics of Mean Test Scores Across All Three Groups .........182
Table 17. Repeated Measures ANOVA: Tests of Within-Subjects Effects ............186
Table 18. Repeated-Measures ANOVA: Multivariate Tests for Performance Across Time in Three Groups .................................................................186
Table 19. Repeated Measures ANOVA: Multiple Comparisons, Scheffe’s Post-Hoc test .........................................................................................187
Table 20. Repeated Measures ANOVA: Multiple Comparisons, Scheffé’s Post-Hoc test (dataset did not include subjects who participated in retrospective interviews) .................................................................189

Table 21. Repeated Measures ANOVA: Multiple Comparisons (Scheffé’s post-hoc) for the Controlled Production Parts of Tests..................................................191

Table 22. Repeated Measures ANOVA: Multiple Comparisons (Scheffé’s post-hoc) for the Free Production Parts of Tests.................................................. 192

Table 23. Repeated Measures ANOVA: Multiple Comparisons (Scheffé’s post-hoc) for the ‘Comprehension: Pictures’ Parts of Tests ....................... 193

Table 24. Repeated Measures ANOVA: Multiple Comparisons (Scheffé’s post-hoc) for the ‘Comprehension: Sentences’ Parts of Tests .......................194

Table 25. Descriptive Statistics for Production Gains Scores: Cognitive and Task-supported Groups................................................................. 195

Table 26. T-test on Production Gains Scores: Cognitive and Task-supported Groups .................................................................196

Table 27. Descriptive Statistics for Overall Gains Scores: Cognitive and Task-supported Groups .................................................................196

Table 28. T-test on Overall Gains Scores: Cognitive and Task-supported Groups .................................................................197
LIST OF FIGURES

Figure 1. Viewing analogies ........................................................................................................22

Figure 2. Representation of the blend “Boxing CEOs” ......................................................... 91

Figure 3. Mental space set-up of the conditional construction “If prices go up, I will sell my car.” ................................................................................................................94

Figure 4. Cognitive linguistic presentation of the English present tense ..........................159

Figure 5. Cognitive linguistic presentation of the English past tense .................................159

Figure 6. Bar graphs representing differences in mean gain scores between the three groups ......................................................................................................................... 184

Figure 7. Means of test performance over time ..................................................................... 188

Figure 8. Means of test performance over time (dataset did not include subjects who participated in retrospective interviews) .............................. 190
INTRODUCTION: WHAT IS THE POINT OF THIS DISSERTATION?

Research on second language learning and teaching has long been trying to explore specific ways of how instruction can promote and facilitate successful acquisition of target language structures. While a one-type-fits-all kind of answer does not exist, a number of methods can be more or less efficient depending on the given context and instructional situation. However, certain target language features remain challenging for learners regardless of the teaching methods, due to their internal complexity and/or other inherent, language-specific characteristics. English conditional phrases are one of such grammatical elements that foreign and second language learners continue to struggle with. Two clauses with a subordinate relationship between them and frequently confusing tense patterns within each clause represent some of the key structural and semantic difficulties for the learners. The internal complexity of conditionals and the great number of their usage contexts have given rise to a wide range of theoretical analyses and categorizations, but few if any represent considerable value for second language learners. The majority of textbooks and other instructional materials treat conditionals quite schematically, resorting to classifications that are largely based on formal features and not on meaning characteristics. Most of the textbooks accounts are also not informed by considerations of contextual use, nor by assumptions associated with various discourse patterns. Moreover, these accounts are not grounded in a coherent linguistic theory.

In other words, learners of English are ill-served in two different ways: a) they receive instruction that is not really connected with current linguistic theory, and b) the predominant methods of instruction do not provide a contextualized and usage-based representation of conditionals.
The focus of this dissertation is primarily concerned with applying cognitive linguistic theory to instruction of English conditional phrases. Why cognitive linguistics, of all theories and/or methodologies? What are some characteristics that make cognitive linguistics so “special”? The primary reason for choosing cognitive linguistics as an underlying paradigm for this study is that I am convinced that cognitive linguistics provides the most comprehensive, coherent account of how language is structured, used and learned to date. Cognitive linguistics has a wide range of concepts that can be of particular use to second language learners. These include strong emphasis on meaning-making as the main purpose of language, the notion of the speaker shaping his or her message to convey a particular perspective to the listener, and the role of embodied, everyday experience in shaping the structure of language.

More specifically, cognitive linguistics allows us to account for usage-based patterns in language and provides the tools to make certain parts of implicit linguistic knowledge explicit. Many aspects of such implicit linguistic knowledge are not addressed in the majority of L2 materials nor by the models of language that underlie these materials, thus much of the systematicity and principled motivation for the way language is structured is absent from L2 materials and explanations. If applied appropriately, cognitive linguistics has the potential of expanding and even transforming the boundaries of (instructed) language learning. In the ideal scenario, cognitive linguistics can provide learners with insights that cannot be found in any other theoretical paradigm or L2 pedagogical source and which would substantially improve the instructed language learning process.
Prior research demonstrates that cognitive linguistic knowledge can be adapted and subsequently presented to second language learners in a more accessible manner, than what is the norm for standard theoretical sources (Tyler, 2012). This dissertation aims to add to the body of knowledge which involves testing the applicability of cognitive linguistics to second language contexts and simultaneously to demonstrating ways in which the theory can be adapted in order to make it meaningful and helpful for actual L2 teachers and learners.

In regard to the target category of this study – English conditionals – cognitive linguistic research addresses the intrinsic complexity of their forms, providing an analysis that highlights the essence of the phenomenon of conditionality, as well as semantic contribution of individual forms to the cumulative meaning of the entire phrase. The focus of this dissertation is to determine if properly the complexities of a CL theoretical approach to conditionals can be adapted to L2 classroom context; cognitive linguistic analysis potentially provides L2 learners with a deep and simultaneously succinct account of what conditionals represent semantically, as well as structurally, and how their intrinsic meaning can be applied to a variety of usage contexts.

Accordingly, in this study, I aim to address the existing problems in the current state of pedagogical representation and instruction of conditionals by developing and testing concrete methodological solutions, informed both by cognitive linguistic theory and by up-to-date achievements in second language pedagogy research. I argue that using cognitive linguistic principles to capture key aspects of conditional meaning and applying that information to pedagogical task design would be an important improvement over the existing gaps in both theory and practice.
The present study involves a quasi-experimental research design with three groups participating: cognitive, task-supported, and control. The research questions are concerned with exploring the efficacy of different types of instruction (cognitive and task-supported as opposed to task-supported alone) for the L2 development of English conditional phrases, as measured by a posttest and a delayed posttest. Also, retrospective interviews were conducted to collect qualitative data informing L2 processes associated with different instructional methods. The findings support the efficacy of L2 instruction of English conditionals and provided positive implications behind incorporating cognitive linguistic theory into L2 instructional setting.

The contents of this dissertation are organized as follows. Chapter 1 gives an overview of general theoretical tenets of cognitive linguistics and highlights prior research in applied cognitive linguistics. Chapter 2 provides a detailed summary of the target structure featured in the experiment – i.e., the English conditional phrases – focusing on the reasons why acquiring conditionals is particularly challenging for L2 learners and how the cognitive linguistic analysis by Dancygier & Sweetser (2005) can be of help. Chapter 3 gives an overview of recent research on focus on form and task-based (-supported) language teaching, key principles of which informed the process of designing the quasi-experimental study described in this dissertation. Chapter 4 addresses the research questions, study design, and materials utilized in the process of data collection. Chapter 5 provides an overview of results, both quantitative and qualitative. Chapter 6 gives detailed answers to research questions and discusses the results in light of prior research on applied cognitive linguistics and task-based (-supported) language teaching, while also highlighting limitations of the present study and suggesting
directions for further research in applying principles of cognitive linguistics to language learning and teaching. Finally, the appendices include a number of documents mentioned in the study.
CHAPTER 1: COGNITIVE LINGUISTICS: BASIC TENETS AND APPLICATIONS TO SECOND LANGUAGE CONTEXT

1.0. Introduction

One of the key goals that this study aims to accomplish is to bring cognitive linguistic theory into the classroom and demonstrate that it can indeed be useful to learners in a number of very specific ways. For instance, incorporating cognitive linguistic theory into the classroom would allow students to structure their language learning around a coherent, underlying theory of language, and second, since a number of aspects of language highlighted by cognitive linguistics are usually ignored by many traditional approaches to language instruction, cognitive linguistics would address those gaps. However, a skeptic might ask, why do learners even need a theory of language to rely on? Another question that might arise in this regard: how and why are the traditional approaches deficient? Don't many learners all over the world continue learning with very few materials and resources available to them and just make do with what they have? Also, why do we even need to continue improving our methodology, and how can language theory, of all possible sources, be useful to learners?

If quick and easy answers to these questions existed, there would not be a point in writing a dissertation on the topic. A short summary of such answers, though, would suggest that the majority of existing materials are cursory at best and misleading at worst. Bringing a fuller, more accessible theory of language to the instructed L2 learning situation will not eliminate all hurdles to language learning, but it holds promise of providing a solid foundation for development of improved materials and curriculum, especially when implement in conjunction with recent advances in teaching
methodology. Most importantly, bringing theory into the language instruction would provide a crucial foundation that learners could build upon continuously throughout their subsequent learning processes.

Rephrasing the statement from the introduction to this dissertation, the ultimate goal of this study is to test how adapted cognitive linguistic theory can inform teaching practices and whether it is worthwhile to rely on theory in language learning at large. Before one can talk about practical adaptations, though, it is important to consider what this theory has to offer.

In this first chapter, I will highlight several underlying theoretical tenets of cognitive linguistics, specifically zooming in on the aspects that are relevant for second language learners. This chapter will not provide clear-cut and unambiguous answers to the question, of why using cognitive linguistic theory in the classroom is useful; however, it will specify and highlight some hypothetical directions of such usefulness. Most importantly, it will examine a number of crucial cognitive linguistic concepts and will prepare the ground for further discussion that will elucidate some more concrete answers to this study’s research questions (to be discussed in greater detail in chapter 4).

So what exactly is distinctive about cognitive linguistic theory, especially in relation to traditional models of language? Cognitive linguistics approaches the study of language from the perspective of human cognitive processes. The underlying premise of cognitive linguistics is that cognition as a human experience is the key to the explanation of language structure, acquisition, and use. According to basic tenets of the cognitive linguistic theory, human language naturally reflects the human experience and subsequent conceptualization of the physical world. Humans live life as perceived
through the unique perceptual systems and capabilities of the human body, and accordingly, meanings associated with various physical experiences are captured through language; cognitive linguists call this *embodied meaning*. Embodied meaning also functions as an underlying principle for many seemingly abstract linguistic categories, such as prepositions, idiomatic expressions, etc. (this will be explained in greater detail later in this chapter). In other words, explanations for linguistic phenomena are often inextricably intertwined with human experiences with the physical, including the surrounding socio-cultural, world.

Furthermore, the purpose of language is communication, and the experiences that speakers engage in during communication are bound to affect the conceptual organization of language used in a given exchange. Langacker (1987/1991) argues that any act of human communication involves the speaker attempting to shape a message in order to make appropriate mental contact with a listener. When a speaker and a listener make mental contact, a number of cognitive processes are activated in order to ensure that one is making sense to the other and vice versa. The external world that is referred to during human communication is filtered through a number of such cognitive processes, e.g., categorization, organized schema, meaning construal, to name just a few (Taylor, 2003). Making mental contact is the concept that the speaker begins with a particular conceptualization involving a particular perspective on an event, or what Langacker calls a construal. The speaker attempts to shape the message in a certain way, by choosing among linguistic constructions, in order to guide the listener to a similar conceptualization. A further section of this chapter explains how some of these concepts
and processes are represented through language and why they constitute key aspects of cognitive linguistic scholarship.

In the context of second language learning, cognitive linguistics aims to explain how language mutually interfaces with conceptual structure as this becomes established during child L1 development and as it becomes available for change during adult L2 learning (Ellis & Robinson, 2008). A growing number of researchers (Achard, 2008; Robinson & Ellis, 2008; Tyler, 2012; among others) argue that the underlying conceptual view of the language accepted in cognitive linguistics can be of particular use for second language learners, because it provides ways to analyze and highlight linguistic aspects that are ignored in the majority of L2 materials and because it reveals systematicity in language that other theories fail to recognize. (A prime example of such previously uncovered systematicity is CL analysis of the many meanings associated with English prepositions (Lakoff, 1987; Tyler & Evans, 2003)). A number of cognitive linguistic concepts, such as speaker knowledge and emphasis on meaning making as the main purpose of language, can essentially function as tools opening new horizons of target language knowledge. This toolset is unique to cognitive linguistic theory. Thus, the ultimate goal of making use of such conceptual tools would be aiming to produce a more comprehensive and powerful language learning experience.

Accordingly, this chapter will thus focus on a number of important assumptions from cognitive linguistics, as well as on the recent research in applied cognitive linguistics, highlighting the tools that cognitive linguistics has to offer to language learners and providing background for the discussion of motivation behind the present study.
1.1 Symbolic meaning of linguistic units

First, in contrast with generative approaches to grammar, cognitive linguistics assumes that language is composed solely of form-meaning pairings, also termed “symbolic units” (Langacker, 1987). Under this analysis, syntax and morphology cannot be strictly separated from lexis, but rather, all linguistic units carry some sort of meaning. In his seminal work on cognitive grammar, Langacker (1987; 1991) offered a comprehensive analysis of semantic connections underlying syntactic patterns and grammatical categories, such as nouns and verbs.

Cognitive grammar treats language as “a structured inventory of conventionalized linguistic units” (Langacker, 2000, p. 8). Such linguistic units are inherently symbolic and comprise an association between two poles – a semantic and a phonological one. As stated by Achard (2008), “because symbolic units are by definition meaningful, the description of the meaning of an entity [including syntactic patterns and morphology – NJ] constitutes an essential aspect of a Cognitive Grammar investigation” (p. 435). Investigating the meaning of symbolic units can be equated with exploring the nature of conceptualization. Conceptualization is “anthropomorphic and subjective” (Achard, 2004, p. 174) in its essence, as it includes “besides the objective properties of the described object, the way in which the conceptualizer chooses to present it.” (Ibid.).

Ways to conceptualize a specific event or entity, and thus the message, can vary widely depending on the speaker and his/her background and the assessment of what the listener is likely to know, as well as on what s/he wants to focus on, and thus are inherently subjective.
Accordingly, in order to explore the meaning of a language expression, one would need to determine how exactly the expression is built, i.e., the precise linguistic choices the speaker makes, the context in which it is used, and what kind of background knowledge it appears to assume or evoke. The tools available in cognitive linguistics (in particular, the concepts and descriptions accepted in cognitive grammar (see, for example, Langacker (1987/1991) or Taylor (2003) for a more accessible presentation) allow us to illuminate the connection between linguistic forms and the underlying meaning of structures and expressions, thus making the conventional construals they evoke accessible to an interested language learner or user. Such tools make it possible to articulate motivations behind linguistic structures and gain insight into the underlying perspective assumed by a native speaker who uses any given language feature in a conventional manner in order to create particular meaning.

The next section will present a series of characterizations of cognitive linguistic tools contributing to construal: it will describe how natural categorization patterns present in language affect the organizational characteristics of certain linguistic features.

1.2 Human category formation and categorization in language

Human ability to categorize is a very basic survival skill (Taylor, 2002; 2003). For instance, when growing up, children are taught to categorize between objects and places that are safe or unsafe, between foods that are edible or inedible, and between activities that elicit parental praise as opposed to parental anger. Categorization skills begin in the earliest moments of childhood and continue to develop throughout life on a number of additional levels.
Humans automatically categorize entities, experiences, emotions, and so on. These categories are in turn reflected in language. At a somewhat abstract level, words can name types of categories, such as parts of speech; thus, knowing that something is a verb rather than a noun immediately allows us as language speakers and users to make a judgment about how this type of category is profiled and, consequently, how it can be used in context. Some of the linguistic categories we use (e.g., nouns vs. verbs) have a universal nature and are connected to basic human experiences (Tyler, 2012). However, in addition to such general categories, categorization systems present in various languages of the world are tied with certain cultures and histories and thus also reflect cross-cultural differences. This is because cognitive formation is an interactive process between the human brain and the surrounding environment, which includes the social-cultural environment. Thus, while category formation is a ubiquitous human cognitive process, it is shaped by the ambient social, cultural and linguistic input of the child’s discourse community/ies. In that sense, categorization patterns present in each language are guided by universal human cognitive process and are simultaneously uniquely distinctive, or conceptually dynamic in nature. One of the key examples cognitive linguistic literature brings up in this connection is how the category of color is organized in various languages.

Earlier anthropological and psychological research on color schemes present in world languages (Berlin and Kay, 1969; Heider, 1972) demonstrated how the category of color is structured overall. Despite the fact that the foundational study by Berlin and Kay (1969) had a number of methodological flaws and was later refined and expanded, these researchers established that a continuum of “universal” colors exists: the vast majority of
languages have terms for black and white; red, followed by yellow and green, usually come next. Heider (1972; name later changed to Rosch) conducted further psychological experiments that established that focal colors humans are sensitive to focal (i.e. the more “universal” ones) and non-focal colors. Rosch (1975) confirmed that focal colors are more salient both cognitively and perceptually than non-focal colors are. Thus, color categories were found to have a center and a periphery, black and white being the central examples of the “color” category, and other colors more being relatively more peripheral, or radial; the exact positioning of these radial colors towards the center was found to be language-specific. Moreover, different languages varied in which colors were given specific labels. Over the years, Rosch and her colleagues expanded their research on prototype categorization well beyond color.

Cognitive linguistic researchers have also investigated concepts of prototypical and peripheral examples for many categories. In general, the prototype represents the central exemplar or cluster of best exemplars of a category, with less central representatives being positioned farther away from the central exemplars. What counts as a prototypical instance of a category and what counts as a peripheral instance in largely determined by function and usage in the context or culture of a given language: “one would expect that speakers from different linguistic and cultural backgrounds will have somewhat different categories with different prototypes” (Tyler, 2012, p. 47).

The notions of prototypical and peripheral category instances are linked to the concepts of schema and speaker’s background knowledge in that they represent two of the primary ways human memory appears to be organized. Langacker (1987) provides the following distinction between prototypes and schemas:
A prototype is a typical instance of a category, and other elements are assimilated to the category on the basis of their perceived resemblance to the prototype; there are degrees of membership based on degrees of similarity. A schema, by contrast, is an abstract characterization that is fully compatible with all the members of the category it defines (so membership is not a matter of degree); it is an integrated structure that embodies the commonality of its members, which are conceptions of greater specificity and detail that elaborate the schema in contrasting ways.

Similarly to notions reflecting our perception of the world around us (like color organization), language structure and use also rely heavily on categorical and schematic patterns. For instance, Gibbs (2005) discusses many meanings of the English word ‘stand’, showing how the prototypical sense is going to be the most concrete one, while all the peripheral senses stemming from the prototypical sense will have a tendency to become more abstract as they move further away from the categorical center. The three meaning types of ‘stand’ that Gibbs is referring to can be divided into three general categories, the most basic one being the literal sense of achieving or occupying a vertical physical posture, and the other two stemming from it:

**Sub-category 1**: Achieving a vertical posture

*My leg hurts, I can’t stand/stand up.*

**Sub-category 2**: Retaining a vertical posture (literally or figuratively)

*We must stand our ground.*

*Stand up to adversity!*

*I cannot stand that kind of music.* (this example also involves the use of metaphor)

**Sub-category 3**: Becoming prominent through a vertical posture (literally or figuratively)
She’s standing in for Sally today.

She really stands out in a crowd.

I stand for freedom and justice.

The core physical meaning of ‘stand’ – acquiring vertical posture – will usually be the first meaning for learners to get in both L1 and L2 acquisition processes (albeit in a different setting and through varying patterns) as it is associated with a specific action that can be easily traced back to our human experiences. All things being equal, the physical-spatial-experiential meanings will form the core sense. Of course, the precise linguistic input the learner receives can affect the order of acquisition.

Categorical division of language is also displayed through all aspects of language, syntax and morphology included. In cases of conflicting categorization patterns (e.g., differing categorization of the same entities or events in L1 vs. L2), cognitive linguistic concepts allow us to highlight and address the differences explicitly, which is particularly useful for L2 learner populations. Differences in categorization may be grounded in usage patterns of a given category (or a continuum of categories), which often determine how categories are captured through linguistic forms.

The next section will be dedicated to discussing the concept of a usage-based view of language in cognitive linguistics. More specifically, it will provide a general characterization of a usage-based view of language and how it accounts for the notion of constructions in cognitive grammar.
1.3 Usage-based view of language

This section has to be started with a disclaimer that cognitive linguistics is not the only area that assumes the usage-based view of language. While a number of approaches to language analysis can be united under the umbrella of Usage-based Linguistics, the paradigm of Cognitive Linguistics is one of the most prominent crucial member (Ellis & Cadierno, 2009; Cadierno & Robinson, 2009; Tyler, 2010); since it is the Cognitive Linguistics, and not other language models, that represents the most interest for the purposes of this dissertation, it will be the only one discussed.

The goal of a usage-based model is not to attain the representation of a linguistic system controlled by rigid rules, but, rather, to “depict the complexity of language use” (Tomasello, 2003, p. 5). Such complexity is expressed through “an eclectic array of expressions at different levels of complexity, abstraction and generality,” most of which follow systematic meaning-based principles and/or represent fully productive grammatical constructions (Ibid.). Varying levels of expression are categorized by language users according to their degree of abstractness, covering what is traditionally regarded as lexicon and grammar, as well as phonological, semantic and pragmatic associations between linguistic units (Bybee 2008). Such associations inherently include specific and generalized information about form, meaning, and context of use for words and constructions. Frequency of use reinforces these linguistic connections between units (Bybee, 2008, p. 216). The meanings received through natural linguistic input are inherently characterized by redundancy (i.e., the same meaning can be and often is conveyed in multiple ways), which essentially makes the process of language use more dynamic and facilitative of human communication.
According to Langacker (2001), “cognitive grammar is contextually grounded because all linguistic units are abstracted from usage events, comprising the full contextual understandings of socially engaged interlocutors with specific communicative objectives in connected discourse” (p. 5). In other words, language speakers can employ an array of linguistic tools in order to convey a contextually appropriate message to their interlocutors.

A concise summary by Tyler (2012) sheds light onto how language usage affects the acquisition process:

Cognitive linguistics holds that since our knowledge of specific instances of language includes knowledge of the contexts in which linguistic units are encountered, knowledge of discourse and pragmatic constraints is established along with knowledge of the words or phrases or sentence patterns of the language. Saying that language is usage-based, that it is learned through usage events or contextualized encounters with members of the discourse community using the language, means that we learn the language as contextualized, discourse-oriented information.

Language learning represents a complicated process that involves the full scope of cognition including remembering past experience, categorizing various types of experience, establishing patterns from linguistic stimuli, etc. (Cadierno & Robinson, 2009; Ellis & Robinson, 2008). Cognitive linguistics provides explicit ways to address various aspects of the language learning processes, thus aiming to study and represent the language in the way it occurs in real life, as opposed to the abstract and out-of-context representations (which are so often resorted to by generative linguists or, for that matter, by authors of ESL materials). One of the ways the usage-based nature of cognitive linguistic is demonstrated most transparently is through the study of constructions, which will be discussed in greater detail in the following section.
1.4 Constructions

The constructionist perspective on language learning is grounded in the idea that languages contain thousands of linguistic forms and constructions that “clearly must be learned on the basis of the input together with general cognitive processes” (Goldberg & Casenhiser, 2008, p. 197).

Constructions reflect our ability to see patterns in the phenomena around us and categorize the world accordingly: “the process of learning a language can also be seen as the process of acquiring the relevant cognitive patterns which codify the conventions of use of that language” (Valenzuela Manzanares et al, 2008, p. 198). Constructions “are regarded as the basic units of linguistic organization” (Ibid.).

Constructions exhibit considerable regularity in the form of local generalizations, which offer degrees of motivation for the observed distribution (Goldberg 1992, 1995). Also, the analogical mechanisms used every day “to produce and decode language are just what is needed to use the L2 productively” (Bybee, 2008, p. 233). Language learning processes rely heavily on categorization mechanisms (Goldberg, 1995), and as long as there exists sufficient exposure to the L2 input, L2 processes involve “chunking and automatization … needed to gain fluency occur naturally with practice of both linguistic and non-linguistic tasks” (Bybee, 2008, p. 233).

Research findings in this area (Goldberg, 1992, 1995; Goldberg et al., 2004; Goldberg & Casenhiser, 2008) have suggested consistently that both adults’ and children’s learning is facilitated significantly by what they term skewed input: the frequency of linguistic components (e.g., certain verbs) of constructions facilitates an establishment of “a correlation between the meaning of a particular verb in a
constructional pattern and the pattern itself, giving rise to an association between meaning and form” (Goldberg, 2006, p. 79). To be more specific, the language input that children are exposed to appears to demonstrate an abundance of certain general-purpose verbs, such as *go*, *put*, *give*, that describe frequently occurring situations witnessed by most normally developing children on multiple occasions (since these verbs occur in linked social-physical and linguistic contexts). Moreover, the anchor verbs occur more frequently in particular linguistic frames or argument structures whose meanings match the semantics of the verbs. Accordingly, such verbs function as cognitive anchors facilitating the acquisition process of the argument structure accompanying them. Also, sorting tasks completed by both adults and language learners indicated that both groups were more likely to sort sentences by construction as a whole rather than by verbs anchoring them, which indicates that constructions often serve as strong indicators of what a given sentence might mean (Goldberg, 2008). Skewed input facilitates acquisition of constructions by mapping out explicit form-meaning connections between the overall meaning of the whole construction and the meanings of linguistic units comprising it.

In circumstances when input provides too much “noise” (even familiar or similar constructions) for the target constructions to be easily identified, the learning of the novel pattern is inhibited (Goldberg and Casenhiser, 2008, p. 209). In fact, in a training study, Goldberg and Casenhiser (2008) found above-chance performance “on the novel construction after training when the training included 16 instances of the novel construction and no other "distracter" construction” (Ibid.). These findings demonstrated support for the value of skewed input.
The process of learning a second language involves determining structure from usage, i.e. “learning from specific usage events the particular sets of symbolic units (i.e. constructions) that are conventionalized in a given speech community” (Cadierno & Robinson, 2009, p. 246). However, since the instructed L2 learner is not usually exposed to the same amount or distribution of naturally occurring language input as L1 learners typically are, some sort of attention to key characteristics of the novel form-meaning(-s) mapping may be particularly useful for the purpose of distinguishing novel constructions in the otherwise extremely “noisy” language input. Also, in many cases, L2 learners are not getting the necessary frequency of input that might facilitate the acquisition process. Moreover, the linguistic input that L2 learners get is typically not accompanied by the social-physical context in which young children are immersed while being exposed to and learning language. As a result, in the case of the L2 learner, instructional interventions may be necessary to address the existing gaps in order to facilitate the acquisition of a given grammatical feature or pattern.

Under a cognitive linguistic analysis, the starting point of language acquisition for L2 learners is quite different from that of L1 learners; but similar cognitive processes are involved in both cases. L1 background cannot be discounted when talking about L2 acquisition processes which is connected with the idea of L1 entrenchment (Ellis & Larsen-Freeman, 2006; MacWhinney, 2008) in the language system of an adult L2 learner. It is almost certain that L1 constructions “are likely to affect L2 construction learning and the processes of function-form and form-function mapping in comprehension and production in variable ways” (Robinson & Ellis, 2008, p. 491). Because the L2 learner comes to the second language learning situation with an L1 (with
its own categories and constructions) already in place, it is likely that the learner will experience conflict between the established L1 system and the target L2 system.

Pedagogical interventions may be needed to help the learner appropriately sort out the L1 and L2 systems. Because cognitive linguistics provides the tools to explicitly discuss aspects that constitute differences between L1 and L2, it can be hypothesized that pedagogical interventions based on cognitive linguistic may be of particular value to second language learners.

1.5 Speaker construal and tools of cognitive grammar in relation to L2 learning and teaching

Under cognitive linguistic accounts, a language speaker is actively choosing among linguistic forms in order to convey his/her specific vision, or conceptualization, of a given usage situation. The notion of active choice among competing linguistic forms on the part of the speaker in order to facilitate making mental contact with the listener is closely intertwined with the notion of construal, or the ability of humans to mentally recreate, or construe a situation in alternative ways (Taylor, 2002, p. 11). Human languages inherently offer a number of tools to help the speaker convey a particular construal of a given situation. For instance, the same event can be conveyed with varying level of details, emphasizing various aspects of a scene or event, using different types of vocabulary (e.g., standard/neutral vs. emotionally loaded), or different grammatical forms and constructions. Some linguistic aspects characterizing construal are language-specific and conventionalized; most of the time, such conventions concern standard grammatical features present in a given language. For example, English treats nouns like advice, evidence, research, and news as mass nouns, which should not be used in plural form
(Taylor, 2002, p. 368). Russian and German, on the other hand, allow for plural forms for all of these nouns. Therefore, while speakers of English conventionally construe advice, evidence, and other similar mass nouns as non-count, speakers of Russian and German (as well as of a number of other languages), view them as countable and plural.

In addition to set linguistic conventions within each language, construal can also refer to speaker’s perspective and speaker’s choice of linguistic items. Langacker (2001) provides the following diagram that shows various points of view that can be available to a language speaker during a given usage event:

![Diagram](taken from Langacker, 2001, p. 9)

**Figure 1.** Viewing analogies (taken from Langacker, 2001, p. 9)

While the *maximal field of view* refers to everything visible to the speaker to any degree at a given moment, the *locus of attention* is the immediate area surrounding the *focus of attention*, or the specific entity or event to which the speaker directs his/her view. Depending on his/her concrete physical orientation and his/her conceptualization thereof, the speaker is able to capture any of the points shown in the diagram above through appropriate language tools, since all physical stimuli are filtered through our perceptual
systems and interpreted by our cognitive processes. As far as the linguistic representation of perspective is concerned, consider the following two sentences:

   a) The rock is falling down the hill.

   b) The rock is falling from the top of the hill.

Both a) and b) refer to the same object involved in the same type of movement – falling – even the same event. However, the two utterances do so by capturing different characteristics within the whole situation. While a) characterizes the motion trajectory of the rock (“down the hill”), b) refers to the original point where the motion began (“from the top of the hill”). The speaker can thus choose language means and expressions that coincide with his/her view of the situation at any given moment.

Put in yet another way, conventionalized “chunks” of language (whose grammatical form, as well as the lexical items chosen, is meaningful) are being combined together in response to a concrete usage event. When the speaker is trying to make mental contact with the listener, he/she is attempting to guide the listener to a conceptualization that is roughly similar to the conceptualization the speaker has. The speaker is therefore attempting to actively shape his/her message using the most (locally) appropriate linguistic means. The notion of a usage event is inextricably tied to on-line meaning making, or active construal. Langacker characterizes a usage event as an “instance of language use as initiated by a language user who is in command of not only the linguistic expression but also other factors such as memory, planning, problem-solving ability, and general knowledge of the world, as well as a full apprehension of the physical, social, cultural, and linguistic context” (Langacker, 2000, p. 9). In order to match a given usage event with corresponding and appropriate language features and/or linguistic means of
expression, the speaker needs to engage his/her background knowledge, as well as understanding of the local context and anticipation of possible consequences of his/her choices to convey a particular perspective within the linguistic event. L1 speakers share the background knowledge conventionally encoded in the common language (e.g., the understanding that *news* is a mass noun that should be used in singular form or that new information tends to occur at the end of a sentence), and such shared background allows them to focus on selecting situationally–appropriate linguistic means, instead of considering the full array of conventionalized forms or chunks.

L2 learners, on the other hand, do not have the same degree of access to linguistic conventions coded by the L2, as L1 speakers of that language do. As Ellis & Cadierno (2009) aptly put it, since “language acquisition is the learning of constructions… SLA depends upon learners’ experience of language usage and upon what they can make of it” (p. 117). L2 speakers also carry different background knowledge and possibly varying perceptions of contextual factors, as opposed to those of the L1 speakers, during any given usage event. Essentially, when faced with a given communicative situation, L2 speakers are likely to be starting off with a different set of construal conventions than L1 speakers. This is where tools and tenets of cognitive linguistics can come to rescue.

In situations where varying and often conflicting L1 and L2 construal patterns are involved, it seems possible to use cognitive linguistic tools to highlight the characteristics of the L1 construal and thus make the learner aware of the construal options, as well as potential differences between the L1 and L2 systems.

Focusing on language structure through event-specific construal makes the paradigm of cognitive linguistics “arguably more comprehensive, revealing, and
descriptively adequate” (Langacker, 2008a, p. 66) than other paradigms currently used in language teaching. However, much, much more work needs to be done by cognitive linguists in order to affect the predominance of traditional instructional methods that rarely take into consideration notions of context, construal, and usage.

Applications of cognitive linguistics to second language classrooms are relatively limited in number, as demonstrated by a literature review in a later section of this chapter. Speaking in more generalized terms, the field of foreign language teaching has lacked a strong theoretical linguistic framework, which could work as a supportive pillar ensuring the stability of teaching practices across various aspects of language (de Knop and Dirven, 2008; Tyler, 2008; 2012). The vast range of existing L2 materials and textbooks do not uncover the systematicity present in the organization of language and portray many linguistic characteristics as largely arbitrary (as an example, see chapter 2 for a detailed account of how existing L2 sources treat English conditionals). Simultaneously, they offer overly general, flawed rules, which lead L2 learners to false generalizations.

Tyler (2012) provides a comprehensive overview of reasons why traditional approaches to language instruction are limiting and insufficient as far as their view of language is concerned. She views the following assumptions associated with traditional approaches as quite problematic (pp. 13-14):

- Language is understood as a compartmentalized system, parts of which are not connected with each other. The connections between various aspects of language (such as syntax, morphology, pragmatics, etc.) are not emphasized, leading learners to a disjointed picture of the target language;
Traditional approaches assume that language is acquired, not learned. The pro-Chomskyan view assumes that environment and frequency of input do not play a significant role in language acquisition, and instead, all acquisition happens through setting (for L1 acquisitional processes) or resetting (in the case of L2 acquisition) of certain morpho-syntactic parameters for a given language when a particular piece of linguistic input triggers the setting.

- Syntax is viewed as completely separated from the lexical and semantic aspects of language, which leads to the assumption that syntactic patterns do not carry meaning of their own. A more detailed description of how this assumption is represented in L2 materials on English conditionals is provided in chapter 2 of this dissertation.

- No connections are explicitly drawn between meanings associated with particular forms. Language units are represented similarly to how they are represented in a dictionary: listed in full but not systematically connected with each other.

- Last but not least, metaphor and metonymy, which represent examples of non-literal language use, are treated as peripheral aspects of language. Cognitive linguistic approaches, on the other hand, view metaphor and metonymy as underlying aspects of human cognitive processes, which pervade all aspects of language.

As stated throughout this chapter, the underlying conceptual characteristics of cognitive linguistics make it a good candidate for the role of providing a comprehensive
theory, supporting successful L2 instruction (Tyler & Evans, 2004; Achard & Niemeier, 2004a, 2004b; Gries, Hampe & Schoenefeld, 2005; Tyler, 2012; among others).

More specifically, cognitive grammar offers a particularly precise account of language organization lending itself well to SLA investigation (Achard, 1997). Insights from cognitive linguistics help present what traditional approaches have termed grammatical features as meaningful “packages” accessible to language learners. Cognitive grammar provides tools for discussion of difficult points of the language and can thus valuably contribute to second language teaching “by integrating cognitive descriptive insights into compatible well-established models of L2 pedagogy” (Achard, 2004, p. 168).

Achard (2004) raises an important point concerning how relative complexity makes a linguistic item either more difficult or more straightforward for L2 acquisition. Grammatical categories take the form of constructional schemas that “can be viewed as templates that generalize over existing expressions and sanction their felicity”; these schemas are also “symbolic in nature, i.e., they have a semantic and a phonological pole” (p. 175). Following this logic, complex grammatical constructions can also be broken down into more straightforward points or subcomponents that might facilitate the acquisition process.

Achard (2008) outlines a number of concrete, meaningful ways cognitive grammar can benefit language instruction:

1) Cognitive grammar allows for the focus on meaning of grammatical constructions, and such focus in turn demonstrates how meaning motivates the aspects of form that need to be learned. Recent research on focus on form
gives an overview of benefits associated with explicit instruction (Doughty and Williams, 1998; VanPatten, Williams, Rott, & Overstreet, 2004; also see additional discussion on this topic in Chapter 3 of this dissertation).

Accordingly, if cognitive linguistic insights could be made explicit for L2 learners through selected focus on form methodology, learners might be able to get a more comprehensive view of the target structure(-s). Holme (2009) claims that “in CL-directed pedagogy, the uptake of form is primarily dependent upon its usage, and usage is more likely to occur after a form has been given some conscious attention” (p. 295). In that sense, focus on form is linked with the usage patterns provided for the form and should be carried out in a meaningful context as much as possible.

2) The cognitive linguistic paradigm allows for making explicit the semantic relations that underlie a given construction, which provides for an opportunity to teach grammar similarly to lexis, i.e. with a direct focus on meaning behind the use of certain forms. Accordingly, grammar is treated as a contextually-based, rather than a context-independent phenomenon, which fits well with the established importance of recreating communicative context in language instruction (this view already has a strong presence in communicative language teaching, content-based teaching, and task-based instructional paradigms, among others).
3) Finally, adopting cognitive grammar principles allows the learner to see the perspective of the speaker at the center of a communicative act. The learner is given an idea that s/he has a choice in linguistic means and is thus encouraged to take a more “active” role in constructing his/her own language. In other words, the learner can pick and choose appropriate linguistic means depending on the given communicative purpose and context. Associating meaning in grammar with the speaker’s stance towards using the available meanings to express what exactly s/he might want to express allows the learner to see that available language choices can be motivated and coherent, rather than random and idiosyncratic. Such a realization helps recreate the naturalistic acquisitional context and in a way, helps bridge the learner’s gap between his/her L1 and L2.

Focus on meaning as expressed through conceptualization (in fact, Achard (2008, p. 435) claims that the two are basically equal) is thus an integral part of cognitive grammar. Clearly, focusing on meaning as the primary target of instruction presents a shift from more traditional methodological tenets. Traditional approaches to grammar treat language as a system that needs to be imparted to the learners. Learners are usually presented a set of conventionalized ways to use given language items. The learner himself/herself is not usually empowered with the idea that s/he is able to make linguistic choices. In the cognitive grammar framework, on the other hand, learners are given the conceptual freedom to make linguistic choices depending on a specific situation they are attempting to portray. The idea of construal allows learners to understand language as a
set of tools for presenting their view of a given situation and select corresponding linguistic forms to follow through with a given stance. Granted, such an approach to learner agency in the L2 process may be difficult for the instructor to handle, as this would be quite different from how the majority of conventional classrooms are structured. As Achard put it: “focusing on the speaker rather than on the system involves the shift from teaching set patterns of lexical associations to teaching the conventionalized way of matching certain expressions to certain situations, as well as the flexibility of using the available alternatives to express specific semantic nuances” (Achard, 2008, p. 441). Such an outlook would also require that instructors shift their understanding of language, including becoming more aware of various linguistic choices and the implications behind using these linguistic choices in meaningful discourse. If carried out in full seriousness, providing guidelines to instructors for teaching students how to exercise their linguistic choices may be a challenging and, initially, labor-intensive enterprise; however, it would definitely be one that appears to be worthwhile for the long-term goals of the language learning and teaching field. The next section addresses the work that has already been done in this direction and outlines possible gaps that could provide ground for further research.

1.6 Existing applications of cognitive linguistics to second language pedagogy

In the course of the past decade, quite a few researchers have turned to exploring the applicability of cognitive linguistic theories in the context of instructed second language acquisition. Recent studies have focused on a range of language phenomena, such as prepositions, idioms, verbal markers/aspects, among others. In this section, I will
briefly review a number of these existing studies noting similarities in their theoretical and practical underpinnings, and will also delineate a range of issues calling for more research and testing in the field.

Since the primary focus of this dissertation is the instructed acquisition of English conditional constructions, a question arises whether this topic had been explored in past research. The answer to this question is such that the category of conditionals per se has not been previously investigated in an applied cognitive linguistic context; however, a number of findings from studies focused on other grammatical points can be deemed useful for my goals (especially concerning the general direction while applying cognitive linguistic principles) and can be used to inform the overall study design of this dissertation.

Another consideration that will guide this overview of applied cognitive linguistic literature is whether or not the methodologies of cited studies involved rigorous design and multiple tests to control for more precise measurement of the degree of the participants’ progress. While a number of studies conducted in the past decade (most of them done before 2005, but some more recently, as well) tended to have an exploratory, descriptive nature and did not always involve statistical testing and comparison between different instructional conditions, more recent research is turning more and more towards using standard methodologies from SLA and applied linguistics. Throughout this subsection, I will review both types of research studies, before moving on to the section addressing the challenges that still exist in regard to applying cognitive linguistics to classroom instruction.
Phrasal verbs traditionally represent a big challenge for English language learners; the use of cognitive linguistic analysis for the instruction of English phrasal verbs was explored in Dirven (2001) and Kurtyka (2001), among others. Dirven (2001) presents a cognitive linguistic analysis of English phrasal verbs and provides some pedagogic recommendations for how such an analysis could be incorporated into teaching practices. However, while these recommendations for pedagogical grammar considerations are based on solid cognitive linguistic research, they remain largely conceptual, as they have not been properly explored through standard classroom SLA methodologies or even piloted in ESL/EFL classrooms. Kurtyka’s (2001) article addresses the issue of pedagogical applicability of phrasal verbs research only briefly, citing informal, largely qualitative reports of how such materials were used by a number of English schoolteachers in Krakow, Poland. The learners’ development was not measured, even though regularly scheduled school tests did demonstrate an overall improvement in the learners’ use of phrasal verbs; however, such improvement may have been caused by a number of other factors in addition to the inclusion of a cognitive linguistic presentation. Kurtyka also reports that “the learners’ reaction to the material was rather positive as long as the teachers’ instructions included practical, ‘tangible’ application of the theory presented” (Ibid., p. 48). This small-scale qualitative study thus suggests the benefit of including cognitive linguistic insights into the instructional process; however, the true value of such inclusion needs to be tested on a larger scale using standard methods accepted in applied linguistics.

A large segment of research in cognitive linguistics is concerned with exploring the typological differences in coding motion events between satellite- and verb-framed
languages (Slobin, 1996, 2005; Cadierno, 2004, 2008). Cadierno has led a number of studies reporting how cross-linguistic differences might affect production patterns of such verbs in an L2. While her earlier research was not concerned with effects of instruction, Cadierno laid an important foundation for exploring how motion patterns coded in L1 transferred into or affected the coding of motion events in L2. Using the narrative of “Frog” stories (Slobin, 1994), Cadierno (2004) found that intermediate-level Danish learners of Spanish coded motion events for Spanish similarly to the Danish language pattern, i.e. with elaborate path descriptions as opposed to using relatively more general motion description like it is the norm in Spanish. The key finding that can be inferred from Cadierno’s research is such that L1 construal patterns will inevitably affect L2 construal and corresponding production.

Cadierno and Robinson (2009) further examined how L1 patterns and second language proficiency interact with task complexity characteristics. Dutch and Japanese learners of English completed tasks that elicited extensive production of motion verbs. The authors hypothesized that Dutch learners of English might have an L1 facilitative effect for their production of motion verbs, since both Dutch and English are typologically similar languages (satellite-framed). On the other hand, since Japanese and English are typologically different (verb-framed and satellite framed respectively), Japanese learners of English might experience an inhibitive effect from their L1 when producing English verb forms. The experimental results demonstrated that the L1 effects were most evident at the lower levels of proficiency; as proficiency increased, inhibitive effects of the L1 construal patterns decreased and subjects from both groups demonstrated more target-like usage patterns. Increased task complexity (see chapter 3
for more detailed discussion of Robinson’s work on task complexity and sequencing) played a role for L1 Dutch speakers, i.e. for speakers of a language typologically similar to English, but not for L1 Japanese speakers, whose native language encodes motion events differently from English. The key implication of this study is such that cross-linguistic influences are particularly salient at the lower levels of proficiency, and as exposure and corresponding mastery of the target language increases, learners exhibit lesser reliance on their first language patterns.

Also adding to the body of literature on cross-linguistic encoding of motion events, Chen & Oller (2008) conducted a study testing how advanced Chinese learners of English (all enrolled in a doctoral program in an American university) encoded motion while retelling the famous “Frog” story (Slobin, 1994), focusing in particular on the construal of scenes. Their findings demonstrated that the subjects’ ways of construing the story events differed from those of native speakers: “subtle implications associated with the use of passive were still out of reach for the students” (Ibid., p. 407). The key point that can be taken away from this piece of research is the finding that ESL learners assume different construal patterns (as opposed to the construal patterns assumed by English L1 speakers); however, the issues affecting construal are not normally targeted through instruction. If the ultimate goal of language instruction is to approach near-native levels of language acquisition, the issues of construal should certainly be a target of instructional focus. In other words, meaningful use of linguistic constructions should be represented as the key factor shaping construal as opposed to emphasizing learning about grammatical rules, which focus solely on form devoid of meaning.
Also, another key point is that exposure to the target language in a naturalistic setting in addition to previous years of instruction may not be enough for successful acquisition of such a complex category, as the English passives: “even skilled adult L2 learners may have difficulty in using subtly distinct grammatical constructions” (Ibid., p. 407). The results of this study call for more research that would test the question of whether the a greater degree of acquisition of complex linguistic structures is possible.

A number of European researchers employed metaphor theory for teaching English vocabulary and idioms. For instance, Csábi (2004) used elements of metaphor theory for teaching the distinction between multiple meanings of the English verbs hold and keep. She developed instructional materials highlighting the central sense of each verb and semantic networks demonstrating various extensions of the central sense in idiomatic English vocabulary. L1 Hungarian learners of English took part in a short experiment testing the efficacy of this instructional intervention. After taking the pretest (which was later utilized as post- and delayed posttests, i.e. learners took the same test three times), learners were given a 45-minute intervention on the meanings of two verbs; one group received the cognitive linguistic demonstration, while the other group received a more traditional type of presentation involving translation into L1. On the posttest that took place on the same day, the participants of the cognitive group outperformed the participants of the traditional group, with the difference being statistically significant. However, statistical significance in performance between the two groups was not retained on the delayed posttest. While the finding about the effectiveness of this short cognitive linguistic intervention is promising, the research design limitations (same test used three
times, only one lesson presented as treatment, lack of controlling conditions) preclude us from making more far-reaching conclusions.

Csábi’s experiment was later replicated by Beréndi, Csábi and Kövecses (2008), who investigated the acquisition of *hold* and *keep* metaphors by the means of a somewhat more extensive instructional treatment involving conceptual metaphors. The participants were L1 Hungarian speakers enrolled in an advanced EFL class; the study involved two groups – traditional and cognitive – and pre-, post-, and delayed posttest design. Participants of the cognitive group received visual support (schematic drawings illustrating central meanings) in addition to an expanded (in comparison with Csabi’s version) explanation informed by metaphor theory. The results demonstrated statistically significant differences between the groups, with the cognitive group outperforming the traditional group on both the immediate posttest and the delayed posttest administered five months later. The authors hypothesized that clear visuals explaining the motivated meanings behind the central idiomatic meanings contributed to the improved comprehension and subsequent production (on the fill-in-the-blank test) of the target vocabulary by the cognitive group. But again, a limitation of both of these studies is tied with the fact that the same test version was used for all three testing procedures. Part of the gains could be explained by the fact that subjects mastered the test, which they took three times. Including a “testing” control group, which would only take the test three times without receiving any instructional treatment could improve the design of this study. More methodologically sound practices would be necessary to validate positive effects associated with cognitive linguistic instruction in this context.
A number of studies exploring a greater range of metaphor research applications to L2 instruction of English vocabulary were conducted by Frank Boers and his colleagues (Boers, 2000; Boers, Demecheleer & Eyckmans, 2004). Boers (2000) created L2 English materials focusing on the instruction of metaphorical language associated with emotions and in particular, the description of anger (the original analysis was done by Zoltan Kövecses in the 1980s). Boers’ participants were L1 speakers of Flemish; the experimental group received instruction demonstrating the central conceptual metaphors (e.g., ANGER IS A HOT FLUID IN A CONTAINER or ANGER IS FIRE) motivating various expressions, while the control group received instruction where the central meaning connection was not highlighted to learners. Statistical analysis demonstrated that the experimental group outperformed the control group, showing that a cognitive linguistic explanation was more effective in teaching patterns of idiomatic English than the traditional, conceptually unmotivated presentation. However, Boers (2000) did not use a pre-, post- and delayed posttest design in his study, which is a limitation of the findings.

Boers et al. (2008) report findings from a number of experiments testing applicability of cognitive linguistic explanation and visual support to instruction of English idioms and everyday primary metaphors. Across all experiments, cognitive groups received visual support in addition to a presentation informed by cognitive linguistics, while the traditional groups received only verbal explanations without the accompanying drawings or pictures. Posttests consistently demonstrated that participants of cognitive groups were able to retain a greater amount of target vocabulary than the participants of traditional groups. A more focused analysis of participants’ learning styles
showed that, while all participants benefited from visual support, low proficiency learners benefited the most. Another targeted analysis demonstrated that learners were most engaged in the instructional process when visuals were positioned after the verbal explanation of the new material instead of simultaneously with the verbal explanation. This finding is of great value for future research applying cognitive linguistic theory to L2 instruction and L2 learning research, as it highlights the most effective practices associated with the delivery of cognitive linguistic information to learners.

The study conducted by Lindstromberg and Boers (2005) investigated how a cognitive linguistic explanation might facilitate the acquisition of English verbs referring to the manner of motion, such as trudge and saunter. The article reports on a series of experiments. In each of the experiments, two groups – a cognitive and a traditional – were given different type of explanation for such manner of motion verbs, the cognitive group enacting the motions and the traditional group providing a verbal explanation. The cognitive group outperformed the traditional group on the retention of target verbs, and the difference was statistically significant. However, it is possible that the modality of instruction, i.e. moving around versus the verbal explanation alone, was the key factor that made the difference. Also, while this research represents encouraging findings for further using cognitive linguistic explanations in L2 classrooms, it covered a very narrowly defined and specific aspect of English. In addition, the instructional technique associated with cognitive linguistic explanation of verbs of motion is Total Physical Response, or some element thereof. While it is a useful tool in certain contexts, its applicability in other contexts (e.g., EAP/ESP) or for other target items (e.g., more complex grammatical constructions) might be challenging to imagine. More expansive
pedagogical interventions are instrumental in order to further test the applicability of conceptual metaphor research for instruction of idioms.

Holme (2009) in his monograph “Cognitive Linguistics and Language Teaching” explored ways of introducing the concepts of embodied language and cognition into classroom practices. One of the foci of his book was on incorporating elements of Total Physical Response into language teaching, through the form of providing an embodied demonstration of word stress and intonation patterns. He includes suggestions of specific activities that could be incorporated into lessons, supporting the idea that “activities that link movement, stress and rhythm also link language, as a remembered entity, to the use of the body as semiotic device” (p. 44). While Holme’s pedagogical suggestions are of great value to researchers and practitioners alike, using embodiment and gesture in language teaching appears to be quite limited in the sense that it can be applied mostly to simple grammatical constructions such as commands, and instruction of certain vocabulary, as well as some phonetics and phonology. Application to more abstract, harder to learn grammatical concepts such as tense, aspect, case, etc., is more difficult to envision.

Research in the area of corpus cognitive linguistics sheds light on the L2 acquisition processes and the value of cognitive linguistics in them. A recent study by Gries and Wulff (2009) analyzed co-occurrence (collexeme) patterns of verb construction in the International Corpus of English. Certain verbs were founded to be used overwhelmingly within one or the other construction: e.g., need, offer, allow, and promise tended to co-occur with to phrases, while appreciate, enjoy, and finish are usually followed by –ing phrases. Advanced learners of English were then asked to provide
grammaticality ratings to a select number of sentences, which was supposed to test whether the above-mentioned co-occurrences were perceived as salient by learners. The results of this investigation suggested that grammaticality ratings generally coincided with verb co-occurrence patterns as determined by the corpus analysis of constructions. The pedagogical implications of these findings are such that learners would likely benefit from being taught the predominant co-occurrence patterns during verb instruction, as such an approach would lessen the memorization load and provide a meaningful basis behind the target forms. A key finding from corpus data analyzed by Ellis & Fereira-Junior (2009) (published in the same volume as the research by Gries and Wulff) is that L2 learners are able to notice prototypical verbs in matching constructions; accordingly, the implication is that instruction ideally should target the patterns demonstrated by skewed input as much as possible.

A number of language-specific structures and categories representing particular challenges for second language learners were also addressed in applied cognitive linguistic research.

English articles are a difficult category for the majority of learners, especially considering that many world languages do not have articles and learners need to acquire not only the multiple target forms and uses, but also the concept of an article itself. Verspoor and Huong (2008) developed a cognitive linguistic analysis of the English article system highlighting different construal options available to native speakers and explaining the basic distinction between article types as centered around the dichotomy of boundedness/unboundedness. They cite an unpublished dissertation by Huong, which focused on effects of instruction associated with presenting an earlier version of such
cognitive linguistic analysis of English articles to learners. The analysis was informed by Langacker’s foundational research in cognitive grammar, and materials included a visually organized decision tree to help learners decide whether a given article occurrence represents a definite or indefinite construal. In the study, the cognitive group demonstrated statistically significant gains on the posttest in comparison with the traditional group, but the differences between the two groups were no longer significant on the delayed posttest. This study suggests the need for more comprehensive instructional treatment methods (longer treatment, etc.) that might be robust enough for achieving statistical significance on delayed posttests.

Nominal case marking is another category that often represents a particular challenge for learners. Liamkina (2008) developed pedagogical applications of a cognitive linguistic analysis of the German dative case. The previously analyzed L1 German data suggested that dative is frequently used for marking the participant role as a Beneficiary or a Recipient (these two were predominant meanings among the range of others) in a given phrase; also, certain aspects of local (sentence- and discourse-level) construal played a role in felicitous use of dative by native speakers. Liamkina’s study focusing on the use of dative in second language writing was one semester long and involved two groups, the cognitive and the traditional. Whenever subjects of both groups misused dative in their essays, participants of the cognitive group received feedback guided by the cognitive linguistic analysis highlighting the central meaning and extended polysemy network associated with dative case, while participants of the traditional group were given standard rules for the use of dative. At the end of the semester, the cognitive group showed a statistically significant improvement in their use of dative case forms.
The finding signifies the importance of explicit focus on form rooted in a concrete discourse context and paired with cognitive linguistic explanation that emphasized meaning aspects of the target structure. In comparison, the explicit focus on form delivered through feedback with a traditional rule (i.e. not emphasizing meaning behind the usage patterns) did not produce as much improvement among subjects.

Moder (2010) conducted another longitudinal study that took into consideration the importance of local discourse contexts. She had previously researched naturally occurring uses of the adverbial uses of *like* in the English native speaker corpus data. Her original research informed the creation of pedagogic tasks that directed the attention of advanced ESL learners towards varying native-like uses of *like* constructions. Following a pretest focusing on possible uses of *like* constructions, learners engaged in discourse analysis exercises and group discussions that highlighted native speaker usage patterns associated with *like*. At the end of the semester, learners demonstrated significant gains in performance; the qualitative analysis of learners’ essays showed more target-like uses of *like* throughout the semester, as well. The findings of Moder’s research generally emphasize the importance of using authentic language materials for instruction. Another implication is associated with using corpus-based research methods for the purpose of identifying accurate L1 discourse patterns that could later inform pedagogical tasks and/or instructional activities.

The grammatical category that received significant prior investigation in cognitive linguistic literature is prepositions. Lindstromberg (1996) used a number of concepts from cognitive linguistics to provide an analysis of over seventy prepositions in English. The primary cognitive linguistic topics Lindstromberg relied upon were conceptual
metaphor theory, prototypes and image schemata. However, Lindstromberg’s research, relying on the earlier work from the eighties (Lakoff, 1987; Brugman, 1981, 1988) did not take into account some more recent findings in conceptual metaphor theory, nor theoretical advances in the analysis of polysemy. More importantly, his claims about the use of cognitive linguistic insights in the classroom were not backed up by any empirical research, although he does discuss anecdotally the usefulness of this approach with his English learners. A similar critique can be applied to the work of Boers and Demecheleer (1998) who suggested a cognitive semantic analysis of prepositions that could benefit the instruction of the English prepositions behind and beyond to French speakers, but did not support their approach to preposition analysis with sufficient empirical findings.

The most comprehensive investigation to date of principled polysemy behind English prepositions was conducted by Tyler and Evans (2001, 2003, 2004). Tyler and Evans (2004) presented multiple pedagogical suggestions of how senses of over might be taught. Matula (2007) applied Tyler and Evans’ (2003) framework to the instruction of prepositions, investigating the effects of cognitive linguistic representation of spatial and temporal senses of the English prepositions in ESL classroom instruction. The design of Matula’s (2007) study included two intact intermediate level ESL classes (total n=20): one group received a traditional instructional presentation of temporal prepositions; the other group received a cognitive linguistic presentation of temporal prepositions. The cognitive treatment included introduction to the tools available in cognitive linguistics to explain the extended senses of prepositions and their corresponding semantic networks. Overall performance was measured with pre-, post- and delayed post-tests, as well as introspective data obtained through questionnaires and retrospective interview sessions.
While Matula’s results did not demonstrate a statistically significant difference for the cognitive group, they did indicate the presence of quantitatively expressed positive effects of cognitive instruction, as the cognitive group demonstrated “more consistent increases in use of the prepositions… across the senses and tasks” (p. 539). Another important advantage for the cognitive group was an increased level of metalinguistic knowledge: the qualitative insights from retrospective interview sessions suggested that the cognitive group participants understood the prepositions more fully as a “construction” as opposed to as formulaic language, which was likely the case with the traditional group participants. In other words, Matula’s findings suggest an overall value of including cognitive linguistic insights into instruction; however, more research needs to be done in order to determine how to do this in the most effective way. Also, Matula’s rather small sample size (total n of 20) and design characteristics (small number of instructional tasks and the fact that the study took place over several weeks) may have affected the statistical outcome; a modified design that would address those issues would likely yield a different set of results.

The most recent study by Tyler, Mueller, and Ho (2011) investigated the effects of cognitive linguistic treatment on the instruction of English prepositions. Participants, all advanced learners of English, were presented with cognitive linguistic accounts of the English prepositions to, for, and at. Their posttest scores were significantly higher than the pretest scores, showing that participants expanded their understanding of the three polysemous prepositions following the cognitive linguistic treatment. These findings provide support for using cognitive linguistic theory in ESL contexts; however, because
this study did not investigate relative efficacy of a cognitive linguistic approach in relation to other pedagogical approaches, further research is warranted in this direction.

Tyler (2008) reports the results of two unpublished studies (or, rather, one was published as a doctoral dissertation), which investigated the effects of cognitive linguistic presentation of the English modal verb system to advanced learners of English for specific purposes (more exactly, foreign lawyers with advanced proficiency in English who were enrolled in an American LL.M program). The general trend reported in the dissertation study (Abbuhl, 2005) was that learners who received cognitive linguistic instruction on modals and subsequent feedback on their written use of target forms demonstrated greater gains in target-like uses of hedges (modals were included as part of the greater category of hedges) than the learners who did not receive a cognitive linguistic intervention. While there was no control group that would allow us to tease apart the effects of feedback provision from the effects of cognitive linguistic treatment per se, the results are nevertheless suggestive of the finding that “the cognitive linguistic intervention allowed the feedback group to make gains in their appropriate use of modals” (p. 480). The other study (Hama, 2005) reported six case studies conducted in the same setting as Abbuhl’s study: the subjects were advanced learners of English for specific purposes (foreign lawyers who were studying for their LL.M degrees at the time) who continued to have trouble with their written use of modals despite long years of previous English instruction. While the sample size in this study was too small for inferential statistics, descriptive results (calculated as percentage points) demonstrated that, following a cognitive linguistic lesson on modals, “there was a noticeable difference in the participants’ correct modal usage” (p. 483), which is suggestive of positive effects
of the cognitive linguistic intervention onto acquisition of modals. The limitations of these studies include, on the one hand, the lack of control groups, and on the other hand, small number of subjects. Accordingly, applying more rigorous methodological constraints to future research would be necessary to make these findings regarding the efficacy of cognitive linguistic approaches to instruction of modals more generalizable.

Tyler, Mueller, and Ho (2010) conducted a quasi-experimental study testing the effectiveness of the cognitive linguistics-based approach to instruction of the English modal verbs in comparison to the more traditional speech act approach, widely used in the ESL textbooks. A range of materials incorporating cognitive linguistic conceptualization and explanation of the English modals was designed and presented to one of the two treatment groups. The other treatment group received a more traditional type of instruction focused around explaining modal verbs through the speech act theory. On the posttest, the cognitive group significantly outperformed the speech acts group, which provides empirical support for the value of adapting cognitive linguistic theory into second language instruction.

Finally, a number of (currently) unpublished studies conducted at Georgetown University (e.g., Kim, 2007; Tyler et al., 2008, 2009; 2012) also suggested support for the benefit of cognitive linguistic representation of grammatical structures such as modal verbs and prepositions, as well as the so-called dative alternation, over the more traditional methods of instruction.

Overall, even though the number of studies testing the applicability of cognitive linguistics to language teaching has been on the rise in the recent years, their overall range is still quite limited, as far as the methodological characteristics are concerned.
Even though there exists rich qualitative support for adapting cognitive linguistics to L2 instruction, at this stage of the establishment of cognitive linguistic paradigm, the total number of research studies is not sufficient to provide solid empirical backing to the predicted qualitative claims of the L2 instructional benefits associated with cognitive linguistics. Much more research needs to be conducted to determine how exactly tools of cognitive linguistics can be incorporated into L2 instruction in the most meaningful and effective way. The study undertaken for this dissertation is aiming to address this gap at least partially. That said, there still exist a number of limiting factors making applications of cognitive linguistics to classroom contexts a bit challenging; they will be the focus of the next section.

1.7 Existing challenges with adapting cognitive linguistic methodology to L2 classroom

The first challenge is associated with patterns of learner expectations established by the traditional instructional methodology. Adapting cognitive linguistic principles to classroom needs can be difficult because, according to Meunier (2008), most learners today “still express a need for short and easy-to-understand explanations and rules of grammar” (p. 103). This pattern may be connected with the fact that decontextualized rules still constitute a bulk of teaching practices all over the world, and accordingly, this is the practice learners are most accustomed to and comfortable with psychologically. The challenge faced by proponents of usage-based instruction is to introduce learners to more cognitive approaches to grammar in a controlled manner, targeting the learners’ level of comfort with the instructional practices and increased levels of L2 comprehension and production at the same time.
That said, some proponents of applied cognitive linguistics research acknowledge “that not all aspects of grammar deserve corpus and/or cognitive treatment” (Meunier, 2008, p. 107). Certain aspects of language, fossilized as result of certain grammaticalization processes (such as irregular verbs, case ending paradigms, etc.) might benefit more from a one-sided treatment, stressing memorization.

Meunier (2008) states that, while cognitive linguistic paradigm is too recent to provide a clear list of items and a definite agenda for furthering applied cognitive linguistic research, it is important to assess “the cost-benefit balance in terms of linguistic and pedagogical description versus the ease of learning, an issue addressed in psycholinguistic experimental studies” (p. 107). Adapting cognitive linguistic research to instructional materials requires a certain level of expertise and labor, and there do not always exist straightforward answers concerning the foci and type(-s) of grammatical analysis that would deliver the biggest value and cost-benefit effects for the learners.

Cognitive linguists have suggested that, to help learners gain an understanding of a number of particularly complex and multi-faceted structures, it would be helpful to expose them to the cognitive linguistic analysis of the subject through using means other than language – for example, visual cues. For instance, in regard to case marking, de Knop and Dirven (2008a) suggest that “the difficulties encountered in case marking with abstract verbs can be considerably reduced if FL teachers attempt a straightforward explanation by trying to visualize the abstract motion” (p. 317). Tyler and Evans’ (2003) model of Principled Polysemy, designed to represent the complexity of the English prepositional system, is also grounded in visual representations of each preposition’s proto-scene and networks of senses. Materials developed for the instruction of modals by
Tyler and her colleagues (cited in previous section of this chapter; also, see chapter 4 in Tyler, 2012) were also based on anthropomorphic representations of the degree of force exerted upon or experienced by the speaker in relation to each modal verb. In short, visual support appears to be an effective way to support the introduction of cognitive linguistic insights to learners, as it functions as a natural extension of the key notions of embodied experience, embodied meaning and their relation to language.

In regard to the quite complex English tense and aspect system, Niemeier and Reif (2008) critique the current approach accepted across many textbooks which highlights the decontextualized “form and use” of certain grammatical structures, while the concepts underlying the grammatical structures are left aside. More specifically, they argue that for EFL learners acquiring the English tense and aspect system, it is crucial that semantic concepts be established before (or simultaneously with) the introduction of morphosyntactic forms to help them develop a meaningful understanding of the English tense and aspect system. Thus, an integration of the semantic-conceptual level into the pedagogical materials, alongside with more accurate, cognitively based morphosyntactic rules and examples of contextualized use, would likely facilitate the learners’ cognitive construction of the English tense-aspect system. Another critique of traditional textbook approaches brought up by Niemeier and Reif is “the extensive memory load students are burdened with through the learning by heart of rules and exceptions” (p. 331). In response to that common problem, they suggest adopting a methodology that would incorporate both communicative principles and explicit CL-based grammar instruction to make introduction of grammatical points as meaningful and context-based as possible. They believe that “cognitive grammar may be a new option to bridge the gap between
form- and meaning-related issues in the EFL classroom” (Ibid., p. 328). However, given the current state of research, such a statement still remains a hypothesis that needs further empirical confirmation.

In relation to the overall scarcity of methodologically controlled research in applied cognitive linguistics, there arise two other problems. First of all, most of the research cited throughout this section did not combine cognitive linguistic insights with the benefit of current achievements in pedagogical research. For instance, Achard (2004) suggested using the Natural Approach in combination with cognitive grammar; the Natural Approach, however, cannot be considered a current method and is no longer being actively promoted by researchers working in the field of second language pedagogy. Total Physical Response (Holme, 2009) is a technique that seems be of use only for a limited range of target language structures.

Second, in most of the cited studies (with the exception of the studies on the modals, prepositions, and ditransitive cited in Tyler (2012) and Tyler, Mueller, and Ho (2010, 2011), the target category was identified as problematic on the basis of the researchers’ own perception and experience. It would also be helpful to identify areas where learners experience problems using corpus linguistic research and analyze the data in L2 learner corpora to examine the exact range of learner difficulties. The need for underlying corpus research was addressed in cognitive linguistic literature in the past, and accordingly, the present study took this need into account. Also, to address the first problem, the cognitively based instruction in this study was placed in the context of task-supported language teaching, a paradigm reflecting current advances in language
teaching methodology research (a more detailed account of this research area will be presented in chapter 3 of this dissertation).

1.8 Why is cognitive linguistics useful for L2 learning and teaching?

In concluding this chapter, it is important to recapture the reasons why bringing cognitive linguistics into the classroom is a valuable and worthwhile enterprise, despite the high learning curve for L2 instructors and the labor-intensive process of adaptation cognitive linguistics to L2 contexts (see more details on that in chapter 4).

The process of learning one’s first language provides authentic contexts, in which learners are exposed to naturally occurring instances of language in which form occurs concurrently with meaning-making. However, second language learners do not usually have access to the same types of conceptualized language learning conditions as L1 learners do. Classroom instruction frequently lacks direct contextual settings, and language forms are not typically reinforced through naturally occurring language use. Accordingly, L2 learners might need additional instructional help when acquiring target language that appear to be mastered by L1 learners after 4 or 5 years.

However, the majority of existing materials and teaching paradigms do not offer good learning solutions. Traditional approaches to grammar teaching do not emphasize meaning but rather focus on various aspects of form, which means that form-meaning mappings are not highlighted sufficiently for the learners (for a more concrete example, see chapter 2, which shows problems associated with the representation of English conditionals in L2 materials). Additionally, the majority of textbooks and other L2
sources lack comprehensive theoretical foundations in order to be able to present target features to learners as a unified system. This is where cognitive linguistics can help.

Cognitive linguistics has a range of tools that can be of particular use and relevance for second language learners. As mentioned throughout the first chapter, the underlying conceptual characteristics of cognitive linguistics make it a good candidate for the role of providing a comprehensive theory that could successfully support L2 instruction (Tyler & Evans, 2004; Achard & Niemeier, 2004a, 2004b; Gries, Hampe & Schoenefeld, 2005; Tyler, 2012). A few (definitely not all) more specific ways how cognitive linguistics can be useful for L2 learning include the following:

- Its conceptual tools and terms can make form-meaning mappings relatively transparent for the learners;
- It allows for and encourages teaching grammar within the context of its authentic usage;
- It can provide learners with the conceptual tools for seeing the perspective of a native speaker.

However, even though a number of researchers have identified cognitive linguistics as an up-and-coming language paradigm, not enough experimental research has been done so far to demonstrate this theory’s direct applicability in L2 contexts. A lot of studies have been exploratory and/or purely qualitative in nature, while studies with quantitatively-oriented design have been relatively small in number and often were not sufficiently controlled. Last but not least, many existing studies applying cognitive linguistics to L2 contexts did not take full advantage of current achievements of pedagogically and SLA-oriented research.
This dissertation thus strives to apply the underlying principles from cognitive linguistics in combination with the existing research on teaching methodologies, in particular, task-based teaching and focus on form, ultimately aiming to demonstrate how the two areas – theory and practice – can complement each other quite successfully. In other words, I aim to use selective, most relevant findings from cognitive linguistics research and combine them with current second language methodology. The next chapter will provide a detailed overview of the target structure – English conditional phrases – and will demonstrate why bringing a cognitive linguistic account into the second language classroom setting would be beneficial for L2 learners trying to master English conditionals.
CHAPTER 2: THE CATEGORY OF CONDITIONALS: AN OVERVIEW

2.0 Introduction

In this chapter, I am first going to examine how conditionals are defined and classified in existing research and outline some general difficulties encountered in their categorization. After that, I will address the representation of conditionals in typical L2 learning sources such as current textbooks and English language grammars. Finally, I will examine a few theoretical sources providing the insights, which have been most useful for the present work.

2.1 Defining and classifying conditionals

Conditionals as a grammatical structure have been studied extensively from a variety of perspectives. According to Ferguson et al. (1986) (as they cite a number of traditions focusing on the study of conditionals, namely: linguistic, psychological, and the philosophical/logical, among others), such extensive interest in the issue of conditionality can be partly explained by the fact that the study of conditionals is “crucial to our understanding of language” and “of how our actions are guided” (p. 19). Conditional constructions allow humans to negotiate between several logical scenarios and to be able to capture various consequences of their actions or of the circumstances humans find themselves in, including making predictions about events that have not yet happened or that did not happen in the past.

The multi-faceted nature of conditionals makes it quite difficult to generate a definition or operationalization that will hold for the full range of research and usage contexts. Along these lines, Declerck and Reed (2001) rightly state that: “the number of
criteria that can be used to categorize conditionals and the number of ensuing types and subtypes is so large that we have found it impossible to identify a genuine common denominator” (p. 8). One of the few aspects that most researchers seem to generally agree upon is the surface form of a conditional construction, frequently referred to as if \( P \), then \( Q \), where \( P \) is the conditional clause, and \( Q \) is the head clause (Comrie, 1986; Evans & Over, 2004; Jackson, 1991; Woods, 1997; among others). Logical and philosophical research on conditionals frequently uses specific terms to refer to the \( P \) and \( Q \) clauses: namely, protasis (the if clause) and apodosis (the main clause tied to the if clause). Werth (1997) aptly summarizes generally acceptable definitions of protasis and apodosis in the following way:

- the protasis sets up a “theoretical” situation, and marks it as remote from actuality;
- the apodosis takes the theoretical situation on to a further outcome, marking it with some degree of probability (p. 252)

Therefore, the working definition of conditional form (not\(^1\) meaning) to be used in this paper is a point of intuitive agreement among most linguists: it stems from the empirically driven analysis of conditional structures, provided in Declerck and Reed (2001): “a conditional is a two-clause structure in which one of the clauses is introduced by if (possible preceded by only, even or except) or by a word or phrase that has a meaning similar to if, only if (e.g., provided) or except if (viz. unless).” (p. 9). An example of such basic conditional structure would be the following:

(a) If you do this, people will know it.

\(^1\) Emphasis added – NJ.
(b) *If he had been there, this wouldn’t have happened.*” (Wierzbicka., 1997, p. 37)

Both sentences reflect the prototypical *if P, then Q* conditional form, the first (subordinate) clause in each sentence being introduced by *if*, and followed by a head clause that very generally outlines the consequences of conditions stated in the first clause.

However, as it has been stated above, the presence of *if* (or another conjunction in a similar role) and the relatively superficial formal characteristics (two clauses) of conditionals seem to be the only certain things researchers generally agree upon. Prototypically, conditional constructions have been used to reflect hypothetical thoughts and thus appear to be a characteristic element of human reasoning and decision-making, naturally flexible and mobile processes (Evans & Over, 2004; Wierzbicka, 1997, among others). Since human thinking patterns are quite complex and involve multiple domains of human activity and functionality (such as logical, linguistic, psychological, epistemological, etc.), the meaning of conditionals naturally lends itself to analysis from numerous perspectives: similarly to “chameleons, they take on the colour suggested by their surroundings” (Johnson-Laird, 1986, p. 73). Finally, the fact that conditionals are constituted of multiple linguistic elements implies that the interpretations and approaches to the analysis of conditionals can be built up compositionally from the interpretations of the individual constituents (Ibid.). The meanings of such constituents (as well as of the conditional phrase as a whole) can also change depending on a specific discourse context or pragmatic environment in which they are positioned.

One of the most common typologies of conditional sentences that many researchers adopt is the tripartite system based on the degree of factuality of the events encoded in
each of the two clauses: it can be applied to English, as well as to the Romance languages (Harris, 1986); in other words, it seems to at least partially reflect cross-linguistic patterns\(^2\). Such a system is also the most prevalent one in ESL textbooks and materials (see a more detailed discussion of ESL/EFL materials further in this document); however, despite its relative popularity it has a number of conceptual problems.

According to Taylor (1997, pp. 301-302), the three key conditional types are the following:

1) **Factual** conditionals, also referred to as ‘real’ or portraying the ‘realis’ sphere (Harris, 1986; Schwenter, 1999): the content of the if-clause is presumed to be the case, i.e. presumed to be real and true. An example of such factual conditional sentence would be: “If prices go up, I sell my car” (Werth, 1997, p. 243), where the content of the if-clause refers to a habitual action fully grounded in reality. This kind of conditional often includes present tense in the if-clause and present or future tense in the main clause.

2) **Hypothetical** conditionals, also known as ‘potential’, or portraying the ‘irrealis’ sphere (Harris, 1986; Schwenter, 1999), in which the content of the if-clause is regarded as a possibility, “neither in accordance with reality, nor necessarily inconsistent with it” (Taylor, 1997, p. 302): using another example from Werth (1997) – “If prices went up, I would sell my car” (p. 244), where the rising of prices may or may not happen in reality, but the possibility strongly exists. The sequence of tenses for hypothetical conditionals usually includes past tense in the if-clause and a

\(^2\) Since this paper is primarily concerned with the English language data, typologies of conditionals based on the data from other languages are not going to be included into current analysis.
modal such as (but not limited to) *would* accompanied by a base verb form in the main clause.

3) *Counterfactual* conditionals, also known as ‘irrealis’ or ‘unreal’: “the content of the if-clause is presumed to be not the case” (Taylor, 1997, p. 302) and is generally regarded as contrary to the fact and to current state of the world; this category also includes situations that are clearly not possible. An example of a counterfactual conditional would be the following: “*If prices had gone up, I would have sold my car.*” (Werth, 1997, p. 245). Accordingly, the *if*-clause in counterfactual conditional usually includes a verb in past perfect tense, while the main clause includes a *would* (or another modal) combined with the perfect form of the verb.

While such a typology may look relatively clear on the surface (especially when combined with fairly straightforward examples), the general state of things immediately starts looking muddier if the data are expanded a bit. For instance, if we look at the following two sentences, keeping in mind the information provided in parentheses:

*a.* *If he said that (and we heard him say it!), he’s a liar.*

*a.* *If he said that, he’d be a liar.* (Taylor, 1997, p. 302)

we will notice that the same *if*-clause in *a.* and *b.* can be interpreted as either factual or hypothetical, depending on the context and what is inferred outside of linguistic forms within the sentence.

The following two sentences reveal another complicating aspect of conditional sentence types (Taylor, 1997, p. 302):
b. If he had seen your photograph before, then of course he was able to recognize you. (implies “he had seen your photograph before”)

c. If he had seen your photograph before, he might have been able to recognize you. (implies “he had not seen your photograph before”)

The exact same if-clause in c. and d. can be interpreted as either factual or counterfactual, depending on what is known about the referent of “he.” Accordingly, the degree of likeliness of a certain occurrence can essentially move along the hypotheticality spectrum between the polar ends of complete certainty (factuality) and counterfactuality. The exact interpretation of the degree of hypotheticality conveyed by each conditional sentence seems to be directly dependent on the context and on the information that lies outside the realm of linguistic coding. As Taylor (1997) notes, sometimes the differences in interpretation can be conveyed by devices as subtle as intonation; in these instances, ways to code such differences do not always exist in writing.

While the above typology is based on the criterion of degree of reality of the information encoded in the if-clause, other criteria can also be used to distinguish between different types of conditional constructions. For example, Athanasiadou and Dirven (1997) suggest differentiating between different types of conditionals based on the kind of relationship between the two clauses. They use a tripartite division that looks quite distinct from the more traditional typology of factual, hypothetical, and counterfactual conditionals:

1) course of events conditionals, in which two regularly co-occurring events or states are reported: If there is a drought like last year, the eggs remain dormant.
2) hypothetical conditionals, which show a causal dependency relation: *If the weather is fine, we’ll go for a swim.* Hypothetical conditionals appear to be most wide-spread across a number of the English language corpora.

3) pragmatic conditionals, expressing the relationships not covered by the first two conditional types: *If you are thirsty, there’s beer in the fridge.*

(Athanasiadou & Dirven, 1997, p.61)

The advantage of this categorization is its use of the pragmatic meaning of conditionals, which is not taken into account by the previous categorization. However, such a pragmatic category seems to include a very wide variety of sentence types just by mere stipulation of everything not covered by the first two categories. For instance, Declerck and Reed (2001) include the following examples that could be classified as pragmatic conditionals:

- *If you think your bike is bad, you should try mine!*
- *If you’re looking for Tom, he’s in the shed.*
- *That’s a lovely tie, if you don’t mind me saying so.*
- *If the truth be told, she really didn’t want to go to the play.* (Ibid., p. 5)

These examples potentially cover a wide, heterogeneous range of pragmatic conditional sentences (Declerck & Reed, 2001). Also, it seems that the distinction used to separate the first two categories (i.e., relationship between the first two clauses) is different from the criterion (context of use and/or additional discourse meaning load) differentiating between the first two categories and the third category. Finally, the relationship between the two clauses can often be ambiguous and not exactly conducive to straightforward categorization (consider, for example, the sentence: “If you are
brining drinks to the party, I am bringing snacks” – the events in these clauses can be interpreted as both co-occurring and causally related to each other, so it would be challenging to determine the exact category). Thus, these areas of potential confusion make this typology difficult to transfer into the L2 learning context.

Last but not least, Sweetser (1990) proposed a functionally-based typology of conditionals in accordance with functional domains in which they are used.

1) **Content** conditionals: their key function is to make a prediction about the external sociophysical world, and the *if*-clause postulates a specific situation. This category would essentially combine hypothetical and counterfactual conditionals in one conditional subtype.

   *If prices go up, I’ll sell/I sell my car.*
   *If prices went up, I’d sell/I sold my car.*

2) **Epistemic** conditionals include an inference in the *if*-clause, and the main clause provides basis for inference.

   *If he sold his car, then prices went up/ must have gone up.*

3) **Speech-act** conditionals: speaker performs a speech-act in the *if*-clause, while the main clause makes the speech act relevant:

   *If you don’t mind me saying so, you can sell your car.*

Sweetser’s typology is based on the criterion of primary metaphor: the content domain is assumed to be the most basic to human experience, and the other two subtypes are linked to the content domain via metaphorical connections that provide foundations for inference and speech acts. This typology is superior to others in the sense that it provides a consistent framework for understanding conditionals in different functional contexts.

---

3 I continue to use examples from Werth (1997) for greater degree of consistency and comparability between typologies.
highlights both different forms and contexts of use, but it is also least popular or least well known across the field so far, and therefore, it has not really been incorporated into many pedagogical and L2 learning sources. The difficulty of transferring this typology into an L2 context lies partially in the use of many specialized concepts and terms (such as “epistemic,” “speech act,” etc.) that are likely unfamiliar and somewhat challenging for an average L2 learner. Thus, significant adaptations would need to be made first before the advantageous, functional elements of the analysis can be brought into the classroom.

Schwenter (1999) demonstrates how the predominant conditional typology (factual, hypothetical, counterfactual) can be combined with the functional typology of Sweetser, thus trying to simultaneously address both types of differentiation criteria.

Table 1
Cross-classification of Conditionals by Typological Parameter (Schwenter, 1999, p. 16)

<table>
<thead>
<tr>
<th>Content</th>
<th>Epistemic</th>
<th>Speech-Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factual</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Hypothetical</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Counterfactual</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

While this combination of the two typologies is an elegant methodological solution for highlighting the overlap between the conditional types highlighted by each of the two typologies, presenting multiple terminological systems to address the complexities of a given grammatical category is usually a sure way to confuse the learner. In general, such an overview would require extensive explanation in regard to both terminological
traditions that are incorporated into it and would thus likely make the transfer into an L2 context quite challenging, if not impossible.

Due to a number of criteria that can be used to explain conditionals and the relation between the two clauses within them, there also exist other categorizations of conditionals, each promoting one or two particular aspects of the structure, while shadowing the rest (among others: Fulcher, 1991; Katis, 1997, Partington, 1998; Schachter’s, 1971; etc.). For reasons of space and relevance for current research, these classification systems will not be analyzed here; rather, their existence is yet another piece of proof demonstrating the complexity of the conditional structures and multiple ways to differentiate between them.

Overall, it seems that major existing typologies are by no means fully comprehensive or precise in representing various types of conditional phrases, offering at best a rather schematic and somewhat simplified view of different structural trends in conditional structure. Accordingly, before delving into the theoretical research on conditionals in search of potential solutions, it would be useful to further examine how conditionals are represented in L2 learning sources in order to be able to further consult the theoretical literature in a more focused and guided manner.

2.2. Representation of conditionals in applied linguistic sources and textbooks: common problems

Not surprisingly, current representations of conditionals in English pedagogical grammars and L2 textbooks generally “provide highly oversimplified information”
(Celce-Murcia and Larsen-Freeman, 1999, p. 545). A typical treatment of conditional forms most frequently provided in textbooks is summarized in Werth (1997, p. 245):

Table 2
Formal Terminology (ESL/Traditional) of Conditionals

<table>
<thead>
<tr>
<th>Conditional</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Conditional I</strong></td>
<td><em>If prices go up,</em></td>
<td>I’ll sell my car</td>
<td>/ I sell my car.</td>
</tr>
<tr>
<td></td>
<td>Present</td>
<td>Future</td>
<td>/ Present</td>
</tr>
<tr>
<td><strong>Conditional II</strong></td>
<td><em>If prices went up,</em></td>
<td>I’d sell my car.</td>
<td>“Conditional”</td>
</tr>
<tr>
<td></td>
<td>Past simple</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Conditional III</strong></td>
<td><em>If prices had gone up,</em></td>
<td>I’d have sold my car.</td>
<td>“Conditional perfect”</td>
</tr>
<tr>
<td></td>
<td>Past perfect</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Such classification has a superficially descriptive role: it bases the distinctions in the types of conditionals solely on tense differences, creating a deceptively simplistic view of conditional structure per se, such a representation can be misleading for the learner: for instance, conditional II, also frequently referred to as expressing “unreal condition in the present,” essentially describes the present situation (hypothetical selling of the car) but using the past tense. In other words, this kind of typology has a clear discrepancy between form and meaning; however, this disadvantage is not usually addressed in any meaningful way by the accompanying explanations, and learners are essentially asked to imitate the examples they see in the book without gaining a deep understanding of the structures they are asked to produce. Labeling the conditionals as I, II, and III does not provide much insight into their interpretations, either.

Also, such a classification does not provide an explanation of how exactly conditionals may be used in a variety of contexts, nor does it provide a clear link between different conditional types and their corresponding semantic motivations, or the exact
linguistic environments where one type of conditional might be preferred over others (Meunier, 2008). Moreover, a recent study based on corpus findings (Gabrielatos, 2003, cited in Meunier, 2008), that compared the traditional English language teaching terminology of conditional clauses against corpus evidence, found that 55% of the authentic corpus examples did not fit into the core ELT typology. Examples that were produced in naturally-occurring contexts were found to be much more varied and complex in the sense that they included tense combinations and sequences that were not captured by the traditional typology. In other words, the traditional typology appears to be schematic at best and misleading and imprecise at worst.

Nevertheless, despite multiple shortcomings and such a limited understanding of conditionals, this classification continues to be widely used in ESL and EFL contexts. To illustrate the true scope of the problem, ten recent (published within the last five years) grammar ESL/EFL textbooks were analyzed for their coverage of conditionals, with a specific focus on the balance (or lack thereof) between form and meaning. It has to be mentioned upfront that all of the textbooks reviewed used the traditional ESL typology of conditionals indicated above, which is the why the typological aspect per se will not be analyzed in the discussion below.

After a preliminary analysis, two general trends in representation of form and meaning of conditionals became apparent:

1) Representation of conditionals is schematic and divided into chunks: i.e., only one subtype of conditional structure is presented at a time, without any references to other subtypes of the same general construction. In other words, learners do not get a very balanced view of the meaning of conditionals as a regular construction. While the overall
complexity of conditionals certainly justifies gradual introduction of different conditional forms, it seems that if only one form is referenced at a time (with absolutely no mention of other similar forms and thus with no attempts at a generalization), learners receive a fragmentary and somewhat sketchy picture of the nature of conditional construction. Also, the primary focus in representation of such chunks of conditional constructions is almost exclusively on form, rather than on meaning. To illustrate how exactly such limited focus looks in practice, a number of examples taken from recent textbooks are provided below.

Here is an example of how past conditionals (also referred to as counterfactuals) are treated in the Touchstone series, Level 4, Cambridge University Press (2006) (notice that no reference to other types of conditionals is included, i.e. learners are not encouraged to create a “big picture” of conditional structures and thus not encouraged to generalize conditional rules and patterns):

“You can use sentences with *if* to talk hypothetically about the past. Use the past perfect form in the *if* clause and a past modal in the main clause.

**If + past perfect**

*Past modal would have, might have, could have,* etc.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>If Watson had stayed in school, different.</td>
<td>If Watson <strong>had stayed</strong> in school, <strong>maybe he would have done</strong> something entirely different.</td>
</tr>
<tr>
<td>If he hadn’t won the talent contest, singer.</td>
<td>If he <strong>hadn’t won</strong> the talent contest, <strong>he might not have had</strong> the confidence to become a singer.</td>
</tr>
<tr>
<td>If he had continued his education,</td>
<td>If he <strong>had continued</strong> his education, <strong>he could have gotten</strong> formal music training.”</td>
</tr>
</tbody>
</table>

As can be seen from this explanation, only a cursory mention of the conditional meaning (“talk hypothetically about the past”) is included in the explanation provided in this book, with the rest of the explanation and examples focusing exclusively on form.
A slightly more detailed explanation of conditional meaning is given in the *Grammar Connection* series, level 2, edited by Celce-Murcia and Sokolik and published by Thomson & Heinle (2008) – this example concerns factual conditional statements, also referred to as present conditionals elsewhere:

**If Clause in the Simple Present Tense**  **Secondary Clause in the Simple Present Tense**

**If/when**  I *want* information quickly,  I *go* to the Internet.

**Notes:**

- Use real conditionals to talk about facts and routines. Examples: *If you don’t have a computer, you can’t use the Internet. If I arrive at school early, I go to the computer lab.*
- When you begin your statement with the *if* clause, put a comma (,) after that clause.
- Factual conditionals can start with the secondary clause: Example: *I go to the Web when I want information quickly.*

(p. 168)

However, the discussion of meaning is still limited to the mention of “facts and routines” which is not truly helpful for the learner in the sense that “facts and routines” is a very general statement and does not highlight more specific speaker choices and/or situations where the use of conditionals might be appropriate or even necessary.

The same series (*Grammar Connection*, level 3) provides the following description of the future conditionals:

**“Future Conditional with If Clauses**

**Notes:**

- The condition is stated in the *if* clause (dependent clause). The result is stated in the main clause.
- Both clauses are about the future, but use the present tense in the *if* clause:
  Incorrect: If it will be cold, you’ll wear a sweater or a jacket.
  Correct: If it is cold, you’ll wear a sweater or a jacket.
- When the *if* clause comes first, use a comma. When it comes second, omit the comma.”

(p. 110)
The latter two examples have a number of shortcomings: first of all, the conditional structure itself is not treated with any meaningful depth, its essence being reduced to “facts and routines” or “condition and result” in the first and the second examples respectively. In fact, more attention is paid to formal, rather than semantic aspects of these structures: i.e. learners get quite a bit of information on how to position the commas and clauses in relation to each other, as well as which tenses should be used in each clause. However, the choice of tenses is not explained in depth, and it essentially remains up to the learners to figure out why the grammatical patterns are the way they are in these two conditional subtypes. Subsequent exercises provided in the book also offer a very controlled and limited context for practicing the newly introduced conditional forms, such as:

“Directions: Complete each sentence with a condition (if clause) or a result (main clause). Add correct punctuation.
1. If clouds become too full with water, it will rain____.
2. We will have a drought _______________________.
3. If ice fills up the clouds _______________________.”, etc.

(Celce-Murcia & Sokolik, 2008, p. 110)

It seems unlikely that upon completing this mechanistic “fill-in the blanks” activity, learners will be able to grasp how to use conditional structures outside this very limited context of a textbook exercise.

Yet another way to characterize conditionals is provided in the commonly used ESL textbook series Grammar in Context (Elbaum, 2005): for instance, the following characterization is given to the unreal conditions in the present (corresponding examples are omitted for reasons of space):
“An unreal condition in the present describes a situation that is not real now. Use a past form in the if clause and would or could + base form in the main clause.

All pronouns except it can contract with would: I’d, you’d, he’d, she’d, we’d, they’d.

Were is the correct form in the condition clause for all subjects, singular and plural. However, you will often hear native speakers use was with I, he, she, and it.

We often give advice with the expression “If I were you…”

We use what if to propose a hypothetical situation.

When we make a question with conditionals, the if clause uses statement word order. The main clause uses question word order.

**Punctuation note:**
When the if clause precedes the main clause, a comma is used to separate the two clauses. When the main clause precedes the if clause, a comma is not used.”

As it becomes clear from reviewing these examples, the meaning component of this structure is reduced to the mention of “unreal condition in the present” and “situation that is not real now” – both characterizations being quite vague and imprecise for the learner to begin generalizing this rule into other contexts of use. While the matter of form receives more attention than the meaning, its representation is also incomplete, as the grammatical categories contributing to the formation of conditionals, i.e. verb tense and aspect, are given very cursory treatment, and learners are essentially asked to imitate the examples provided in the textbook rule descriptions without truly understanding what they mean. Also, the representation of examples takes place completely outside of context, and learners are not given the tools to generalize the textbook rules and use them in more extended discourse contexts, other than the very narrow-focused and highly specific textbook exercises.
Last but not least, it seems that the relatively less important formal aspects (i.e., proper punctuation) receive more attention than the meaning and pragmatic components; it seems that the authors of such materials find it easier to describe comma placement rather than delve into the complexities of the conditional system.

2) The other trend in the textbooks’ representation of conditionals demonstrates somewhat more complete attention to the variety of conditional forms at the general level. In this case, a number of parallel conditional forms are included into a systematic representation of some kind. A comprehensive chart, for example, is presented in the Level 4 book of the Grammar Dimensions series (Frodesen & Eyring, 2007), directed by Diane Larsen-Freeman.

<table>
<thead>
<tr>
<th>Factual conditionals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Truth</strong></td>
</tr>
<tr>
<td>a) If you <strong>are</strong> 65 or older, you <strong>qualify</strong> for senior citizen discounts.</td>
</tr>
<tr>
<td><strong>Factual Conditionals</strong></td>
</tr>
<tr>
<td><strong>Habitual Present</strong></td>
</tr>
<tr>
<td>b) If my great-grandfather <strong>comes</strong> over, we usually <strong>go</strong> to the park.</td>
</tr>
<tr>
<td><strong>Habitual Past</strong></td>
</tr>
<tr>
<td>c) When my mother was young, if relatives <strong>visited</strong> on Sunday, they <strong>stayed</strong> all day.</td>
</tr>
<tr>
<td><strong>Inference: Explicit</strong></td>
</tr>
</tbody>
</table>
must have missed the train.

**Inference: Implicit**

e) If that is grandmother on the phone, she is still in Connecticut.

explicit or implicit. In explicit inference, the main-clause verb includes the modal *must* or *should*.

f) If my great-grandmother *comes* tomorrow, we *may go* to a restaurant.

**Future Conditionals**

These conditionals describe future events.

**Present Hypothetical**

g) If we *lived* closer to our grandparents, we *would see* them more often. (We don’t live closer to our grandparents; we don’t see them as often as we would like to.)

h) If my great-grandmother *were* alive today, she *might not approve* of the tattoos that many young people have.

**Hypothetical Conditionals**

The present hypothetical conditional describes conditions that are untrue or hypothetical.

**Past Hypothetical**

i) If my great-aunt *had been born* about 50 years later, she *might have been* a doctor instead of a nurse.

Past hypothetical conditionals describe conditions and results that were unreal or untrue in the past.

(Frodesen & Eyring, 2007, p. 282)

A separate chart with the summary of verb tenses used with conditional sentences follows the layout of conditional explanations presented above. Such a classification clearly echoes the analysis provided in Celce-Murcia and Larsen-Freeman (1999; to be analyzed more specifically in a later part of this chapter), carrying most of its features. Such an approach to representation of conditionals, i.e. fuller representation of conditional subtypes in one comprehensive chart and with a greater degree of attention to
the connections between them, does provide for a more comprehensive overview of the system. However, while definitely being more encompassing than the approaches listed in the first category of textbooks, such a representation is still very far from being complete, as it does not provide a context-based overview of the conditional meanings and clear rules of its use in various contexts. Also, while some information regarding the pragmatic uses (such as “used in sciences to describe physical laws”) of conditional uses is present, not all of the conditional types are given the complete treatment, and the existing pragmatic characterization is conveyed in a very schematic and somewhat incomplete manner. Finally, the chart gives an idea that the tenses and verb choices used in the present examples are the only possibilities of correct use, which is simply not true: for instance, the sentence expressing explicit inference in habitual past (If that was grandmother on the phone, she must have missed the train), does not have to include must or should. Other modal verbs in place of should or must would also be grammatical – albeit, the sentence would then be conveying a slightly different meaning. In addition, the distinction between implicit and explicit inferences seems rather vague: the learner is not provided with explanations for each kind; nor is it demonstrated how conditional structure contributes to creation of the inference per se. In other words, while such a classification provides a much wider range of connections between different types of conditionals, it also does so in a somewhat awkward manner, as it gives rises to a variety of questions that do not get answered and thus ultimately cause more confusion for the learner.
To summarize the treatment of conditionals across current textbooks, an overview of ten recent textbooks is presented in the table below, with a specific focus on different aspects of conditional meanings listed.

Table 3
Representation of Conditionals in Recent ESL/EFL Textbooks

<table>
<thead>
<tr>
<th>Textbook title, author, year</th>
<th>Formal aspects addressed</th>
<th>Specific types of conditionals included</th>
<th>Use/function addressed</th>
<th>Conditional meaning at large addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Grammar Form and Function, book 3</em> (Broukal, 2005)</td>
<td>Tense, aspect, clause structure</td>
<td>Real conditional, unreal conditionals, mixed conditionals, conditionals without if</td>
<td>Partially addressed (e.g., general fact that is always true, contrary to fact situation)</td>
<td>Partially</td>
</tr>
<tr>
<td><em>Touchstone</em>, book 4, (McCarthy, McCarten, &amp; Sandiford, 2006)</td>
<td>Tense, aspect, clause structure</td>
<td>Hypothetical questions about past (in reference to counterfactuals)</td>
<td>Not addressed</td>
<td>No</td>
</tr>
<tr>
<td><em>Grammar Dimensions</em> (Frodesen &amp; Eyring), 2007</td>
<td>Tense, aspect, clause structure</td>
<td>Factual, future, hypothetical</td>
<td>Partially addressed (general truth, habitual present)</td>
<td>Partially</td>
</tr>
<tr>
<td><em>Focus on Grammar</em>, book 3 (Fuchs, Bonner, &amp; Westheimer, 2006)</td>
<td>Tense, clause structure</td>
<td>Hypothetical</td>
<td>Not addressed</td>
<td>No</td>
</tr>
<tr>
<td><em>Focus on Grammar</em>, book 5 (Spack Koch, 2006)</td>
<td>Tense, aspect, clause structure</td>
<td>Real and unreal conditional in the present and future</td>
<td>Partially addressed</td>
<td>No</td>
</tr>
<tr>
<td><strong>Grammar connection, book 3</strong> (Celce-Murcia &amp; Sokolik, 2008)</td>
<td>Tense, clause structure</td>
<td>Future conditional (condition and result)</td>
<td>Not addressed</td>
<td>No</td>
</tr>
<tr>
<td><strong>Grammar in Context, book 3</strong> (Elbaum, 2005)</td>
<td>Tense, clause structure</td>
<td>Unreal and real conditions in the present and past; real vs. unreal</td>
<td>Partially addressed (e.g., real possibility in the future)</td>
<td>No</td>
</tr>
<tr>
<td><strong>Grammar Sense, book 4</strong> (Kesner Bland, 2008)</td>
<td>Tense, clause, structure</td>
<td>Present real conditionals (timeless and possibilities), future real conditionals, past real conditionals, present/future and past unreal conditionals</td>
<td>Partially addressed (functions provided for every conditional type, e.g., “imaginary conditions and results, alternative outcomes to past events and situations,” etc.)</td>
<td>Partially addressed (by tense distinctions)</td>
</tr>
<tr>
<td><strong>Understanding and Using English Grammar (4th ed.)</strong> (Azar &amp; Hagen, 2009)</td>
<td>Tense, aspect, clause structure</td>
<td>True in the present/future, untrue in the present/future, untrue in the past</td>
<td>Partially addressed: e.g., “desired or predictable results,” “true, factual ideas”</td>
<td>Partially addressed</td>
</tr>
</tbody>
</table>

To sum up, it appears that the majority of textbooks primarily address the form rather than the meaning of conditionals, generally following the traditional ESL typology. The descriptions present in the textbooks are usually detached from the natural contexts of conditional use. Even the materials from the second category (i.e., those that demonstrate a slightly greater amount of attention to the conditionals’ general meaning), convey the meanings of conditionals as disconnected from each other and not stemming from the same semantic root. In sum learners of English using even the better of the textbooks
discussed above would not get a comprehensive and thorough understanding of the category and its semantic core.

One could argue that learners should consult English grammars rather than textbooks to gain a complete understanding of how conditionals work or, alternatively, that teachers are likely to consult grammar books and fill in the gaps left by the textbooks. For that reason, two recent editions of classic ESL grammars were consulted: the 1999 edition of Celce-Murcia and Larsen-Freeman’s “The Grammar Book” (designated for ESL/EFL and, accordingly, providing a fuller overview of grammatical forms than those available in textbooks) and the 2002 edition of pragmatically-oriented “Communicative grammar of English” by Leech and Svartvik.

Celce-Murcia and Larsen-Freeman (1999) define conditional phrases in the following way: “A conditional sentence is a complex sentence that consists of a main clause and a subordinate clause; the latter typically begins with the adverbial subordinator if” (p. 546). Even though this definition is structurally sound, it does not provide a good starting point for understanding the conditional meaning, as it does not address any semantic components involved in conditional phrase formation.

Further on, Celce-Murcia and Larsen-Freeman suggest that conditional constructions can be divided into three major categories: factual, conditional and imaginative. The specific details pertinent to each category are represented below (table reconstructed from Celce-Murcia and Larsen-Freeman, 1999, p. 548):
According to Celce-Murcia and Larsen-Freeman, imaginative conditionals are the most problematic for L2 learners, as it is difficult for them to capture the distinction between realistic and unrealistic consequences of the *if*-clause and express such a relationship through appropriate choice of grammatical forms (in particular, correct tense and aspect).

While this categorization definitely represents conditionals as a more complex category and reports a great deal more of conditional meaning nuances than usually provided in ESL/EFL textbooks, such categorization seems to be not very easily transferable into an L2 learning environment. For instance, the distinction between “strong” and “weakened” condition and result in future/predictive conditionals seems to be quite arbitrary in the sense that the relative degree of strength can be understood in different terms by different people. Also, most of the examples are detached from context even in this relatively more comprehensive representation of conditionals than the kind predominant in the majority of L2 textbooks, and thus, it may be challenging for learners to generalize the patterns stated above into some new discourse contexts.

Unlike Celce-Murcia and Larsen-Freeman (1999), who focus on the intersections of form and meaning in conditionals, Leech and Svartvik (2002) primarily address the conditional meaning, defining the main characteristic of conditional clauses as

<table>
<thead>
<tr>
<th>Factual</th>
<th>Future (predictive)</th>
<th>Imaginative (i.e., subjunctive)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeless</td>
<td>Time-bound</td>
<td>Strong condition &amp; result</td>
</tr>
<tr>
<td>Generic</td>
<td>Habitual</td>
<td>Implicit inference</td>
</tr>
</tbody>
</table>

| Table 4  |
| A Semantic Hierarchy of Conditional Sentence Types |
“discussing the consequence of something which may or may not be a real event” (p. 110). Such a definition appears to be generally accurate as far as communicative meaning of conditional phrases is concerned; however, it completely lacks structural characteristics, as well as any implications as to how conditionals may be used in different contexts. Further on, Leech and Svartvik differentiate between two types of conditionals: open and hypothetical. An example of open conditional phrase would be the following: “I’ll lend Peter the money if he needs it” (p. 110); the reason for describing this type of conditional as ‘open’ is the unknown status of truth of the situation described. A hypothetical conditional is defined in accordance with the assumed falsehood or unlikelihood of what is described in the conditional clause, e.g.: “I would lend Peter the money if he needed it” or “I would have lent Peter the money if he had needed it” (p. 111). In other words, tense and aspect distinctions between the last two examples do not function as a distinctive factor for this kind of classification. This classification essentially lumps together the hypothetical and the counterfactual conditionals, while also blurring any structural and meaningful distinctions between the two, which is likely to be utterly confusing for any ESL/EFL learners using this resource. Also, various contextual and pragmatic meanings of conditional phrases are lost or ignored in the simplicity of this classification; hence, the picture portrayed here is not as full and solid as the language reality suggests.

In the next section, I will attempt to summarize the overall difficulties learners may experience when acquiring English conditionals.
2.3 Why conditionals are problematic for L2 learners

According to Celce-Murcia and Larsen-Freeman (1999), a number of factors contribute to the difficulty of conditionals for L2 learners. First, because conditionals are a syntactic structure consisting of two clauses, the syntactic aspects of subordination do not make them easy to acquire. Secondly, the variety of types and contexts (as discussed earlier in the section on conditional typologies) in which conditionals are used are not adequately captured in typical ESL/EFL sources. The result may be that, in order to interpret the conditionals they encounter in natural discourse, learners may create their own set of rules and these may very well be faulty. While such a method might work in an ideal world where rich input is steady and the exposure to the conditional structures is regular and meaningful, such a learning environment remains an out-of-reach ideal for the majority of L2 learners, especially those in an EFL setting. Moreover, decoding conditional meanings from context and trying to internalize them into one’s interlanguage may be a very time-consuming learning strategy, also potentially confusing and frustrating. Finally, before one can tackle the issue of correct formation of conditionals, a number of other grammatical items need to have already become a part of one’s interlanguage: i.e., workings of tense and aspect, as well as modal auxiliaries and negation. Tense, aspect and modal auxiliaries all represent difficult areas for learners of English; accordingly, the presence of such internally complex building blocks makes successful acquisition of conditionals even more challenging.

To highlight these problems more specifically, it will be useful to again focus on examples that are generally included in typical ESL terminologies (the chart is reconstructed from examples given in Werth, 1997):
Table 5
Traditional Classification/Terminology of Conditionals

<table>
<thead>
<tr>
<th></th>
<th>If prices go up, Present</th>
<th>I’ll sell my car/ I sell my car Future Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2)</td>
<td>If prices went up, Past simple</td>
<td>I’d sell my car. “Conditional”</td>
</tr>
<tr>
<td>3)</td>
<td>If prices had gone up, Past perfect</td>
<td>I’d have sold my car. “Conditional perfect”</td>
</tr>
</tbody>
</table>

While sentence 1) traditionally signifies “real” conditions, sentences 2) and 3) refer to “unreal” conditions in the present and past correspondingly. The discrepancy between the past tense of the verb in 2) and the “present” meaning designation is likely going to be confusing to second language learners; the textbooks, unfortunately, do not usually address this discrepancy in any meaningful way.

Also, there are a variety of uses of conditional phrases that do not fit into the above categorization and thus, might make the category of conditionals even more confusing to the learners. One of the sentence types is the simplest English conditional sentence type cited in Celce-Murcia and Larsen-Freeman (1999, p. 545), referring to habitual actions:

“If you boil water, it vaporizes.
If Bobby goes swimming, he catches a cold.”

The discourse functions of the if-structures in the above phrase are clearly different from the ones included into traditional classification, so it remains unclear how traditional ESL materials would convey the knowledge of such phrases to learners.

Finally, while the above categorization suggests that “would” and “will” should not be used within if clauses, the reality is different: phrases such as “If prices will (just) go
“up, I will sell my car” are often used in the colloquial speech of native English speakers from North America (Werth, 1997).

The studies on the second language acquisition of English conditionals are very few and do not offer any uniform conclusive evidence, other than the general idea that conditionals appear to be quite difficult for ESL learners. Celce-Murcia and Larsen Freeman (1999) cite a study by Covitt (1976) that found conditionals to be one of the most serious teaching problems due to, on the one hand, oversimplified explanations, and on the other hand, a very complex form, meaning, and time-tense relationship. Hwang (1979) demonstrated that simple, present tense conditionals are harder to interpret for L2 learners than future tense conditionals; also, learners seem to confuse hypothetical and counterfactual conditionals. Chou (2000) tried to approach the complexity in acquisition of conditionals aiming to be able to predict the acquisition order of conditionals according to their syntactic complexity. However, Chou’s results did not offer a comprehensive picture of any patterns that may be present in the acquisition of conditionals, and accordingly, her lack of definitive findings regarding the order of grammatical categories to be acquired leaves the question of potential sequencing of grammatical forms contributing to construction of conditionals completely unanswered. Other than what has been done in these few studies, the issue of L2 acquisition of conditionals has been ignored in previous literature.

In general, previous research has not yet presented a comprehensive picture of how conditionals are acquired; nor have any adequate and focused pedagogical interventions been designed to address various difficulties encountered in instruction of conditionals. They remain a difficult learning target due to the complex levels of interactions between
forms (verb tenses/moods and syntactic structure) and meanings conveyed through those forms (cause and effect, hypotheticality, counterfactuality, etc.).

To help shed light on possible solutions for the pedagogical problems, it would be helpful to consult linguistic research on the nature of conditionals and examine whether any insights from it can be borrowed to help address the problem of representation of conditionals in ESL contexts.

In the next section, I briefly discuss semantic and philosophical approaches to the analysis of conditionals with the goal of determining their potential applicability for second language learning contexts.

2.4 Formal semantic approaches to the analysis of conditionals

As a rule, formal semantic approaches to the analysis of conditional structures assume the perspective of possible worlds and use notations from formal logic. This theoretical approach stems from the 1960s and 1970s through the seminal publications of Stalnaker (1968), Lewis (1973), and Pollock (1976), among others; more recently, significant formal semantic contributions to research on conditionals include Horn (2000), Jackson (1991), Woods (1997), etc. The underlying premise in this line of research bases the meanings carried by the two parts of a conditional construction on the idea of ‘possible worlds’. Using traditional notations of $P$ and $Q$, “we look at that world in which $P$ is true which is most like the real world, and we see whether $Q$ is true in it” (Pollock, 1976, p. 14). Furthermore, correlations between the possible worlds represented by $P$ and $Q$ are analyzed in this tradition using a wide range of notations characteristic of formal logic, e.g.:
2.4.1 \( \Gamma \rightarrow P \) iff every possible world making all of the sentences in \( \Gamma \) true makes \( P \) true.

2.4.2 \( Q \rightarrow P \) iff \( \{Q\} \rightarrow P \)

(Pollock, 1976, p. 19)

An approximate “translation” of the formal notations above would be the following: condition in sentence \( Q \) will cause the result in sentence \( P \), if certain characteristics of the world of \( Q \) are true and consistent with similar and/or corresponding characteristics of the world of \( P \). This example captures how the realities conveyed through \( P \) and \( Q \) respectively correlate with each other, as well as what the underlying conditions for compatibility between the realities of both worlds are. Even though conditional phrases are a linguistic category, this formal logic notation does not really capture the presence of linguistic forms or context characteristics in any way.

If we do not use formal logic notation, the relationship between the two prototypical clauses of a conditional and the corresponding worlds they project can be expressed in the following manner:

“If \( A \) then \( B \)

is true if and only if

Every one of a number of ways in which \( A \) can be true constitutes, or carries with it, a way of \( B \)’s being true.” (Kamp, 2002, p. 198)

Yet another way to address the focus of formal semantic research on conditionals would be to highlight the issue of truth-values of \( P \) and \( Q \) in relation to each other, or to possible worlds they were each projecting. The truth conditions of natural language conditionals are equated with those of the mathematical conditional, which, accordingly, lends itself to the analysis from mathematical-logical perspective (Jackson, 1991). The
following is an example of treatment of different parts of the conditional phrase using truth values and the notion of possible worlds (where T stands for True, F – False, N – lack of a truth-value):

<table>
<thead>
<tr>
<th>If P then Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
</tr>
<tr>
<td>T</td>
</tr>
<tr>
<td>T</td>
</tr>
<tr>
<td>F</td>
</tr>
<tr>
<td>F</td>
</tr>
<tr>
<td>F</td>
</tr>
</tbody>
</table>

This “truth” table represents the truth values of P and Q as interconnected, and that combinations of individual truth values of P and Q produce a number of different truth values for the entire conditional construction.

Even this very brief overview of formal semantic definition of conditionals demonstrates that, in general, formal semantic approaches treat the category of conditionals as a token of an ideal reality and highlight what can be made possible given different configurations of P and Q clauses. In other words, formal semantic approaches analyze conditionals outside of the discourse contexts in which they appear, treating them primarily as instruments of logic rather than as linguistic devices (Schwenter, 1999).

Such a focus makes the semantic analyses of conditionals ill-fitted for use in L2 classrooms or, as Johnson-Laird (1986) aptly summarized: “because the set of possible worlds is infinite in size, it cannot fit directly into an individual’s mind” (p. 63). In other words, since these theories cannot describe the full range of interpretations, L2 teaching materials derived from them would ultimately be faulty at their core.

Thus, insights from logical and philosophical treatments of conditionals do not seem to be directly applicable to the classroom context and thus offer little help for bridging the gap between theory and practice, as far as instruction is concerned.
For the sake of being as inclusive in this review as possible, it has to be stated that there also exist a variety of philosophical approaches to the analysis of conditionals, such as a recent epistemological philosophical analysis of conditionals undertaken by Rescher (2007), or other work concerned with a wide range of philosophical questions relating to conditionals (Bennett, 2003; McLaughlin, 1990). Yet another way to approach conditionals is demonstrated in psychologically-oriented literature (e.g., Evans & Over, 2004) that aims to contribute to psychological theory on hypothetical thinking and psychological bases of hypothetical reasoning in humans. However, while theoretical semantic, philosophical and psychological approaches to the study of conditionals add at least somewhat to our understanding of the logical nature of conditionals and their functioning in certain realms of human reasoning, they do not address the issue of how conditionals are used in real-life linguistic contexts. In other words, these approaches do not cover the linguistic and pragmatic aspects that are so crucial for proper understanding of conditional structures, which makes them ill-fitted for application to second language contexts.

2.5 Non-formal linguistic approaches to the analysis of conditionals

Some of the previous analyses of conditional structure addressed a number of aspects of conditional meaning, but in most cases, the theoretical knowledge presented through such analyses would not necessarily address the problems faced by L2 learners. For instance, Talmy’s early (1978) analysis of conditional constructions was focused on a general tendency in natural languages, where the summative meaning of conditional phrases was framed as the following: “relations between two events are most frequently
expressed by giving the reference point first, and the thing that requires referencing second” (p. 276). While this analysis mirrors the generally accepted principle of: “in a conditional construction, the protasis provides ground, with the apodosis performing the function of figure” (p. 276; it also corresponds directly with the structural definition of conditionals provided by Werth (1997) and cited earlier in this document), it does not promote a more precise understanding of different types of conditional phrases and the difficulties learners may have with their acquisition.

The most comprehensive recent analysis of conditional meanings and forms was done by Declerck and Reed (2001). Not all the conditionals described by Declerck and Reed were addressed in the present study. I will limit my presentation to those aspects used in the classroom materials developed.

Declerck and Reed (2001) produce an exhaustive analysis of conditional forms and meanings. The proposed distinctions between different types of conditionals originate from the authentic data rather than from a single externally imposed overarching criterion per se. The most important distinction is the one between case-specifying and non-case-specifying P conditionals, the former being defined as “conditionals in which the P-clause specifies a case or the case(s) in which the Q-situation actualizes or in which the Q-predication is true” (Ibid., p. 65) and the latter, accordingly, as lacking such specification. The typology for such case-specifying P-conditionals is based upon the idea of possible worlds; however, here the term “possible worlds” loosely refers to different types of reality, rather than to “possible worlds” in the strict formal semantic sense. Such a treatment of original terminology is generally
characteristic of this book: various terms in the book are frequently used outside their original theoretical contexts.

A general list of conditional types (each type has a number of subtypes, omitted here for lack of relevance for present proposal) specified by Declerck and Reed (2001, pp. 65) is provided in the overview below:

• **Factual** (e.g., *If I had a problem, I always went to my grandmother*)

• **Theoretical** (nonfactual): where the P-proposition is not represented as true in the actual world, hence a ‘theoretical world’ is created)
  
  o **Neutral theoretical** (e.g., *Most parents wish the baby to sleep in a separate room if their house or flat is big enough*)
  
  o **Nonneutral theoretical**
    
    ▪ Closed (e.g., *If the work will be done anyhow, I might as well have a lie down*)
    
    ▪ Open (e.g., *If the train is late, we will miss our connection in London*)
    
    ▪ **Tentative** (e.g., *If our train were to arrive late, we might miss our plane*)
    
    ▪ **Counterfactual** (e.g., *If you had been an engineer, you could have solved this difficult problem*)

As can be seen from the list of types and examples, the extent of this typology – even with the additional subtypes omitted – is quite complex (so much so, that the authors even provide an additional glossary at the end of the book to ensure that all the terms can be conveniently looked up if necessary). In addition to level of granularity in regard to
various contexts of conditional use and subtype differences stemming from those contexts, the authors also provide a detailed overview of tenses involved in the construction of conditionals, meticulously explaining how they contribute to the overall meaning. A primary drawback of such analysis is the fact that such highly detailed tense descriptions cannot be readily adapted to L2 learning contexts due to their sheer volume and lack of generalizability.

While this work is extensive as far as the representation of empirical contexts of conditional use is concerned, it does not address the criteria underlying the notion of conditionality per se and the aspects that are central to conditional interpretation. Nevertheless, the discourse based nature of the categorization can definitely inform the pedagogic research on various uses of conditionals in authentic contexts and, as such, represents a major improvement over the ESL texts reviewed here Conceptually, however, the book partially draws on several theories while not really being faithful to any one of them, which results in some overall theoretical discordance rather than conceptual unity (the use of the term “possible worlds” being just one example of this phenomenon). As Dancygier (2003) elegantly put it in her review of Declerck and Reed’s book, “the trees have been described in all their plenitude and variety, but the forest has been overlooked” (p. 30).

While a number of insights from this book certainly seem directly applicable to the second language instruction setting (for example, the clear benefits of this book include the reliance on corpora and a variety of authentic examples that can be transferred directly into materials, as well as the analysis of the varied tense system contributing to felicity of conditionals), the comprehensive representation of conditionals provided by
Declerck and Reed (2001) would be quite difficult to adapt to language classrooms and the needs of the learners. As mentioned above, the analysis provided by Declerck and Reed is not grounded in any explanatory theory, and thus does not really provide the learner with the proper tools to gain a unified and complete understanding of conditional structure. Therefore, in the present work, I utilize empirical insights from Declerck and Reed (2001) but not their theoretical treatment of conditionals.

Overall, I have to agree with Taylor’s (1997) opinion that the study of conditionals has been quite fuzzy and that the variety of categories involved in the making of a conditional construction can seem quite confusing and even overwhelming. Taylor (1997) suggests that “a search for a schematic meaning, common to all members of a category, needs to be complemented by a study of the prototypical instantiations of the category, and of the conceptual links between prototypical and more marginal instances. Conversely, a study of the particularities of category members needs to be supplemented by a more general view of conceptual unity of the category of “conditionality” (Ibid., 305).

It seems that the answer to this agenda is provided in the most recent work by cognitive linguists Dancygier (1998) and Dancygier and Sweetser (2005), as they do combine conceptual uniformity with applicability to authentic contexts of use.

Dancygier (1998) treats conditional sentences as an example of a construction in the cognitive linguistic sense of the word, i.e. an abstract form-meaning pairing, and builds her theory of the conditional structure based on the assumption that a general and motivated account of the full range of conditional constructions is possible and that such a description would ultimately address form-meaning pairings. The other implication of
Dancygier’s work is that relatively more central and more peripheral meanings of conditional constructions do exist; the central meanings usually correspond with the conventional meaning, while peripheral meanings generally rely on the “dynamically constructed context” (p. 10). Dancygier’s (1998) analysis is crucial first and foremost in the sense that conditionals are treated as a unique grammatical construction, and thus, their meaning can accordingly be explained through analyzing various parts of the construction contributing to the meaning of the whole.

Furthermore, Dancygier and Sweetser (2005), drawing on Mental Space Theory (Fauconnier, 1994; Fauconnier and Turner, 1998) address the issue of mental spaces in creation of constructions. First of all, they posit that expression of conditional phrases may take place upon several distinct levels, or domains (they largely correspond with Sweetser (1990) typology of conditionals discussed earlier in this paper):

1) the **content** domain: it refers to predictions regarding events in the external sociophysical world, and the *if*-clause postulates a specific situation (this category would include typical hypothetical and counterfactual conditional constructions referring to events of physical reality);

2) the **epistemic** domain, referring to an inference in the *if*-clause, and the main clause provides basis for inference (e.g., *If he sold his car, then prices went up*/*must have gone up*).

3) the **speech-act** and **metalinguistic** domain: it assumes the performance of a speech-act or presence of a metalinguistic characterization in the *if*-clause, while the main clause makes the speech act relevant (e.g., *If you are a linguist, what’s the Russian word for “blender”?* (Sweetser, 1990, p. 19)
The variety of meanings associated with conditional phrases can be explained succinctly through the use of Mental Space Theory and Blending Theory (Fauconnier, 1994; Fauconnier and Turner, 1998, 2000, 2002). Mental Space theory is a theory of cognitive semantics centered around the idea of spontaneously created bundles (i.e. spaces) of mental content, which demonstrate speaker’s conceptual representations of entities in language or any given semantic scenarios as perceived, imagined, remembered, or otherwise understood by the speaker. Mental Space Theory implies that meanings can be traced back to mental spaces present in the consciousness of a given speaker, and the semantic positioning and interaction between meanings is usually reflected in natural language. Because the same scenario or meaning can be represented in multiple ways, mental spaces are used to partition incoming information about elements in the referential representation. Blending takes place when meanings located in different mental places are combined or integrated in some way. Mappings between different mental spaces can be based on various relationships between concepts, such as similarity and analogy as well as on pragmatic functions based on metonymy, synecdoche, and representation (Coulson and Oakley, 2000). Blending is the process that gives the speaker access to multiple conceptual areas, or domains. In the process of blending, appropriate linguistic forms are picked out by the speaker to express the meanings consistent with or characteristic of corresponding conceptual domains. Conceptual blending theory thus explores how human information is integrated and then reflected through language.

More specifically, Fauconnier and Turner (1998) argue that blending occurs when the “structure from two mental spaces is projected to a third space, the ‘blend’” (p. 143). The two original spaces providing material for the blend are thus called “input spaces,”
and they have a common schematic structure that is represented as a “generic” space. Generic space maps onto both of the input spaces, thus defining context and providing assumed knowledge that unites the two input spaces. Input spaces can be blends themselves, and by merging, they will create yet another blend, or the emergent structure, i.e. the newly created meaning, which appears by the operation of one of three blending processes – composition, completion, or elaboration. Visually, this is how the metaphorical phrase “boxing CEOs” (Fauconnier and Turner, 2002, 126-128) is represented as a conceptual blend:

**Figure 2. Representation of the blend “Boxing CEOs”**

The phrase “Boxing CEOs” is a metaphor used figuratively in a business context implying tough business competition demonstrated by some interaction between the chief executive officers. By bringing in not only the standard input of business relations but also the context of boxing and all of the accompanying associations of a physical fight,
the blend conveys the vibrancy and pitilessness of business relations. Both boxing and business are united by the generic space of a competition between rivals.

The blending processes and examples described by Fauconnier and Turner refer not only to the interaction of word meanings creating new terms but also to things that are more challenging to capture, such as complex semantic sentence structures (“In France, Watergate would not have harmed Nixon”; Fauconnier and Turner, 1998, p. 151) or abstract notions, processes and concepts (e.g., complex numbers, p. 146). Blending happens in all spheres of language and human life in general as new meanings are being constructed or integrated.

Returning to the issue of conditionals, Dancygier and Sweetser’s (2005) claim that conditional if-clauses set up certain mental space structures and analyze how such a set-up happens through various markers (e.g., if, when, unless, etc.) and verb forms that contribute to different configurations of corresponding mental spaces. Coherence and validity of conditional phrases depend on the successful configuration of all the elements constituting their structure: “in the case of conditional constructions, one can see that certain combinations would be coherent and others less so: a construction which marks its mental-space set-up as true, or believed in by the speaker, will not be coherent with verb forms which express the speaker’s doubt about such truth, while a neutral verb form will be coherent with a wider range of constructions” (Dancygier & Sweetser, 2005, p. 12). Dancygier and Sweetser thus integrate the role of a speaker in construing the meaning of a conditional phrase and explain how various configurations are made possible within the ranges allowed by the English language grammar. They aptly summarize their general position in the following way: “in all these cases a conditional
construction involves setting up a mental space (in the case of *if*-conditionals, this is the job of the *if*-clause), and requesting construal of something (in *if*-conditionals, the *then*-clause or main clause) within that space. Much of the diversity of interpretation can be attributed to the fact that the spaces themselves can be quite diverse sorts of entities, related to the linguistic form in a variety of ways” (p. 18).

To provide a more specific example of how such a mental space set-up may happen on the level of conditional phrase structure, I am going to use analysis and schematic conventions proposed by Dancygier and Sweetser (2005) and apply them to the example of a factual conditional used earlier in the typologies – *If prices go up, I will sell my car*. In this case, the base, or the generic, space would be the understanding of the current assumed reality, i.e. the one in which prices have not gone up yet. The *if*-clause (*if prices go up*) works as a key space-builder, creating a new mental space that provides a view into a different kind of reality. The set-up of the mental space within the *if*-clause allows for the predictive function to emerge in this sentence: without engagement in prediction in this case, a conditional phrase would not be felicitous here. In other words, *if* functions as a mental space builder and allows the speaker to assume a number of possible outcomes that may subsequently follow from the *if*-clause. One such outcome is captured in the main clause (*I will sell my car*), which essentially functions as an extension of the *if*-clause, or the space the emergence of which is made possible only through the introduction of the condition in the *if*-clause. The speaker is accordingly able to choose linguistic means in accordance with the kind of possible reality(-ies) that s/he deems most likely to occur. The idea of mental space set-up and interaction between the possible reality outcomes can be expressed more vividly through the following diagram:
Figure 3. Mental space set-up of the conditional construction “If prices go up, I will sell my car.”

The base space in which prices have not gone up gives rise to two possible interpretations, or blends, each consisting of two inputs: the blend in which the prices will go up and the blend in which prices will not go up. The structure on the left represents a most likely succession from the base space, which is encoded in the given sentence: i.e., that the prices will go up. Solid bold lines in the two input spaces within the left blend represent the fact that the speaker will most likely choose this scenario as the most probable one (essentially since it is realized in the sentence structure) and will accordingly choose corresponding grammatical constructions to express the ideas and support the anticipated mental space set-up. The if-clause refers to the future and leads to
the extension that will also take place in the future: hence, the use of appropriately sequenced tense markers. The correlation between the two input spaces works as a unifying element for the overall conditional blend, where the emergence of the second space (the extension) becomes possible, only when the first space – the *if*-clause – is created.

However, it is important to remember that *if* (or any other conditional marker) as a space builder also additionally sets up an alternative blended space which encodes the scenario that is not likely to happen in reality (hence the dotted lines around the right-handed blend in the diagram). Accordingly, the sequence of events encoded in the diagram on the right is probably not going to happen; however, a mere thought of its possibility is still present in the speaker’s mind and is thus incorporated into an additional blend that essentially creates a semantic background for the likely blend on the left. Essentially, the presence of a “more likely to happen” space and an alternative space are going to be constant elements of conditional phrases; and the exact relationship between them – or the degree of probability of each blend – will be determined based on a given speaker’s choices and will be further grounded in a given communicative context.

While the above example refers to a very basic factual conditional phrase, in other situations (i.e., conditional sentences of various other kinds, such as hypothetical, counterfactual, etc.) – the alternative blend might have an equal ‘reality’ weight as the blend on the left. In other words, a speaker construes mental spaces within the greater conditional sentence and produces a conditional blend of the two depending on the information available to him/her at the moment of speaking, as well as depending on the stance s/he takes in regard to the situation in question. The blend that unites the
A careful adaptation of these insights into L2 materials would likely be able to highlight individual aspects of conditional meaning and also outline patterns that learners could readily rely upon in construction of their own conditional sentences. The ultimate goal of this study is to adapt a number of conditional pattern representations outlined by

representation of conditional spaces thus represents different degrees of correlation between the projected worlds.

The diagram above thus represents only one example of a relatively simple (grammatically) conditional form; Dancygier and Sweetser (2005) also outline a variety of other possible configurations of conditional mental spaces and blends and specify how the elements within them correlate with each other. Their approach takes into consideration the contextual needs and formal characteristics of conditionals, as they cover the wide range of grammatical elements and forms that participate in the formation of conditionals and discuss how each of those grammatical elements may be contributing to construal of the overall meaning of the final conditional blend. In other words, they outline linguistic tools, commonly employed by native English speakers to create felicitous conditional phrases, while also demonstrating the dependence of conditionals on the communicative context and the speaker’s stance towards a given situation.

An important insight from Dancygier and Sweetser’s work is the idea of compositionality of conditionals: by analyzing combinations of regular and less regular conditional constructions and identifying patterns of inferential structure and metonymic reasoning involved, the authors essentially separate the threads creating the fabric of the conditional construction and make those aspects of meaning directly analyzable. A careful adaptation of these insights into L2 materials would likely be able to highlight individual aspects of conditional meaning and also outline patterns that learners could readily rely upon in construction of their own conditional sentences. The ultimate goal of this study is to adapt a number of conditional pattern representations outlined by
Dancygier and Sweetser (2005) to classroom needs and further incorporate them into pedagogic tasks.

Using the cognitive linguistic insights in L2 instruction would also allow us to give the learner more agency in his/her own language learning process. The idea of a speaker having power of choice (represented in CL by the concept of speaker construal) is generally deemed very beneficial for L2 learners: it seems possible to reconstruct the point of view of a native speaker and accordingly allow the L2 learner to recreate it in his or her own use of target language discourse. The ultimate goal of such a process would be to internalize the patterns of use of the new construction as part of one’s interlanguage (the benefit of using cognitive linguistic and cognitive grammar insights in L2 learning setting will be discussed more specifically in a separate section).

The goal of this dissertation study is thus to utilize appropriate insights from the analysis from Dancygier and Sweetser (2005) and to incorporate their findings regarding the nature of conditionals (in particular, those regarding their central and peripheral meanings, domains covered by different conditional configurations, and speaker’s role in construing a specific configuration of a given conditional phrase) into second language classroom materials. Ideally, the insights from theoretical linguistic research would serve the language learners through the meaningful use of pedagogically-grounded focus on form in the shape of consciousness-raising tasks (see chapters 3 and 4 for more detail).

2.6 Summary: Explicit benefits of cognitive linguistic analysis of conditionals

Conditionals represent a very challenging part of the English language due to a number of factors. First of all, conditionals are a particularly complex aspect of English
even for theorists as witnessed by the fact that in spite of a great deal of multi-faceted research on the subject, linguists do not agree on the unified meaning or on a comprehensive classification of conditionals. Secondly, ESL textbooks provide a particularly limiting view of conditionals, largely relying on form rather than meaning and essentially ignoring and/or leaving out multiple meaning nuances from the big picture. Another drawback of the typical textbook representation is the fact that rules in textbooks are often presented outside of context, so even if a given explanation made sense in the textbook vacuum, it would most likely not translate as smoothly into the more widely varied context of real life language use. The predominant methods of instruction do not provide a realistic representation of conditionals, ignoring complexities of the category and providing the students with a one-sided view, on the one hand, and an out-of-context instruction, on the other hand. The knowledge students get comes in the shape of rules rather than general patterns that are going to occur in the natural language data.

If we turned to insights from theoretical research on the nature of conditionals, formal semantic approaches are likely going to be of little help for L2 learning contexts due to their highly abstract treatment of conditional meaning and complex system of logic notation that is used to represent such meanings.

On the other hand, cognitive linguistic approaches to the study of conditionals, by means of their reliance on a number of cognitive linguistic tenets (as discussed in chapter 1), should be able to provide learners with insights regarding specific patterns of conditional use and domains contributing to construction of conditional meanings. The concept of meaning-form “packages” (Achard, 2004) allows us to break down composite
grammatical meanings into separate parts and subsequently highlight form-meaning connections of those parts explicitly to learners who are struggling with the complexity of target forms. For the category of conditionals, the work by Dancygier and Sweetser (2005) is crucial in portraying a complete picture of conditional meaning as it is situated in various contexts of use. Organization of conditional phrases is typically shaped by the use and manipulation of speaker’s background knowledge and construal (as reflected in choice of verb tenses) and the arrangement of contextual information around the conditional sentence. The basics of this analysis could be highly beneficial for L2 learners, if made relatively accessible for them in the pedagogical sense. Combining theory and practice and determining the overall boundaries of theory in L2 instruction as supported by concrete pedagogical practices is the ultimate direction targeted by this dissertation.

More specifically, in this study, I propose to address the problems in the current state of representation and instruction of conditionals by developing and testing concrete methodological solutions, informed both by cognitive linguistic theory and by up-to-date achievements in second language pedagogy research. I argue that using cognitive linguistic principles to capture key aspects of conditional constructions and applying that information in pedagogical task design would be an important improvement over the existing treatments. Implementing a usage-based account of conditionals and highlighting the details of their conceptualization would ideally help learners to see the native-like viewpoint of conditional usage in accordance with the most current principles of L2 pedagogy. The next chapter offers further discussion of research on second language acquisition and task-based language teaching.
3.1 Explicit instruction and focus on form

The research in the field of second language acquisition has yielded a number of crucial findings regarding the best conditions for acquiring a second language in a formal educational setting. One of such findings concerns the efficacy of different teaching methods: namely, language teaching methods that include explicit focus of some sort and allow the instructor to indicate learner’s problems and address them through instructional intervention are more effective than the type of instruction concerned purely with implicit learning (Long, 1991). More specifically, for the purposes of present discussion, I am going to adhere to the operationalizations of explicit and implicit instruction used in the SLA meta-analyses of Norris and Ortega (2000), and subsequently, in Spada and Tomita (2010). Explicit instruction will necessarily include “rule explanation,” or learners will be “directly asked to attend to particular forms and to try to arrive at metalinguistic generalizations on their own” (Norris & Ortega, 2000, p. 437). Implicit instruction, on the other hand, will include “neither rule presentation nor directions to attend to particular forms” (Ibid.) and will frequently be based around “input flood/high-frequency input” (Spada & Tomita, 2010, p. 273). In other words, some type of conscious or direct reference to rules is a crucial element associated with explicit instruction, while implicit methods are associated with learning from salient input alone.

That said, implicit methods alone applied to classroom instruction have not demonstrated to be a self-sufficient pedagogic approach. A number of studies carried out in Canada (Swain, 2000; Tarone & Swain, 1995) showed that even in the environment of full immersion, Canadian learners of French were not likely to achieve a high level of
language proficiency in regard to certain grammatical forms, and, moreover, had multiple problems with fossilized parts of grammar and lexicon. These studies promoted reevaluation of the role of purely communicative and largely implicitly structured language teaching without any focus on form, thus setting the stage for further research on the efficacy of explicitly-oriented instructional techniques and methods in the contexts of instructed SLA.

The value of explicit instruction was also supported in meta-analyses of research in second language acquisition. One of the most comprehensive meta-analyses of SLA studies conducted over the past fifteen years (Norris & Ortega, 2000) concluded that: “instruction that incorporates explicit (including deductive and inductive) techniques leads to more substantial effects than implicit instruction” (p. 500). A more recent meta-analysis conducted by Spada and Tomita (2010) investigating the effects of explicit/implicit instruction (the explicit/implicit dichotomy was operationalized following the original suggestions used in Norris and Ortega (2000) on the type of language feature in question concluded that effect sizes for explicit instruction in regard to both simple and complex language features were greater than the effect sizes for implicit instruction.

Referring to more cognitively-grounded research, N. Ellis (2002) claimed that “language acquisition can be speeded up by explicit instruction.” (p. 175). Along similar lines, MacWhinney (1997) has argued that:

Students who receive explicit instruction, as well as implicit exposure to forms, would seem to have the best of both worlds. They can use explicit instruction to allocate attention to specific types of input,… narrow their hypothesis space,… tune the weights in their neural networks,… or consolidate their memory traces… From the viewpoint of psycholinguistic theory, providing learners with explicit
instruction along with standard implicit exposure would seem to be a no-lose proposition. (p. 278)

It would thus be fair to say that explicit instruction has clear research-based pedagogical benefits, which I hope to explore in the present study by combining elements of explicit instruction with task-supported language teaching methodology. When speaking of applying explicit instruction to teaching cognitive linguistic insights in the context of instructed SLA, explicit instruction in the shape of focus on form appears to be the most suitable method (Liamkina, 2008; Moden, 2010). As discussed in chapter one of this dissertation, the usage-based premise of cognitive grammar and its inherent pedagogical implications lend themselves well toward a number of basic tenets of L2 acquisition and pedagogy research. More specifically, the idea of exposing the motivation behind various linguistic structures to the learner (through using cognitive grammar insights) and targeting specific points is highly compatible with the underlying principles of focus on form, a crucial concept in SLA research over the course of the past couple of decades. Focus on form should in turn be discussed in greater detail.

The specific definition of “focus on form” is a somewhat controversial issue. Long (2000) defines the essence of focus on form as some sort of “briefly drawing students’ attention to linguistic elements” (p. 185) through incidental and/or contextually-based exposure. In other words, such attention to form has to be happening in a meaningful interactionally-grounded context. Ellis (2003), on the other hand, approaches focus on form from a slightly broader perspective, referring to instruction that is focused on specific linguistic forms/topics in the context of meaningful language use, which does not necessarily have to be reactive. The latter approach thus includes a proactive, as well as a reactive nature of implementing focus on form.
Focus on form is inextricably tied with the research on value of noticing in an L2 classroom (Gass, 1997; Schmidt, 1993, 2001), which has demonstrated that, “since many features of L2 input are likely to be infrequent, non-salient, and communicatively redundant, intentionally focused attention may be a practical (though not theoretical) necessity for successful language learning” (Schmidt, 2001, p. 15). Accordingly, some sort of form-focused instruction or consciousness raising (Sharwood Smith, 1981, 1993, 2007) may be necessary to help the learner notice linguistic cues and raise their salience. Focus on form is particularly important for teaching complex linguistic forms, where learners have to become aware of differences between distinct semantic grammatical aspects of complicated target forms.

Focus on form can be achieved through implicit or explicit instructional techniques. While it has been argued (Doughty, 2003) that implicit approach to focus on form is more conducive to the acquisition of form-meaning mappings, the choice and the degree of effectiveness of explicit versus implicit focus on form may ultimately depend on the linguistic structure chosen. While it may be possible to address phonological or relatively “simple” grammatical errors (i.e., those involving direct form-meaning mappings, such as third person “-s” or basic English plurals) through implicit focus on form in the shape of recasts or other types of interaction-grounded feedback, it is much more difficult to do so in situations where complex linguistic structures (such as conditional constructions) are involved. It has been argued by some researchers (e.g., Hulstijn & de Graaff, 1994) that while simple forms or rules are best acquired through implicit methods, complex rules are better presented through explicit teaching. Such a recommendation is related to the fact that complex features or rules may be difficult to
identify in naturally occurring input and, accordingly, learners might need additional instructional help in discovering and acquiring complex forms.

Because form-meaning mappings of conditionals involve multiple grammatical levels and represent a relatively complex structure, it is likely that the explicit rather than the implicit approach to focus on form would appear more effective in addressing such L2 needs.

Proponents of cognitive linguistics have already voiced the idea of merging cognitive linguistic principles with selectively organized focus on form. Cadierno (2008b), among others, argues that “the pedagogical research on the value of focus on form, with its key emphasis on the integration of grammar and communication in foreign language teaching, can greatly benefit from the theoretical perspective of cognitive linguistics, given its view of language as consisting of conventionalized form-meaning mappings used for communicative purposes” (p. 259). Reaching into the underlying premises of cognitive linguistic theory can help uncover conceptualizations behind various grammatical and idiomatic structures in a given language, as well as indicate construction usage patterns. Cognitive grammar can thus serve as a particularly useful tool for second language learners, combining the right amount of focus on form with reconstructing or otherwise pointing out the target language representations behind the corresponding linguistic items. As Achard and Niemeier (2004) aptly put it, cognitive linguistics in general and cognitive grammar in particular are relevant for the study of second language acquisition in the classroom context also “because the kinds of generalizations it posits to describe linguistic organization can easily be made explicit, and thus incorporated into classroom practices” (p. 7). If such explicit incorporation of
selected cognitive linguistic points into classroom practices were paired with sound pedagogical choices, this combination could be of great value to L2 learners.

As highlighted in chapter 1 of this dissertation, the key predictable benefits of applying cognitive linguistic knowledge in the language learning setting include a) enhancing the learner’s awareness regarding the underlying meaning-based conceptualization of a given linguistic phenomenon and b) correspondingly increasing the chances that this phenomenon or category will be acquired in an appropriate and target-like manner. However, viable pedagogical solutions are needed to make these novel insights make sense to the learners. The paradigm of task-based (supported) language teaching appears to be highly compatible with the basic assumptions of cognitive linguistics, the two providing a rich initial ground for further collaborative efforts. The next chapter will aim to identify a number of basic principles of task-based research.

3.2 Task-based language teaching and task sequencing

While grammar can be taught explicitly, its teaching can hardly be effective, if it is isolated from meaningful usage contexts and if it does not allow learners to apply their newly acquired knowledge in a way that would promote the L2 acquisition processes. The conceptual approach assumed by this dissertation follows along the lines of the opinion that “grammar can no longer be viewed as a central, autonomous system to be taught and learned independent of meaning, social function, and discourse structure” (Celce-Murcia, 2001, p. 466). Accordingly, for best instructional results, explicit focus on form when incorporating tenets of cognitive linguistics into classroom research and
practices should be combined with meaningful instructional methods, and task-based language teaching appears to be the most logical choice to meet all the requirements, for the reasons explained next.

Task-based language teaching has been gaining increased popularity over the course of the last two decades (e.g., Bygate, Skehan, & Swain, 2001; Ellis, 2003; Robinson, 2001, 2005; Samuda and Bygate, 2008). It emerged as a viable pedagogical alternative to teacher-centered and rigidly form-oriented types of instruction predominant in the language learning and teaching field in the mid- to early second half of the 20th century. Task-based approaches emerged as a natural progression from communicative language teaching (CLT), bringing the concept of a classroom communicative activity to the next level and shifting the pedagogic focus onto holistic, meaning-oriented, and learner-centered instruction (Van den Branden, Bygate, & Norris, 2009).

Task-based approaches “seek to recreate an environment facilitating universal acquisitional processes” (Révész, 2009, p. 438), such as implicit learning, and maximize the learners’ exposure to the target language, providing opportunities for both receiving comprehensible input and producing meaningful output. Task-based classroom practices ensure that learners are provided with meaning-rich tasks that elicit the kind of language use that would be occurring in real-life contexts.

Another key point of task-based language teaching is the fact that it allows instruction to combine a general focus on meaning and the presence of a communicative context with focus on form that can be incorporated into instruction in accordance with the learners’ developmental needs. Task-based language teaching implies that “the performance of functional tasks involving meaningful language use is the starting point,
primary mechanism, and final goal of educational activity” (Van den Branden, Bygate, & Norris, 2009, p. 6), but it also encourages “a focus on form in view of optimizing the learning potential of task-based educational activities” (Ibid.).

Cognitive linguistic researchers have indicated the value of using task-based methodology in combination with cognitive linguistic insights. For example, Cadierno (2008), in the conclusion of her article on teaching motion events across languages with different patterns of their organization, suggests the following sequence of using task-based language instruction and cognitively-based insights in regard to motion event organization:

“For example, if one were to follow a task-based language teaching curriculum, the activities proposed above could be organized around given tasks with common themes (e.g., free time activities; traveling in a given country). Furthermore, the applied linguist/teacher should clearly specify: (i) the overall goal of tasks (i.e., to provide an opportunity for the interpretation and use of motion constructions); (ii) the input that constitutes its point of departure (e.g., pictures, maps, brochures, videos); (iii) the types of activities to be carried out, as well as their sequencing; (iv) the teacher's and the students' roles in the task; and (v) the settings for the task, i.e., types of classroom arrangements as well as a specification of whether the task is to be implemented only inside the classroom or also outside of it (Nunan 1989; Ellis 2003)” (pp. 284-285)

That said, few studies so far combined pedagogic tasks with teaching cognitive linguistics. Cadierno and Robinson (2009) used pedagogic tasks to measure how the manipulation of cognitive complexity can facilitate the development of L2 construal patterns. Moder (2010) used targeted pedagogic tasks (based on prior corpus-based research) to teach usage patterns of the English like constructions. A number of experiments conducted at Georgetown University and reported in Tyler (2012) used various versions of pedagogic tasks to deliver cognitive linguistic insights to learners. While it is a promising direction, the relative dearth of studies at this point in time does
not allow us to make comprehensive conclusions about the best ways to combine task-
based (or task-supported – see the following section) language teaching with teaching 
insights from cognitive linguistics. This study thus aims to address this area of need and 
complementing the predominant applied cognitive linguistic focus of this study with the 
use of pedagogic tasks.

While the general principles of task-based language teaching are relatively 
uniform across the field, the same cannot be said in regard to the standard universal 
conceptualization of tasks per se. In very general terms, tasks, which represent the core of 
task-based language teaching, are viewed as meaningful sequences for achieving certain 
goals while using language in the manner that maximally mirrors natural language 
contexts. While there exist a number of definitions for tasks, exhibiting certain degrees of 
conceptual variation, for the purposes of this study, I am going to use the comprehensive 
operationalization of task, provided in Ellis (2003):

“A task is a workplan that requires learners to process language pragmatically in 
order to achieve an outcome that can be evaluated in terms of whether the correct 
or appropriate propositional content has been conveyed. To this end, it requires 
them to give primary attention to meaning and to make use of their own linguistic 
resources, although the design of the task may predispose them to choose 
particular forms. A task is intended to result in language use that bears a 
resemblance, direct or indirect, to the way language is used in the real world.”
(pp. 5-6)

In other words, tasks provide learners with an opportunity to produce language in 
a context that resembles or aims to recreate an authentic language environment. Similarly 
to other language activities, a task can engage productive or receptive, and oral or written 
skills. Also, tasks can be designed in accordance with a variety of parameters, such as 
focused/unfocused tasks, real world versus pedagogic tasks, one-way/two-way tasks,
open/closed, convergent/divergent task outcomes (for a more detailed discussion of these and other characteristics of tasks, see Ellis 2003). A key distinction has to be drawn between the so called “target tasks” and “pedagogic tasks.” Long (1985) defined target tasks as the real-world tasks that learners are expected to be able to perform in authentic usage contexts (a needs analysis would be an important first step for identifying such real-world tasks). Pedagogic tasks, on the other hand, refer to tasks that learners and teachers work on in classroom contexts. Since this dissertation is dealing with grammar instruction, the only type of tasks that will be referred to throughout this chapter and entire manuscript is the pedagogic task. For brevity reasons, the word ‘task’ used on its own (i.e. without modifying phrases) will always imply a pedagogic rather than a target task.

A number of task taxonomies were developed since TBLT became an increasingly popular direction in language pedagogy research. Informed by Long’s Interaction Hypothesis and prior research on how tasks promote interaction, Pica et al. (1993) developed a taxonomy of tasks based on their communicative organization. The guiding criteria for Pica et al.’s classification were different configurations of task activity (participant roles and directions of information flow) and task goals, or outcomes. The specific task types identified by Pica et al. were Jigsaw, Information Gap, Problem-Solving, Decision-Making, and Opinion exchange. Pica et al.’s taxonomy is particularly useful for researching the exact configuration of interaction that is happening during task completion; however, at five task types, it is not detailed enough for a number of further research goals (i.e., going beyond questions of interaction during task completion process), nor does it provide recommendations regarding the optimal task sequencing
conditions. The issue of task sequencing has been central in much of task-based research, ever since it was first raised by Candlin (1987), focusing on how different combinations of tasks may affect L2 performance and production.

Skehan’s (1998) taxonomy of tasks addressed the question of task difficulty and was centered around the issue of various psycholinguistic factors involved in the process of L2 production. Skehan was primarily concerned with how task design affects the areas of accuracy, fluency, and complexity connected with L2 development. The three criteria that Skehan focused on were code complexity, cognitive complexity, and communicative stress; his general recommendation for a task-based syllabus was to sequence tasks from less cognitively demanding to more demanding, due to the fact that such an arrangement would be generally facilitative of learners’ attention to form. According to Skehan’s general orientation, organizing the sequence of task characteristics in accordance with his criteria would help learners “channel their attention in predictable ways, such as clear macrostructure towards accuracy, the need to impose order on ideas towards complexity, and so on.” (1998, p. 112). Skehan’s taxonomy is more comprehensive than Pica et al.’s in the sense that it can inform a greater number of research questions regarding the use of tasks in L2 learning contexts, its main focus being on how tasks affect speech production and learners’ attention to forms. In comparison with the research goals of the present study (see chapter 4 for a more detailed overview), Skehan’s focus is more micro-oriented in the sense that he is interested in the effects of task characteristics onto cognitive processes and production during specific task-completion episodes, which does not appear to be directly applicable to the range of research questions immediately addressed in this dissertation. However, Skehan’s general orientation to task sequencing
was of value for informing the process of determining the optimal ways to sequence pedagogic tasks used in this study.

The most prominent task-sequencing paradigm influencing recent research on task-based instruction is Robinson’s Triadic Componential Framework (TCF), as guided by his Cognition Hypothesis. Robinson (2011) presents the key claim of the Cognition Hypothesis as follows:

“task-based syllabi, pedagogic tasks should be sequenced solely on the basis of increases in their cognitive complexity, which mirror the sequences in which children are able to meet the cognitive demands of tasks during L1 acquisition, and that such sequences provide optimal support for L2 learners in their attempts to use accurate and complex language at the level needed to meet real-world task demands”

(p. 14)

In other words, as tasks are progressively made more complex, learners have to expand their cognitive processing resources (i.e., memory, reasoning, attention, etc.), and this leads to their increased and/or improved performance, as far as accuracy and complexity (both lexical and structural) are concerned. Production needs that are grounded in a relatively more complex context are also supposed to maximize the range of interaction that can happen during task performance and subsequently lead to a greater amount of noticing, negotiation of meaning, and uptake of forms that may emerge as focus of interactional feedback (Robinson, 2003).

Robinson (2007, 2011) suggests that in a task-based instructional syllabus, tasks should be organized according to the following three categories of task demands:

1) Task condition refers to interactive demands of tasks and participant variables. This category includes some of the task characteristics from Pica et al.’s (1993) taxonomy.
2) Task difficulty refers to working memory capacity that needs to be tapped into for task completion, as well as to other cognitive factors that are related to individual difference types of variables, such as aptitude, motivation, and a number of affective factors.

3) Task complexity refers to intrinsic complexity of tasks, such as +/-elements and reasoning demands that are involved in a task. Robinson (2007) distinguishes between three types of reasoning demands – spatial, causal, and intentional reasoning.

The Triadic Componential Framework further suggests how task complexity can be organized along two dimensions – resource-directing and resource-dispersing. While resource-directing task characteristics have the effect of directing cognitive resources to specific aspects of second language form or meaning, resource-dispersing task characteristics divert learners’ focus from specific aspects of target language and possibly onto other, both linguistic and non-linguistic features. The full TCF (see, e.g., the appendix for Robinson, 2011) includes exact values for each dimension and variable: they are supposed to be used for guidance when addressing task-sequencing considerations. Last but not least, Robinson (2011) provides the following operational principles for sequencing tasks in a task-based syllabus:

“a) sequencing should be based only on increases in cognitive complexity, 

b) increase resource-dispersing dimensions of task complexity first (to promote access to current interlanguage), then increase resource-directing dimensions of complexity (to promote development of new form-function mappings, and destabilize the current interlanguage system).” (p. 15)
Cognitive complexity is thus treated as the cornerstone of task sequencing needs, the efficacy of organizing tasks according to such recommended sequence being one of the key foci of recent task-based research. However, while highly useful for informing the theoretical background of this study, Robinson’s taxonomy will not be relied upon directly in this study, because the underlying – task-supported – context of this study is not consistent with the notion of task-based syllabus that is emphasized by the Cognition Hypothesis, as stated in definition above. That said, a number of possible directions of how applied cognitive linguistic research can be further connected with the Triadic Componential Framework are outlined towards the end of chapter 6 of this dissertation.

Taking a more general perspective of larger trends in the field, the development of Skehan’s and Robinson’s taxonomies seems to be linked with a certain shift in the orientation of research on tasks that occurred over the course of the past two decades (Robinson, 2011). A number of earlier studies focused on how tasks promoted interaction and corresponding effects on L2 learning (Gass & Varonis, 1994; Pica, Young, & Doughty, 1987; Swain & Lapkin, 1995; more recent studies from this direction include Gass, Mackey, & Ross-Feldman (2011), Mackey (1999), Mackey & Gass (2006). However, over the course of the last decade, the predominant focus of task-based research has somewhat shifted towards “cognitive demands and motivational impact of variously classified task characteristics and their effects on speech production, uptake, and longer term memory for input provided during task performance (Robinson, 2011, p. 3). A select number of examples concerned with the latter agenda include: Cadierno & Robinson (2009), Gilabert, (2005, 2007), Gilabert, Baron, & Llanes (2009), Revesz (2009), Robinson (2007), Skehan & Foster (1999; 2001), etc.
While this research carries a great informational value for the present study, this
dissertation does not directly fit with either of the directions, as here, tasks are treated as
supplementary, as opposed to the principal focus of attention. This dissertation is
primarily concerned with how tasks can promote focus on form grounded in meaning-
based contexts that are informed by findings of cognitive linguistics. The next section
highlights the specifics of the role tasks will play in the present study.

3.3 Task-supported instruction and consciousness-raising tasks

In the “perfect world,” tasks would be the key feature and component of a
language-teaching syllabus (Long, 1996), as well as the primary method of learning for
the students. The real world needs (target tasks) would determine the contents of
instruction, which would consequently be delivered to students through pedagogic tasks.
However, in the context of the present study (as described in greater detail in the
following chapter), basing the entire instructional syllabus on tasks would be unrealistic,
as the data collection context was complicated with outside (institutional) instructional
demands that could not be ignored and/or overcome. Accordingly, the term “task-
supported” rather than “task-based” instruction is a more accurate and relevant term to
use in reference to the context of the present study.

In task-supported instructional setting, tasks are not the only medium of
instruction but rather one of the key components of the general syllabus. This
organization would mirror the “weak” as opposed to “strong” version of TBLT (Skehan,
1998), also referred to as “task-supported language teaching (Ellis, 2003; Samuda &
Bygate, 2008).
Samuda and Bygate’s (2008) characterize task-supported teaching as follows:

- “Tasks are important, but not the sole element in a pedagogic cycle.
- Tasks are used in conjunction with different types of activity.
- Tasks are one element in the syllabus, but not necessarily the defining element.
- Tasks may be used as an element of assessment, but not necessarily as the defining element.” (p. 60)

In other words, tasks do not function as the key element for organizing the entire syllabus and assessment design; instead, they can be used as supplementary teaching materials to allow learners to practice target forms in semi-authentic contexts. In the context of teaching complex grammatical categories such as conditional constructions, task-supported (as opposed to the “ideal” case of pure TBLT) instruction may be the optimal form of task-based instruction, as otherwise (i.e., if the strong form of TBLT, treating tasks as primary units of language teaching, were used), it would be quite challenging to teach all the complexities of conditionals relying primarily on the ideal of real-world tasks and not resorting to any non-task-based methods, such as metalinguistic presentation or teacher-led explanation.

In sum, utilizing task-supported language teaching as a methodological paradigm in which to place the cognitive linguistic perspective appears to be a good solution to problems concerning incorporation of cognitive linguistic principles into L2 instruction (as discussed in chapter 1). Task-supported language teaching allows the cognitive linguistic insights to be placed in a meaningful usage context and delivered through solid pedagogical means, i.e. providing learners with an opportunity to (hopefully) improve
their target form comprehension and production skills through focus on form grounded in cognitive linguistics.

Many researchers (Long & Norris, 2000; Long & Crookes, 1992; Long & Robinson, 1998) agree that focus on form should be incorporated into task-based language teaching as a general methodological principle. That said, the exact degree and specific timing (reactive versus preemptive) of focus on form to be incorporated into task-based language teaching seems to be a subject of debate in the field, as it depends on the general instructional methods chosen (e.g., focus on context-embedded, incidental learning vs. more explicit instruction). One of the ways to incorporate focus on form into this study would be through the use of consciousness-raising tasks.

Consciousness-raising tasks represent a kind of a pedagogical task dealing primarily with explicit knowledge. Eckerth (2008a) defines consciousness-raising tasks as “form-focused tasks” that can be used as “a pedagogical device to direct learners’ attention to specific L2 forms while they are communicating in the L2” (p. 92). The main purpose of consciousness-raising tasks is to give the learners the opportunity to explore target features in a focused context while attending to completing task guidelines at the same time.

Consciousness-raising tasks are usually centered around linguistic features as their ‘topics’; however, the tasks themselves “must conform to the definition of a task in general and thus designers will still need to make principled decisions regarding the types of task they wish to use and the sequencing of these tasks” (Ellis, 2003, p. 233). However, since it might be very difficult to base an entire task-based course on consciousness-raising tasks, Ellis suggests that a better way would be to “thread
consciousness-raising tasks into a syllabus comprised primarily of linguistically unfocused tasks” (Ellis, 2003, p. 234).

Even though explicit focus on form in task-based language teaching has been increasingly gaining popularity in recent research, only a handful of studies have directly investigated the effects of using consciousness-raising tasks in second language classrooms. The few studies summarized below provide positive implications associated with the use of consciousness-raising tasks in language-learning classrooms. Accordingly, the present study is also supposed to contribute to the body of literature investigating the degree to which consciousness-raising tasks can facilitate language-learning processes in one way or another.

The studies focused on efficacy of consciousness-raising tasks (Eckerth, 2008; Fotos & Ellis, 1991; Fotos, 1993, 1994; de la Fuente, 2006) have investigated the applicability of consciousness-raising tasks to second language learning context, focusing specifically on what learners can acquire from such an instructional method. More specifically, Fotos (1994) investigated how grammar-focused consciousness-raising tasks affected proficiency gains in acquiring word order.

Before highlighting the study details, a separate mention has to be made about an important differentiation between types of consciousness-raising tasks made by Fotos (1994) – namely, the dichotomy of communicative consciousness-raising tasks and grammar (NJ: emphasis added) consciousness-raising tasks:

“whereas the former [NJ: i.e. communicative] task is ungrammatical, but requires either recognition of the target structure or its use in reaching the task solution, the content of the grammar consciousness-raising task is the target structure itself. Second, the grammar consciousness-raising task is not aimed at developing immediate ability to use the target structure but rather attempts to call learners...
attention to grammatical features, raising their consciousness of them, and thereby facilitating subsequent learners noticing of the features in communicative input.”

(p. 326)

This distinction between grammar consciousness-raising tasks and communicative consciousness-raising tasks is going to be taken into account for my own discussion of conditionals as a target of consciousness-raising tasks, as discussed in the following chapter.

Getting back to Fotos’ study, one group received teacher-fronted grammar lessons on word order patterns in English, while two other groups received instruction through grammatical tasks of various designs (grammar tasks vs. communicative tasks). The results of statistical analysis indicate that using consciousness-raising tasks for instruction of word order was more effective than the use of traditional teacher-fronted explanation. The gains of the two task groups as opposed to those of a traditional instruction group also consistently maintained after a two-week period. Fotos concludes that: “the knowledge developed through performance of the three different grammar tasks compared favorably with the knowledge gained from formal instruction on the three grammar points. It can therefore be suggested that the positive results of grammar task performance may be widely applicable to a range of grammar structures.” (p. 340) Consciousness-raising tasks were thus demonstrated to be a more powerful teaching method than formal instruction.

De la Fuente (2006) investigated the efficacy of using consciousness-raising tasks for instruction of vocabulary in comparison with the more traditional PPP (presentation, practice, and production) method. While the posttest outcomes did not reveal significant differences between groups, participants of the task-based group performed statistically
significantly better on the delayed L2 vocabulary retrieval test than the participants of the PPP group. De la Fuente suggests that “planned TBLT lessons allow for deeper processing of the L2 words by helping learners to establish more productive meaning-form connections through multiple opportunities for output production (of target words) during negotiation.” (p. 282) Even though her study focused on vocabulary acquisition as opposed to the acquisition of a grammatical feature/structure (like it is the case with the present study), de la Fuente’s findings suggest a general positive long-term effect of using explicit focus on form in task-based teaching.

Eckerth (2008a) characterizes consciousness-raising tasks as representing an “exploratory approach to language learning and teaching in that they are designed to encourage learners to reflect upon the L2 and to discover aspects of the L2 with regard to its form, meaning, and function.” (p. 94). His study focused on investigating the effects of dialogic tasks onto specific learning gains, as well as on the process of task completion itself (i.e., conversational characteristics associated with dialogic tasks). Groups of learners of German as a second language completed both unfocused and focused (consciousness-raising) tasks; both task types were dialogic in nature and elicited quite a bit of oral language production. In regard to general efficacy of task use in the language classroom, the findings of Eckerth’s study demonstrated that task completion yielded significant task-specific learning gains both immediately and after passage of some time. As far as the effects of consciousness-raising tasks (as opposed to unfocused tasks) are concerned, Eckerth found that “consciousness-raising tasks succeeded in generating not only the same amount of speech production, meaning negotiation, and output modification as unfocused tasks, but also extensive individual discursive turns and
complex collaborative dialogue” (p. 110). Further implication of such effects associated with consciousness-raising task type is the fact that consciousness-raising tasks are more likely “to bring about complex L2 production and interaction than pure information gap tasks, in which learners tend to rely on semantically-based communication strategies.” (Ibid.) In short, consciousness-raising tasks were associated with greater linguistic complexity, as far as both perception and production are concerned.

Eckerth (2008b) framed research questions for investigating the effects of consciousness-raising tasks in a slightly more general manner, posing as one of the two research questions, “To what extent and in which sense do pedagogically targeted learning gains result from the completion of dyadic consciousness-raising tasks?” (p. 123). The use of consciousness-raising tasks produced statistically significant learning gains of the features that were featured in the task design. The interaction in dyads that learners needed to produce for the purpose of completing the consciousness-raising tasks in his study resulted in a greater number of feedback and negotiation opportunities (according to qualitative analysis of task interaction transcripts). Another crucial finding was the fact that learners also gained a better range of knowledge regarding grammatical features that were not targeted by consciousness-raising tasks per se, but those features emerged in learner-learner interactions during the task completion process, which thus promoted additional gains in linguistic knowledge. Eckerth claims that another positive “side-effect” of using dialogic consciousness-raising tasks in language-learning classrooms is the fact that learners have to rely on and develop their language scaffolding skills.
In summary, even though research on consciousness-raising tasks has not exactly been plentiful, the existing findings provide support for using consciousness-raising tasks as a way to deliver guided focus on form in L2 settings. In addition to being an effective method of incorporating focus on form into a task-supported language learning environment, they also give a rich ground upon which learners can expand their range of linguistic complexity and interactional tools.

3.4 Conditionals as target of consciousness-raising task

As mentioned earlier, the main goal of this study is to test how certain adjustments (grounded in cognitive linguistics and task-supported language teaching) in pedagogical grammar can contribute to the acquisition of conditional constructions. Being in agreement with Taylor’s (2008) statement that “the function of pedagogical grammar is to promote the learner’s insight into the foreign language system” (p. 57), I propose to test the potential of pedagogical cognitive grammar to convey the complexity of conditional constructions with the support of tasks, that would ideally allow for meaningful practice of the new knowledge.

An earlier overview of insights from applied cognitive linguistic literature provides enough reasons to believe that demonstrating the non-arbitrariness behind the conditional sentences and providing a fuller explanation for why their structure is organized the way it is will promote learners’ understanding of the category. My study will thus generally attempt to test what Taylor referred to as a key characteristic of cognitive grammar – if “presented in a suitable pedagogical format”: “If the basic assumptions of the cognitive program are correct, it should be possible to realize the
objective by bringing to the learner's consciousness the conceptualizations conventionally associated with the structures of the foreign language" (p. 58). The suitable pedagogical form will be the weaker form of task-based language teaching, or task-supported language teaching.

In line with the following summarization provided by Gries (2008): “Thus, even syntactic patterns are meaningful in their own right, since they must have a semantic pole, which is highly schematic to allow for the diverse ways of how they can be instantiated.” (p. 409), - the syntactic organization of conditional structures carries meaning, which can be made explicit through (pedagogically balanced) focus on form. Since another important feature of symbolic nature relates to frequency of use (cf., “the symbolic unit in question must have occurred frequently enough for it to be entrenched in a speaker/hearer's linguistic system” (Gries, 2008, p. 409), it is a natural consequence for some kinds of grammatical structures to be less readily salient as far as acquisition is concerned due to the fact that they occur less frequently in natural input than other constructions do. Meunier (2008) states her overall agreement with Gries’ statement above, also suggesting that such language points as “phrasal verbs, expressions of futurity, causation, question tags” should be included in the agenda for designing a cognitive-based treatment (p. 107).

Conditional constructions offer a good starting ground for investigating how research in cognitive linguistics can contribute to testing the efficacy of task-based focus on form in the shape of consciousness-raising tasks. Conditionals provide a reasonable target for designing such a treatment because: a) it is quite challenging for learners to acquire conditionals through mere exposure to natural input (as opposed to how more
“straightforward” features lending themselves to implicit learning); and b), the structural complexity of conditionals makes them ideal candidates for cognitively-based “dissection” and analysis.

Accordingly, to help learners gain a deeper understanding of what conditionals ultimately imply and how they are used, I am going to rely on the work of Dancygier (1998) and Dancygier and Sweetser (2005). As already stated earlier, the analysis of conditionals represented in their research appears to be the best articulated and most comprehensive account as it tackles the variety of conceptualizations behind the structures themselves.

3.5 Why use cognitive linguistic research in combination with tasks?

Taking the points from the previous section to a more general level, it is important to mention that combining the theoretical strengths of cognitive linguistics with the current pedagogical research on using tasks in the classroom appears to be a logical direction, in which to follow.

Being a usage-based theory of language, cognitive linguistics is highly compatible with research on task-based teaching, which also emphasizes language learning through meaningful content and authentic, contextualized language use. Task-based language teaching conceptually favors naturalistic learning processes, which again, is in line with the underlying concepts of cognitive linguistics that address connections between human experiences and various aspects of linguistic organization. Last but not least, even though it is not fully utilized for the design of this study, recent research on task complexity (Robinson 2011) suggests cognitive linguistic bases for various points of task-based
teaching. In short, elements of task-based (or more specifically for this study, task-supported) instruction can function as a practical, compatible pedagogical platform to complement the process of adapting the theory of cognitive linguistics to language classroom.

Since conditionals are relatively complex in their form and also in the range of the speaker attitudes towards the propositions being expressed, pedagogic tasks provide a way to explore their different contexts of use that will also bear (in the best case) a certain degree of authenticity.

The next chapter will addresses the practical aspects of how theory can be combined with and translated into practice – namely, the process of adapting cognitive linguistic insights into tasks and other materials, as well as other details on methodology and research design of the study.
4.0 Introduction: What exactly does this study aim to accomplish?

The primary goal of this chapter is to provide an outline of research questions and hypotheses, as well highlight the key characteristics of the study design, participants, and details of the instructional treatment, focusing in particular on instructional materials.

As discussed in greater detail in Chapter 2, conditional constructions posit a challenge for second language learners due to high degree of their internal complexity and a wide range of their usage contexts. Successful acquisition of conditional constructions is also instrumental in many contexts of adult academic English language use, such as professional speaking and writing, and research paper writing; High Intermediate and Advanced speakers of English need to be able to use conditional constructions with a relatively high degree of accuracy in order to properly function in a target language environment and satisfy a variety of language tasks. Keeping in mind the ultimate goal of helping such learners through designing a different, ideally more effective, instructional treatment, a question arises: which type of conditional structure is most worth the effort of investigating its subtypes and contexts of use?

In order to determine the type to target in this dissertation study, I conducted research on most commonly occurring errors (most errors concerned tense pattern usage; see complete list of learner corpora consulted for this purpose in Appendix A) in conditional constructions. The results of this qualitative research demonstrated that the range of constructions typically categorized as content (using the term from Sweetser’s classification) hypothetical (using traditional classification term) conditionals (e.g., If prices go up, I’ll sell/I sell my car/ If prices went up, would sell my car/ If prices had
gone up, I would have sold my car) represents the most challenge for L2 learners (as captured by L2 corpus data). In other words, often when learners are attempting to highlight hypothetical outcomes, they experience the most trouble, exhibited through imprecise or explicitly erroneous tense sequences and/or other indicators of time. It did not seem to matter for accuracy whether or not these hypothetical conditionals referred to the unreal situation in the past or the present; the qualitative analysis of the corpora of learners’ writing samples that used conditionals showed that learners are generally struggling with outlining scenarios with outcomes that can no longer be affected either in the present or in the past condition. In order to address such a need in learner knowledge, the focus this study will test the applicability of cognitive linguistic insights conveyed through task-supported form to the instruction of content hypothetical conditionals.

4.1 Research questions and hypotheses

Since the topic of acquisition of conditionals has not been extensively targeted even in a more general applied linguistic research, let alone cognitively-oriented applied linguistic research, this dissertation study intended to examine the general effects of task-supported focus on form upon the instruction of conditionals, as well as the relative significance of cognitively-oriented insights included into the instructional treatment. In other words, I plan to investigate whether a comprehensive view of hypothetical conditionals can be conveyed to learners through task-based instruction overall and whether insights from cognitive linguistics make such instruction and tasks even more effective than instruction based on traditional descriptions of conditionals.

Accordingly, my research questions are the following:
**Research Question 1:** Does task-supported instruction produce an effect for L2 development of conditional constructions?

**Research Question 2:** Does task-supported instruction with added cognitively-based insights produce an effect for L2 development of conditional constructions?

**Research Question 3:** Does the addition of cognitive insights into task-supported instruction produce greater L2 development of conditional constructions than task-supported instruction alone?

**Research Question 4:** What is the possible qualitative effect of using cognitively-based insights in task-supported instruction?

For these research questions, the following operationalizations will be in place:

**Task-supported instruction:** instruction that uses pedagogic tasks along with different types of instructional activities – in other words, tasks are not the only element in the pedagogic cycle and are supplemented by other instructional methods. In the context of these research questions, task-supported instruction *per se* implies the type of instruction that follows traditional explanation of conditionals, i.e. the type that does not use cognitive linguistic insights. The treatment group that received only the task-supported instruction without cognitive insights (i.e. with the traditional explanation of the conditional form) will be referred to as “task-supported” group throughout the rest of this manuscript.

**Cognitively-based insights:** insights and/or summaries from cognitive linguistics added to pedagogic materials. Cognitively-based insights will only be added to the
instruction of one of the treatment groups, referred to as the “cognitive” group throughout the rest of this manuscript.

**Effect**: positive gains in the performance of treatment groups in comparison with the control group.

**Qualitative effect** refers to any findings from the retrospective interview data (see the study design subsection of this chapter for more detail) that highlight the processes of acquiring conditional constructions in a qualitative, i.e. not statistically measurable, manner.

Research Questions 1, 2, and 3 will require corresponding hypotheses, while Research Question 4 has a qualitative nature and will thus not warrant a predictable hypothesis. The hypotheses to Research Questions 1-3 are stated in the subsection below.

**Hypotheses.**

Since there are no prior studies of the acquisition of conditional constructions under the effects of task-supported, and let alone cognitively-based, instruction, the hypotheses associated with my research questions will not allow for positive relationships between the instructional treatment and the corresponding outcomes. Accordingly, at this stage of research, it would be most appropriate to state the hypotheses to three out of four research questions (i.e. the ones that require hypotheses) as null statements.

**Hypotheses**

**H01**: Task-supported instruction will not produce any effect for the L2 development of conditional constructions.

**H02**: Task-supported instruction with added cognitively-based insights will not produce an effect for L2 development of conditional constructions.
**Ho3**: The addition of cognitive insights into task-supported instruction will not produce greater L2 development of conditional constructions than absence thereof, i.e. than task-supported instruction alone.

This dissertation aims to investigate whether experimental support for these null hypotheses can be found or whether effects of different types of instruction can indeed be found. It also aims to investigate qualitatively measured positive effects associated with the experimental treatment (both task-supported and cognitively-based) designed specifically for this study. The context of data collection is described next, starting with the instructional setting and the participants.

### 4.2 Data collection context and participants

The context for this study was a university-level English for Academic Purposes (EAP) program. All participants came to the United States to obtain their graduate and/or professional degrees; at the time of data collection, all of them were enrolled full-time in graduate programs at a major university in the northeastern United States. The age range of participants was between 23-35 years old. The total number of participants was 57 for all three groups, 36 males and 21 females. Groups were approximately the same in size, N equaling 17 and 18 in cognitive and task-supported groups respectively, and 22 in control group. All participants were students of intact EAP classes. All participants were at the Advanced level of English proficiency, as determined by the placement test they were required to take prior to being enrolled into the corresponding level of EAP class. The cognitive group and the task-supported group were each one intact class; the control group consisted of select participants from two other intact classes (10 and 12
respectively). At the time of data collection, all participants were enrolled in the lower of the two EAP level courses in the program. For most of the participants, taking the EAP class was a requirement from their respective departments of study; however, a small number of participants chose to take the class in order to improve their English proficiency.

The focus of the said EAP class was on developing English language writing and research skills. The vast majority of the participants first came to the United States a few months prior to the beginning of data collection; for almost everyone, enrolling in this graduate program was their first educational experience in the English-speaking world (the exception were 4 out of 6 Arabic speakers who had lived in the US in the past to take English courses at English language schools). The type of skill focus addressed in this level of EAP is discussed further in this chapter.

The fact that all subjects received instructional treatment in their corresponding intact classes rather than in randomly assigned groups implies that the findings of this study can be treated as “ecologically sound” for the instructional context of English for Academic Purposes (Mackey & Gass, 2005; Gass & Mackey, 2007; Pica, 2005). Since the ultimate goal of this dissertation study is to gain insights into areas of linguistic research that could improve classroom instruction – if combined with appropriate instructional methods – collecting data from intact classrooms made more sense, since this context essentially represented the target context where the experimental materials would be eventually used. In this particular case, using intact classrooms was a way of increasing external validity of the study. However, the key limitation of choosing this
context is that the findings of this study cannot be felicitously generalized into laboratory research contexts and other instructional contexts.

How the treatment conditions were assigned to the said intact classes was determined by random selection. The two classes that received treatment were taught by the researcher/author of this dissertation, while the two classes with control group subjects were taught by one other EAP instructor who kindly gave the researcher her permission to advertise the study in her classroom and solicit subjects’ consent for participation.

Appendix B provides a copy of the consent form used to recruit subjects for this study. The consent form was made available to subjects online through GoogleDocs.

Table 6 below represents all the basic biographic information related to the study participants.

Table 6
Participant Information

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Cognitive group</th>
<th>Task-supported group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number</td>
<td>17</td>
<td>18</td>
<td>22</td>
</tr>
<tr>
<td>Mean age</td>
<td>25 (SD = 5.6)</td>
<td>24 (SD = 4.7)</td>
<td>26 (SD=4.2)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>10</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>Female</td>
<td>7</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>L1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mandarin Chinese</td>
<td>14</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>Arabic</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Farsi</td>
<td>2</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Portuguese (Brazil)</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Urdu</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Mean length of stay in the U.S.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(SD=2.3)</td>
<td>3 months</td>
<td>3 months</td>
<td>7 months</td>
</tr>
<tr>
<td>(SD=3.5)</td>
<td>(SD=3.5)</td>
<td>(SD=2.9)</td>
<td></td>
</tr>
</tbody>
</table>
As can be seen from the table, the three groups were approximately the same in size, control group being slightly larger due to the fact that subjects were recruited from two rather than one intact classes. As far as the age of participants is concerned, this was a relatively homogeneous group, with most of the subjects being in their mid-20s. Males were predominant in each group, with the total number of male participants across three groups being 36, and the total number of females being 21. The vast majority of participants came from Mainland China or Taiwan and spoke Mandarin Chinese as their first language. It has to be mentioned that the L2 student population at the university in which this study was carried out is predominantly Chinese, so this layout represented a typical EAP student sample in this period of time. The next largest L1 background group was composed of speakers of Arabic; one of those speakers came from the United Arab Emirates, while the rest came from Saudi Arabia. Three Farsi speakers were all natives of Iran, and one speaker each came from Pakistan and Brazil, respectively.

The type of treatment(-s) received by each group was as follows:

1) the participants in the **control group (n=22)** received no explicit classroom instruction targeting conditionals and only completed the three tests;

2) the participants in the “**task-supported” group (n=18)** received instruction targeting conditionals using the traditional teacher-facilitated explanation and pedagogic tasks. To clarify once again, the teacher-used instructional materials for task-supported group did **not** (NJ: emphasis added) include explanations guided by insights from cognitive linguistics (see details in section on materials);
3) the participants in the “cognitive” group (n=17) received teacher-facilitated presentation of conditionals, as well as pedagogic tasks. Teacher-used instructional materials did include cognitive linguistic explanation of the target form.

The types of materials utilized for each group are discussed further in this chapter (under the subheading Tests and Instructional Materials)

**4.3 Instructional procedure and data collection process**

The entire process of data collection took six weeks. During the first week, all three groups were given pretests. The average group scores on the pretests were approximately the same across all three groups (25, 24.5, and 23.5 for the cognitive, task-supported, and control groups respectively). The pretests ensured that, even though group participants were not randomized across conditions, the intact classes used for the purpose of data collection could still be considered representative of target population and were approximately on the same level as far as the initial knowledge of conditionals was concerned (see chapter 5 for specific details of one-way ANOVA). The treatment for the cognitive and task-supported groups was scheduled over the course of three weeks. After the three-week treatment was completed, an immediate and a delayed (10 days week after the end of instruction) posttests were administered to measure relative gains that may have taken place in the course of the treatment. Each of the tests took approximately 50 minutes to complete. More details regarding the composition of the test can be found in the following section of this chapter, Tests and Instructional Materials. In the first week following the completion of treatment, three (3) and four (4) subjects
from task-supported and cognitive groups respectively were interviewed using the method of **retrospective interview**. The purpose of such retrospective interview sessions was to determine the qualitative aspects of learning within each group and to gain insights into the level of motivation and/or student interest that may be associated with each type of treatment. Retrospective interview sessions took place immediately after class meetings; each session lasted approximately 10-12 minutes. During each session, participants were shown the pedagogic tasks they took part in during the treatment, as well as the instructional PPTs that were presented by the instructor. Subjects were asked about the thought patterns associated with these materials; also, any additional comments and feedback were encouraged. At the end of the same week when the retrospective interview sessions took place, all three groups took a delayed posttest.

The overall study design is also presented in the figure on the following page:
<table>
<thead>
<tr>
<th>Control Group</th>
<th>Group</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>No classroom training on conditionals</td>
<td>Task Supported</td>
<td>Cognitive</td>
</tr>
<tr>
<td>Tasks 1 &amp; 2</td>
<td>Tasks 1 &amp; 2</td>
<td>Traditional PPT 1</td>
</tr>
<tr>
<td>Tasks 3 &amp; 4</td>
<td>Tasks 3 &amp; 4</td>
<td>Cognitive PPT 2</td>
</tr>
<tr>
<td>Tasks 5 &amp; 6</td>
<td>Tasks 5 &amp; 6</td>
<td>Cognitive PPT 3</td>
</tr>
</tbody>
</table>

Sessions: Posttest

Table 7: Study Design

Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6

Delayed Posttest

Receptive

Posttest
4.4 Tests and Instructional Materials

Tests.

Rationale. Past research highlights the importance of addressing multiple aspects of grammar structure acquisition when creating tests. For this study, there were no pre-existing standardized testing protocols that could be used to measure the knowledge of conditional constructions. The tests that were created for the purpose of measuring the L2 development associated with conditional constructions were guided by two key factors: prior research on types of tests and classroom constraints present in the data collection process. Because the data for this study were collected from intact classrooms, it was important to create tests that could be taken during class time and would not take more than half of one class period.

Doughty (2003), following findings from Norris and Ortega’s (2000) meta-analysis, lists four basic types of L2 ability measures of:

1) Constrained, constructed responses:
   a) Written production (e.g., correct sentences containing errors);
   b) Oral production (e.g., recall of isolated sentences);

2) Metalinguistic judgment responses;

3) Selected responses:
   a) Comprehension (e.g., matching pictures to sentences);
   b) Production (choosing from a list of words to complete a sentence);
   c) Other;

4) Free responses:
   a) Comprehension (e.g., translate an L2 narrative into English);
b) Production (e.g., picture description).

From this list, the target structure of complex syntactic form lends itself well to metalinguistic judgment responses (i.e., grammaticality judgment), selected responses and free responses. In order to narrow down the types of knowledge about conditional sentences that should be tested, it is important to discuss distinctions in types of knowledge (explicit or implicit) targeted through the tests.

Ellis (2004), in drawing lines between explicit and implicit knowledge, characterized explicit knowledge as follows:

Explicit L2 knowledge is the declarative and often anomalous knowledge of the phonological, lexical, grammatical, pragmatic, and sociocritical features of an L2 together with the metalanguage for labeling this knowledge. It is held consciously and is learnable and verbalizable. It is typically accessed through controlled processing when L2 learners experience some kind of linguistic difficulty in the use of the L2. Learners vary in the breadth and depth of their L2 explicit knowledge.

(pp. 244-245).

Classifications and conscious rules associated with traditional instruction of conditionals (see chapter 2 for more detailed discussion) are clear example of the explicit knowledge that learners may have acquired during their previous education. When assessing explicit knowledge, grammaticality judgment tests were a “favored method of investigating L2 explicit knowledge” (Ellis, 2004, p. 249). For instance, grammaticality judgment tests were used by Sorace (1985) in relation to a number of grammatical structures, by Han and Ellis (1998) – in relation to grammatical verb placement, and by Elder et al. (1999) – in relation to a number of verb-related characteristics. Many of previous studies also asked learners to produce rules and/or correct versions of target forms.
Implicit knowledge, on the other hand, refers to comprehension of meaning and how structures are used in various contexts: selected and free responses (following Doughty’s (2003) types listed above) thus provide subjects with an opportunity to demonstrate how the target structures can be used in authentic contexts. While one cannot be certain that subjects do not draw on implicit knowledge during a free production test, the ideas described above can be used as a general set of guidelines to keep in mind.

Accordingly, even though they were not specifically piloted as testing instruments distinguishing between one or the other type of knowledge being tested, the tests created for this study attempted to address both implicit and explicit knowledge and reflected production and comprehension aspects of conditional usage. The tests administered consisted of four distinct parts:

1) controlled production (13 items, 27 points total)
2) free production (4 items, 8 points total)
3) grammaticality judgment and comprehension: pictures (4 items, 4 points total)
4) grammaticality judgment and comprehension: sentences (8 items, 8 points total)

The total number of points possible for this test was 49 (scoring patterns are discussed more in this chapter, while results are discussed in the next chapter).

Controlled and free production parts, where students were asked to fill in the blanks and describe a picture respectively, aimed to target primarily implicit knowledge; i.e. the goal was to get students to demonstrate how they use the target form in specific contexts (Norris & Ortega 2000; Ellis 2009; Loewen 2009).

Grammaticality judgment and comprehension parts, on the other hand, aimed to target explicit knowledge as well as implicit knowledge. Since the directions for these
parts (discussed in a subsequent subsection) did not include correction of the sentences and producing/articulating a rule, learners were not monitored in terms of their online reasoning/judgment processes. Ellis (2004) and Ellis and Han (1998) support the idea that grammaticality judgment tests can indeed target implicit or tacit, as well as explicit knowledge:

> it can be hypothesized that when learners are asked to judge the grammaticality of a sentence rapidly, they are more likely to rely on implicit knowledge, but if they are given time, they are able to gain controlled access to explicit knowledge. (Ellis, 2004, p. 255)

In the study design context for this dissertation (see earlier sections of this chapter), learners were allowed a controlled amount of time to finish the tests; however, time spent on each section was not controlled. In other words, learners could choose to allocate a majority of their test-taking time for one section over others. In that sense, depending on how the time arrangement worked out for each individual learner, it is possible that grammaticality judgment sections were able to target both implicit and explicit knowledge associated with conditionals.

Fotos (1994), in a similar context which used consciousness-raising tasks and form-focused instruction, also used a grammaticality judgment section and a sentence production section in the tests measuring the knowledge of adverb placement (the study focused on measuring “the significance of gains produced from grammar task performance compared with gains produced through receiving grammar lessons” (p. 331), which is consistent with the range of tests used for this dissertation.

**Test creation process.** In order to create items for the four parts of each test, I utilized the Corpus of American Contemporary English ([http://corpus.byu.edu/coca/](http://corpus.byu.edu/coca/)). I conducted
searches for conditional sentences as utilized in as many contexts as possible, including academic genres, conversational, newspaper/magazine language, and so on. The goal was to represent the contexts where students will most likely see conditional phrases and might in turn be able to use them. Since the goal was to make representation of the target forms maximally close to the predominant usage patterns, contexts such as highly technical writing with high density of professional terminology were excluded.

To create test parts with pictures, I conducted Google Image searches, as well as searches on the stock photography websites, such as Stock.XCHNG (http://www.sxc.hu/) and MorgueFile (http://www.morguefile.com/). Only images explicitly stated to be in public domain were used for the purpose of creating materials.

**Piloting.** The initial pool of items was twice as big as the number of items that were eventually used for the test versions. All item collections were piloted first with native speakers, then with non-native speakers, in order to determine which items made sense and provided a generally acceptable context in which conditionals are used. Each of the native speakers (the total number of piloting volunteers was 30) took two subparts (one production and one grammaticality/comprehension part each). Many of the native speakers helping pilot the tests items had background in linguistics or language education (majority were employed at the Center for Applied Linguistics in Washington, DC). In many cases, their background allowed them to provide targeted feedback whenever items were unclear and/or usage was less than standard. Based on the feedback received from these native speakers, items that were unclear and/or confusing in some manner were eliminated from the pool of possible items.
Once the pool of possible items was finalized, test versions were created. Each subsection had three (3) possible versions (A, B, and C), and those were counterbalanced for each test (pretest, posttest, and delayed posttest). For instance, pretest had the following components:

- Controlled production: Fill in the blanks – Version A
- Free production: Pictures – Version A
- Grammaticality Judgment and Comprehension: Pictures – Version B
- Grammaticality Judgment and Comprehension: Sentences – Version C

Posttest and delayed posttests followed a similar arrangement in the sense that each test had several versions that were used in different order.

The preliminary versions of each complete test were piloted with a number of non-native speakers (total number was 6; all were former students of the author) to ensure that items made sense to the target population of the study and that they evoked the expected patterns of form-meaning associations. After filling out the tests, each non-native “piloter” was also asked questions about possibly problematic areas. Items that caused questions or ambiguity were further refined or removed from the tests.

Final versions of the tests were once again piloted with select native speakers to gain their input on correct answers within the remaining items. Between the preliminary and the final piloting with native speakers, each version of each test subsection was scored by an average of three people. The answers produced by native speakers in the course of the piloting process were further used as reference for answer keys for the time when the tests were being scored.
**Scoring.** The total number of points possible on the entire test was 49 across all three tests. Below is the exact breakdown of how those points distributed across sections:

1) controlled production (13 items, 29 points total)
2) free production (4 items, 8 points total)
3) grammaticality judgment: pictures (4 items, 4 points total)
4) grammaticality judgment: sentences (8 items, 8 points total)

A sample test can be seen in Appendix C. As already mentioned in the Piloting subsection, answer keys for each test part were determined by native speakers who piloted all test versions.

The scoring criteria worked as follows for each part:

1) Controlled production: Fill in the blanks. Each item came from a naturally occurring context, as captured by Corpus of Contemporary American English. The name of the context was indicated explicitly for each item, so that students would have an appropriate point of reference when comprehending the meaning of the entire sentence. The conditional sentence in each item was surrounded by other authentic sentences taken from the same context. The original context was preserved in order to maximally recreate the conditions where native speakers usually glean local, contextual knowledge that will typically inform their choices of tense in conditional phrases. The piloting process described above made sure that only the sentences with unambiguous context characteristics were used in all tests, as well as in instructional materials.

The measure of accuracy in this part was whether or not the correct tense was used in each blank. Some items included only one conditional phrase surrounded by context
phrases; accordingly, those items could “earn” two points maximum. Other items included more than one conditional phrase, so in that case, the maximum number of points possible for that item was 4 or 5 (if there were multiple dependent clauses, for instance). An example of a sentence from this section is listed next: this item was used in the pretest, Version A of “Controlled production: Fill in the blanks.” As is evident from the opening, the text itself comes from a novel:

From a novel: “So it’s like a fashion show?” Cooper asked, silently wondering if she had the name right. “Exactly. And all the women attending are married and go to my church, so I doubt there’ll be anything too scandalous for sale afterwards.” Ashley added, “I know it’s not your scene, Cooper, but it really ____________ (mean) a lot to me if you ________________ (be) with me. And you might even find yourself picking out something to wear for that magical moment when you and Nathan are ready.”

There is one conditional phrase with two blanks in this item; accordingly, the maximum number of points possible here is 2.

2) In the second part, “Controlled production: Pictures,” subjects were asked to describe a picture that represented a conditional scenario. Each item within this section had one conditional sentence frame, which needed to be filled out by subjects based on their personal choice of verb and tense. They were not given specific directions and/or suggestions regarding the types of verb to use in blanks. The answers provided by subjects were scored based on the correctness of tense. If the tense they used for each blank coincided with the tense used in the corresponding item by the native speaker, one point was awarded; if they used a wrong tense, no points were awarded. Accordingly, the most number of points possible for each item was 2; the maximum number of points for the whole section was 8. An example of an item from this section is provided next:
3. (may use negation)

**Last week:**

If I ________________________, the flowers ________________________________.

**Now:**

3) In the subsection “Grammaticality Judgment and Comprehension: Pictures,” subjects were given two descriptions of a picture, and they were asked to match one of the descriptions with the picture itself. If they matched the correct sentence with the picture (again, correctness was determined based on responses gleaned from the native speaker piloting process), one point was awarded. If they chose the incorrect sentence, no points were awarded. This section was the smallest in terms of “weight” that it carried for the test, with the maximum number of points possible for it being four (4). A sample item with the corresponding image is provided below.
2.

Peter after his house buying deal was closed:

a) I will lend Peter money if he needs help with buying a house.
b) I would have lent Peter money if he had actually needed it for buying a house.

4) Finally, the last part of each test, “Grammaticality Judgment and Comprehension: Sentences” presented subjects with conditional sentences used in their authentic contexts (as determined by corpus examples). The tenses in some of the conditional sentences were modified from the original and thus contradicted the surrounded contexts; other items had original “correct” tenses maintained in the if-sentence. Subjects were asked to judge which if-sentences used proper tense sequences in relation to the surrounding contexts and which ones did not. The rating used was a 5-point Likert scale, with one (1) being completely ungrammatical and five (5) being perfectly grammatical. Answers of the participants from the experiment were matched against the answers given by the
native speakers (as mentioned above, only relatively unambiguous items were included into final versions of the tests). If the answer produced by a study subject coincided with or was one point away from the one given by the native speaker (e.g., study participant gave a 4 while a native speaker gave a 5 when rating the grammaticality of a given sentence within its context), one point was awarded. If an answer did not coincide or was more than one point away from that provided by native speakers, no points were awarded. The maximum number of points subjects could gain on this section was eight (8). An example of a corresponding item is provided below:

**Directions:** read each text excerpt and decide whether the _if_-sentence(-s) (bolded) is/are used in a grammatically correct way. Rate each sentence from 1 to 5: 1 being completely ungrammatical (UG) and 5 being completely grammatical (G).

<table>
<thead>
<tr>
<th>How I came to be clinging to a steep slope of ice-cold, muddy soup, bleeding, alone, and off-trail in Glacier National Park is a long story, so I'll spare you the details. It was the kind of thing you don't want to tell even your friends, an embarrassment of huge proportions. I was in over my head on my first day out and I was contemplating the unimaginable - giving up. Oh, die shame! <strong>It will be not so bad if I am not obsessed about this hike for so long.</strong> For months, a photo of Sperry Glacier - the precise spot where I ran into trouble - had gleamed at me from my computer screen. From the comfort of my office chair, I studied every detail of the cross-country Floral Park route, and chatted with online advisers who assured me that it was a piece of cake.</th>
<th>UG</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

In this particular example, the bolded sentence is ungrammatical, which is why the correct answer is rating this excerpt with 1.

The total time needed by the subjects to complete the tests was approximately 50 minutes. All subjects were able to finish the tests during that time frame; more details regarding the scores can be found in the next chapter, **Results**.
Instructional materials.

*PowerPoint presentations for the cognitive group.*

*Introduction.* As mentioned earlier in this chapter, incorporating elements of cognitive linguistic analysis into classroom instruction and determining whether such practice might work better than the traditional approach is the cornerstone of this dissertation. A question then arises, how exactly can cognitive linguistic insights be transferred into teaching materials in such a manner that they are true to the original, conceptually salient for the learners, and effective pedagogically all at the same time? The following subsections contain details elucidating this general question. I will start with discussing some key ideas from Dancygier and Sweetser’s (2005) analysis that were relevant for material creation, and will then highlight key points that were included into each instructional PowerPoint presentation used for the cognitive treatment.

*Conceptual tenets from cognitive linguistic analysis of conditionals.* As discussed in Chapter 2, Dancygier and Sweetser’s (2005) analysis of English conditionals represents a comprehensive overview of this structure’s conceptual configuration. One of the key tenets of their approach is that they view conditionals as a unique syntactic construction that is comprised of elements making up the complete form. Grammatical aspects that contribute to felicitous creation of a conditional sentence, such verb tense and configuration of clauses, work together to determine the ultimate meaning of each conditional sentence.

A key function of conditionals is to make a prediction about the future, the general cognitive function of imagining future being an integral part of human cognitive activity (Dancygier, 1993, 1998). Without the ability to engage in such a function,
humans would never be able to commit to making decisions, discussing cause-and-effect patterns, or projecting future action. Conditional constructions represent the linguistic means that allow humans to follow through with these natural reasoning processes and be able to choose one scenario over another. Alternatives are thus a necessary element present in all conditional constructions, as without considering the alternatives, prediction process is not going to be successful. The process of weighing the outcomes of two or more alternatives when trying to make a prediction is at the core of the general meaning of conditional constructions as a category. Whenever two clauses (the if-clause and the main clause) are involved, the purpose of the entire sentence is to capture the precise correlation between them as cause and effect, as opposed to any other factors and/or possible reasons that might be involved.

According to cognitive linguists, the human conceptual process of proceeding with this type of prediction is made possible through mental space set-up and blending (see chapter 2 for more theoretical details in this regard). When starting one’s consideration of alternatives, each speaker begins with the background knowledge of the situation that s/he already has, which is typically referred to as base, or generic, space. The base space serves as a foundation for two daughter spaces, each being a conditional blend outlining the hypothetical reasoning behind each of the scenarios. Each daughter if-space consists of two parts (captured as two clauses conveying cause and effect relations), and those parts represent a certain model of the world or some other type of a reasoning process. The background knowledge of the speaker, or the base space, will inherently inform the composition of the possible scenario (daughter) spaces. Visual
representations of how such blending process works can be seen in chapter 2 of this dissertation.

Whenever the speaker makes a judgment about possible outcomes of a given conditional scenario, s/he needs to utilize specific linguistic means in order for the conceptually new construction to make sense and to express exactly what the speaker intends to express. In English, the pairing of verb forms in and between the if- and the main clauses plays a crucial role in conveying the information or background knowledge the speaker is drawing on, as well as the speaker’s intent. Verb tenses function as elements of a conditional construction that work as glue ensuring that the cause and effect are aligned with each other in the most appropriate and consistent manner possible.

The most commonly used type of a predictive sentence involves the use of present tense in the if-clause and the future tense in the main clause: if prices go up, I will sell my car. Dancygier and Sweetser (2005) provide a salient example: If Hiro takes the card, then the data will be transferred to his computer (pp. 32-33). Even though the event in the main clause has not taken place yet and is essentially referring to the future, English does not code those types of situations with future tense usage (unlike many other languages that do so). Essentially, the examples above clearly demonstrate that it is standard in English to use present tense to refer to the future in the if clause when grammatical future is used in the main clause in a conditional construction.

The phenomenon of using “backwards” tenses when expressing a temporal correlation is called backshifting (Dancygier 1993, 1998; Dancygier & Sweetser, 2005). Backshifting implies going back one tense category when expressing different hypothetical scenarios. In other words, the English language codes distancing into the
practice of referring to events that either have not taken place yet, or the outcomes of which can no longer be affected. If we look at the sentences traditionally referred to as hypothetical and counterfactual, this process of backshifting/distancing works in the following way:

1) **Hypothetical sentence**: If you got me a cup of coffee, I would be very grateful (Dancygier & Sweetser, 2005, p. 60). Technically, the *if*-clause refers to the present, but it uses past tense to create additional distance (and consequently to reduce the degree of pressure of the present moment and of the immediate pragmatic needs onto the actions of the interlocutor). The main clause includes *would* that was historically treated as the past tense of *will*; *would* thus also fulfills the general backshifting/distancing function. This construction of past tenses in both of the clauses stems from the implied base space (speaker’s background knowledge) that the speaker’s interlocutor (“you”) has not had a chance to get a cup of coffee for the speaker yet and there is no certain reason to believe that s/he will do so. Accordingly, the speaker’s general assumption, also referred to as the *epistemic stance* in cognitive linguistic terminology, is negative, and past tense is utilized here to capture this negative stance when referring to what is technically happening in the present, rather than in the past. Dancygier and Sweetser use the term ‘negative’ for this type of epistemic stance to highlight the “pessimistic” view of the reason captured by the *if*-clause, i.e. such negative stance suggests that the underlying condition is very unlikely to be true. The hypothetical scenario is set up and developed in order to draw appropriate conclusions about an analogous situation in the reality space, and using past tense here is intended to highlight the lack of immediate control from the present.
2) **Counterfactual sentence** (I will use a modified sentence from the previous example): *If you had gotten me a cup of coffee, I would have been very grateful*. Both clauses refer to the past; however, the tenses used therein take it one level further (past perfect in the *if*-clause and *would* + perfect infinitive in the main clause), so the past is double-removed in a way. Contextually, such forms set up a mental space, which is not only hypothetical in nature but also negates our knowledge of the reality space, and thus the entire sentence receives a counterfactual interpretation. The base space, or the background knowledge of the speaker is such that the interlocutor (“you”) did not get him/her a cup of coffee, and this action happened in the past and therefore can no longer be changed or affected. The knowledge that this desired action did not happen represents a negative epistemic stance on the part of the speaker and requires that the temporal pattern be shifted backwards from the actual past that is implied in the base space. Shifting the tense structure one level backwards essentially characterizes the speaker’s attitude to the situation/event: since the action has already taken place and cannot be changed, one can only talk about in abstract terms, rather than discussing potential outcomes. Thus, the primary function of counterfactual mental-space building is to draw inferences about the base space, rather than about the scenarios that stem from it and are organized in two counterfactual outcome spaces (Dancygier & Sweetser, 2005, p. 71).

Distancing, or backshifting, happens across all levels of conditional sentences depending on the assumptions held by the speaker and/or the composition of the generic space. In sentences like ‘*If prices go up, I will sell my car*’, both clauses refer to future, but the *if*-clause backshifts this info to the present, since the present implies that the situation can still change and that speaker can execute some degree of control over it. In
sentences with combinations of present and future tense, the epistemic stance of the speaker is positive.

On the other hand, in sentences provided under 1) and 2) above, the base space, or the background knowledge used for prediction is viewed as implausible (past perfect) or highly uncertain (regular past) by the speaker, which is why the generic space or the background knowledge is immediately positioned as negative. Assuming a potentially negative stance in the if-clause (i.e. the expectation that the reason is/will be highly unlikely to happen) also usually leads to the negative or implausible outcomes in the main clause, which are captured by distanced verb forms, as well.

Tenses and their interactions with the base space, or speaker’s knowledge, are one of the key ways of representing speaker’s perspective. Perspective of the speaker can essentially convey a complex combination of emotional, epistemic, temporal, interpersonal, and spatial viewpoints manifested in mental-space structure. Perspective of the speaker demonstrates what side/event s/he might align him/herself with. In addition to tense-related mental space building, perspective can be expressed through choices of personal pronouns (she as opposed to you), spatial characteristics (e.g., here rather than there), and through explicit references to participant roles in speech interactions (Ibid., p. 68).

To sum up, linguistic elements that are used to build conditional constructions are grounded in meaningful patterns that stem from the speaker’s background knowledge and his/her reasoning processes. Making these ideas clear to second language learners of English and allowing them to recognize these linguistic patterns, as well as understand
the speaker’s agency processes, is the ultimate goal of the cognitive instructional treatment undertaken for this study.

Logistics of the adaptation process. The ideas provided in the previous section carry tremendous value overall, but what can one do with the fact that Dancygier and Sweetser’s book contains 295 pages and is riddled with cognitive linguistic terminology? The original language and presentation would have been appropriate for a graduate level seminar in cognitive linguistics, but not for many other instructional contexts and audiences. In order to make the cognitive linguistic insights appear meaningful to non-native speakers who focus on improving their academic English, it was important to consider their background and the level of metalinguistic awareness that they were exposed to in their prior educational settings. As is the case with the majority of learners exposed to English in an EFL, rather than ESL context, the subjects in this study were not familiar with thinking about English language in usage-based terms (as opposed to considering just the formal aspects – a practice all of them were very familiar with because of prior schooling and experience). The subjects’ lack of familiarity with usage-based and discourse-focused instruction was made obvious earlier in the course of the semester, when both treatment groups engaged in discourse analysis exercises on multiple occasions during class time. Subjects reported having difficulty analyzing and discussing texts’ meaning at first, but later in the semester, both groups became more comfortable discussing language and reasons behind certain discourse choices. However, in the case of the cognitive treatment group, a number of adjustments still had to be made in order to make the cognitive insights meaningful for this target audience. One of the
key adjustments was extensive use of visuals and video, whenever possible and appropriate (more details on those will be discussed below, in corresponding sections focusing on each instructional PowerPoint). Also, all terminology was replaced with simple “lay-man” terms; for instance, the idea of a base space was conveyed through discussing speaker’s background knowledge. Every new conceptual point was first mentioned briefly and then introduced in greater detail as a discussion point, so that subjects could perceive the new information as a novel and engaging subject worthy of discussion. Last but not least, all of the theoretical (cognitive or not) parts were subsequently supported with pedagogic tasks, to be discussed in a later part of this chapter.

Each instructional PowerPoint presentation was teacher-facilitated; the entire session (going over the slides, explanation, debriefing key points and getting students’ responses and feedback) lasted a maximum of 45-50 minutes. The next several sections will highlight how the original cognitive linguistic ideas were made explicit and meaningful for subjects within the context of each instructional PowerPoint presentation.

Instructional PPT 1: expanding metalinguistic knowledge and conveying cognitive view of language. The first presentation focused on exposing the subjects to the meaning-centered reality of language. It started with giving a general introduction of how language is organized conceptually, highlighting the compositional nature of language. Students were introduced to this concept through the metaphor of a puzzle: puzzle pieces fit together and make one whole, similarly to how language structures work in combination with each other thus producing a composite meaning. In the beginning of this presentation, students contemplated the idea that language speakers have a choice in
defining how they put the puzzle pieces together and what the ultimate meaning of a
given linguistic unit is going to be. Then they were asked to reflect upon and share what
they already know about the conditional structure; this step was undertaken with the
purpose of later building upon this background knowledge and focusing upon possible
points that were brought up during this discussion. Next, general functions of
conditionals were discussed – prediction and establishing cause-and-effect relations.
Before discussing the actual structural parts of a conditional unit, students watched an
excerpt from “Alice in Wonderland” and brainstormed answers to the question “What
would have happened if Alice hadn’t seen the rabbit?” The focus of this video piece was
to make students think about conditionals in terms of the reality of the movie they all
were familiar with and be able to refer to concrete terms when thinking about conditional
functions.

The next portion of the teacher-led presentation focused on highlighting the
compound structure of a typical conditional clause. Students were reminded of the two
clauses – the if-clause and the main clause – and were asked to discuss the typical rules
they were taught in the past. The teacher then rephrased those rules in order to highlight
the aspects that were addressed poorly and/or did not receive a meaningful treatment.
This was a segue to bringing up the question of speaker reality and how conditional
sentences can be used to signal speaker’s perceptions of a combination of reasons and
outcomes. Students were given additional pictures and were asked to speculate about the
outcomes of actions presented through those pictures. The discussion of outcomes was
necessary for meaningful positioning of the role of linguistic means in marking possible
scenarios. The underlying idea was to reinforce the understanding that language resources
of each language give each speaker certain opportunities to code such outcomes, and the specific range of resources or linguistic tools can be adjusted to match the desired message. This first part of the presentation was essentially designed to get students to contemplate about a number of basic tenets of cognitive linguistics, so that they would further be able to perceive the newly structured grammatical information in a conclusive manner.

In the second part of the presentation, students were given two phrases: “If Dan finds the necessary data, he will share it with us in class” and “If Dan found the necessary data, he would share it with us in class.” Each of these two sentences was then analyzed more closely following the “adapted” blending scheme, where the base space of each phrase was referred to as background knowledge. First, each sentence was analyzed from the point of view of background knowledge: i.e., students were asked to discuss what information had to make sense and be true before either of these conditional sentences could be formed. After the discussion of background knowledge, the two scenarios were highlighted and implications of those scenarios elaborated. Students were asked to think about what would be the more realistic scenario, given that we already have a final output phrase (i.e., both phrases stated above) and speaker has a choice of how to manipulate the available linguistic tools in order to highlight a specific meaning. More detailed examples from this PowerPoint can be found in Appendix D.

Next, students were asked to talk about the speaker’s background knowledge and the two possible scenarios encoded through the grammatical organization of the following set of phrases: “If she misses the train, she will not meet her husband” and “If she had missed the train, she would not have met her husband.” This time this was a
discussion led by the students themselves rather than by the instructor. Then students’ answers were compared with the diagrams for these phrases present on the PowerPoint. Finally, having been taken through the conceptual process of on-line building of conditionals, students were provided with a detailed description of the cognitive chart (discussed below in a separate subsection of this chapter). The corresponding mental steps that could proceed from this entire presentation were summarized as the following:

1) Start with thinking about the background knowledge in question. What is realistic?
2) What is the possible or projected time of condition (if-clause)?
3) What is the possible or projected time of result (main clause)?
4) Pick the tenses that will reflect such an arrangement.
5) Check if your sentence makes sense overall in the given context.

The cognitive chart was designed to serve as a one-stop reminder of all these steps.

Following the completion of this teacher-led presentation, subjects proceeded to complete task one (1); the use of cognitive chart was encouraged. During the next class (which took place during the same week), subjects completed two, interactive tasks (2) (see detailed descriptions of tasks in later parts of this chapter). Thus, two interactive tasks were done before the next teacher-facilitated presentation took place the following week.

Instructional PPT 2: verb tenses and their combinations in various contexts. The second presentation demonstrated the underlying meanings of English tenses and how they are used in a variety of conditional contexts. First, to make connections with a previous teacher-facilitated session, an overview of the concepts of speaker background
knowledge and possible scenarios was provided. Then subjects were asked to speculate about implications of human motion and activity as captured by a photograph as opposed to a video. This discussion served as a segue towards discussing the conceptual organization of English tenses: while past tense signifies actions that are remote, static, cannot be accessed through real-life senses, and lie outside of human control, the present tense captures actions that are relevant to “here and now,” can be accessed through real-life senses, and potentially lie within the area of our control. The idea of control was discussed in terms of outcomes: the outcomes of actions from the past can no longer be affected, while the outcomes of actions from the present can indeed still be affected.

Following the initial discussion of implications of tenses, subjects were taken through a range of examples that highlighted how our use of past tense signifies remoteness, distance, and lack of control, while the present tense, on the other hand, assumes the presence of individual control at least to some extent. While being taken through each example, subjects were asked to contemplate possible reasons for grammatical arrangements in each structure.

After the presentation of examples, the underlying differences between the present and past tense conceptualization were captured through what is provided as Figures 4 and 5 below.
Role of present tense

Zone of no control

Zone of control

Role of past tense

Zone of no control

Zone of control

Use past tenses (simple, progressive, or perfect)
The remaining portion of this part of cognitive presentation focused on how tenses can be combined within larger realm of conditional sentences. Standard pairings of specific forms to be used in each clause were highlighted by discussing how the implications of different tense choices affect the construction and the eventual meaning of a conditional sentence. Even though the types of conditional sentences that are typically referred to as hypothetical and counterfactual have “prescribed” tense patterns attached to them (as captured by majority of textbooks), these tense patterns are predominant and standardized rather than grammatically absolute. It was stressed to the subjects that language speakers have choices depending on what they are trying to say, and accordingly, may or may not have to resort to the standard tense pairings. It has to be mentioned separately that all of such discussion of standardized versus non-standardized tenses was centered around specific examples, so that subjects could see how the meanings of tenses are configured in actual usage contexts. Examples were taken from authentic materials provided in the Corpus of Contemporary American English (COCA).

The conclusion of this teacher-facilitated presentation asked the subjects to watch an excerpt from the movie “Avatar” in which the character is taken into an alternative reality and has to follow a life pattern that is completely different from what is considered normal in his world. This excerpt was used in order to illustrate the process of accessing zone of control and how the perception of zone of control may depend on the speaker in question. Upon viewing this excerpt, subjects discussed the implications of various actions of the main character paying specific attention to the tenses that would be most appropriate in each context. Also, subjects were asked to contemplate how we could capture different scenarios of action development, if we were speaking from the
perspective of a movie viewer, as opposed to that of a movie character. Tenses in conditionals are bound to capture what each speaker perceives as possible or impossible, given the perceived limitations (sometimes subjective) of his or her own life reality.

The completion of teacher-facilitated presentation was complemented by task three (3); task four (4) was administered during the following session in the same week. Again, subjects were encouraged but not required to make use of the cognitive chart as an aid in self-guiding thinking processes associated with creation of conditional sentences.

**Instructional PPT 3: relying on context in determining the meaning of tenses.** The third presentation aimed at showing the subjects how conditionals are shaped within specific usage contexts and how surrounding information might affect the tense composition of either of the two clauses. The presentation started with drawing the students’ attention to the idea of perspective and how it can be expressed through visual means. Visual characteristics associated with different points of view humans can assume translate into the thinking patterns and what we associate with various viewing points in our real life.

The idea of having a certain point of view depending on environmental limitations was further transferred into the realm of language. Linguistic perspective and perception of local context can be expressed through time reference (as discussed on the previous day of instructional treatment), through personal reference (i.e., how the speaker aligns him/herself with the environment), and through reference to spatial locations. In conditional sentences, whenever the speaker aligns him/herself *together* with certain limitations of the context, the zone of control is referenced indirectly, which calls for preference for present tense usage. Alternately, whenever the speaker aligns him/herself
apart from context limitations, his/her perspective gives away the assumption that s/he does not view him/herself as being inside the zone of control; hence, past tense combinations would be more appropriate in such contexts.

Following this discussion of implications behind different types of speaker perspectives, subjects were taken through a variety of examples in which such differences in individual perception were shown playing out through specific linguistic means. The analysis of the first example was teacher-facilitated, with explicit progression through a number of accompanying questions that would allow the students to see how individual perspective is realized on the textual and linguistic levels. All subsequent examples were analyzed by students themselves while they worked in pairs or small groups (depending on specific seating arrangements), then debriefed with the whole class. Some of the examples featured multiple speakers and characters, which is why it was important for students to determine whose perspective was being expressed by each sentence and how subjective choices of possibilities were reflected through tense choices in corresponding conditional sentences. Last but not least, students were encouraged to keep in mind the limitations of a concrete discourse context and think about how tense choices might fit with such limitations.

In a nutshell, the students were supposed to learn to consider and keep in mind the following characteristics when pondering the compositional meaning and implications behind a given conditional sentence:

- Tenses in surrounding sentences;
- Perspective of speaker who is narrating: is it the same person as a given character? Is s/he still within the zone of control or already outside it?
• Time markers such as adverbs, adjectives, etc. providing an idea of what time is referenced;
• Appropriateness of forms for corresponding discourse context.

Following the completion of this teacher-led instructional treatment, students completed tasks five (5) (on the same day as the PowerPoint 3) and task six (6) (on a different day during the same week).

To sum up, at the end of instructional treatment, the goal was to have the subjects grasp and be able to at least partially internalize the following tenets of the cognitive linguistic explanation behind English conditionals:

- Speaker’s background knowledge and local context knowledge determine which verb forms we use;
- Speakers have choices as far as verb forms are concerned;
- Hypothetical, counterfactual and future if-constructions all reflect differing degrees of reality projected by the speaker;
- Tenses signal degree of distance from the events and the degree of reality perceived by the speaker (speaker perspective);
- Time markers such as adverbs and the like add context knowledge and information and may influence how events are viewed in the long run by the speaker and hearer.

In the ideal case scenario, internalizing these ideas would result in the mastery of the following behaviors; in other words, the desired outcome was for students to be able to:
- Recognize that conditionals are complex constructions, and different elements need to be taken into account in order to form a sentence that conforms to a given description of reality;
- Recognize/understand how tenses generally work in conditional constructions;
- Choose and use tenses appropriately with the locally desirable/appropriate description of reality;
- Choose and use time markers appropriately with the locally desirable/appropriate description of reality.

Whether or not these student outcomes were indeed achieved will be discussed in Chapters 5 and 6 of this dissertation (Results and Discussion, respectively).

**PowerPoint presentations for task-supported group.** The task-supported group received PowerPoint presentations informed by the traditional analysis of conditionals, which conveyed the most common classification of conditionals: factual, hypothetical, and counterfactual (more information on this actual classification in chapter 2). Since this was not a novel explanation/treatment of the target form, I will only provide a brief description of the whole treatment rather than a detailed overview of each PowerPoint.

During the first week of instructional treatment, learners were given an overview of all three conditional types with subtypes as informed by the more extended classification provided by Celce-Murcia and Larsen-Freeman in “ESL Grammar Book” (1992). During the second week, the focus was on tense combinations in all types of conditional sentences. The tense sequences were highlighted according to the explanations and descriptions provided in the traditional ESL materials (see chapter 2 for more detailed explanation). During the third week, the focus was on practicing using
these forms in various contexts. Students were given examples similar to the ones provided in ESL textbooks (mostly fill in the blank types, but also some where they had a greater degree of freedom in using conditionals). The PowerPoint presentation of the third week of treatment was teacher-led but students did most of the talking, as they were asked to react and respond to stimuli presented on the screen. Each of the three teacher-facilitated lessons ended with a brief re-statement of rules and a short introduction to subsequent practice through pedagogic tasks. As mentioned earlier in this chapter (and as will be discussed in greater detail in the section Pedagogic tasks and their sequencing), both groups completed identical tasks involving the same task conditions.

*Cognitive chart.* In addition to the cognitive PowerPoint, the participants in the cognitive group received the so-called cognitive chart that they could use both during the teacher-facilitated instruction and during the pedagogic tasks that they completed in class. The whole chart is available in Appendix E. The idea behind creating this supplementary piece for the cognitive group was to try to mirror/follow cognitive processes that should be taking place when conditional sentences are being created. The cognitive chart directs the learners’ attention to different aspects of conditional forms that need to be taken into account when determining felicitous tense choices. Subjects in cognitive group were allowed to use the chart when participating in/completing tasks so that their reasoning processes would be gradually aligned with how conditional form is expressed through the conventions of the English grammar. That said, even though all participants of the cognitive group were allowed the use of the chart, whether or not they actually used it during instructional time was not monitored directly. Participants were encouraged to
bring their copies of the cognitive chart to each class; however, it was noted that some of
the participants did not make active use of the chart, while others did. While this was a
supplementary resource made available to everyone, no conclusions can be drawn about
its distinct use and/or effectiveness. Some students, though, provided positive comments
pertaining to their use of cognitive chart in the classroom; see the chapter on results for
more detailed discussion of such comments.

**Pedagogic tasks and their sequencing.** A total of six tasks were used in the
process of data collection. The sequence of tasks is indicated in table 8 below. During
each week of data collection, two tasks were done during class time, one during each
twice-a-week class session. The first task was administered right after the teacher-
facilitated PowerPoint presentation in order to give students the chance to practice the
target knowledge immediately. The second task was administered during the next class
that took place within the same week. Participants worked in pairs and/or groups of three
for all of the tasks listed (see detailed descriptions of task characteristics following the
table below); a whole-class teacher-facilitated debriefing followed after task work in
groups was completed. The sequencing of the tasks followed the general degree of
intrinsic difficulty and novelty of tasks for the subjects. The “early” tasks targeted
comprehension and provided a controlled context for using the target form. Also, the
formats of fill-in-the-blank (tasks 1 and 3) or matching (task 2) were familiar to most
subjects from their past experience, which is why this would supposedly be an “easier”
form to practice conditionals in. Tasks 4-6, on the other hand, provided opportunities for
subjects to use the target form in a less constrained manner, thus allowing the learners to
use the target forms more freely. Also, the format of the latter tasks was more novel in the sense that subjects have not been exposed to tasks of these type(-s) in their prior educational contexts.

The only free production task was saved for the last session of instructional treatment (before the posttest), because prior research showed that when involved in free interactive activities, learners tend to avoid use of L2 target forms (de la Fuente, 2006). Thus, it was hoped that the sequencing of the tasks, with learners first participating in instructional activities that would require their production of the target feature, before giving them the opportunity to have a choice whether or not to use them during task completion. While specific task instructions do require the use of conditionals throughout tasks 1-6, during task six, learners may use other forms in addition to conditional constructions to accomplish task guidelines/instructions.

A complete overview of all tasks used in this study is provided in table 6 below.

Table 8
Pedagogic Tasks Used in the Study

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Task name/kind</th>
<th>Task characteristics/skills addressed through task</th>
<th>Grammatical elements emphasized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Sentence strips</td>
<td>Controlled production, comprehension; grammar task</td>
<td>Sequence of tenses between clauses, time markers</td>
</tr>
<tr>
<td>2</td>
<td>Understanding background knowledge</td>
<td>Consciousness-raising, comprehension; grammar task</td>
<td>Speaker knowledge</td>
</tr>
<tr>
<td>3</td>
<td>Hedging in data commentaries</td>
<td>Controlled production, comprehension;</td>
<td>Tenses and context knowledge</td>
</tr>
<tr>
<td>Week 2</td>
<td>Task</td>
<td>Context, Production</td>
<td>Knowledge</td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
<td>---------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>4</td>
<td>Global warming causes</td>
<td>Comprehension, controlled production; grammar task</td>
<td>Tenses; speaker and context knowledge</td>
</tr>
<tr>
<td>Week 3</td>
<td>Task</td>
<td>Context, Production</td>
<td>Knowledge</td>
</tr>
<tr>
<td>5</td>
<td>Text repair: break-up letter</td>
<td>Consciousness-raising, controlled production; communicative task</td>
<td>Tenses, context knowledge, time markers</td>
</tr>
<tr>
<td>6</td>
<td>Seating chart task</td>
<td>Free production; grammar task</td>
<td>Tenses, speaker knowledge</td>
</tr>
</tbody>
</table>

All of these tasks are consciousness-raising tasks in the sense that they all direct subjects’ attention to the use of conditionals, and conditionals are required for successful completion of all of these tasks. All but five of these tasks represent what Fotos (1994) referred to as grammar tasks, in the sense that all of them call learners’ attention to the specifics of the target language features. The only task that can be characterized as communicative was the break-up letter: it involved ungrammatical uses of the target feature, and learners needed to correct them in order to achieve solution. This classification, however, may appear misleading in the sense that it might imply that communication was not necessary for all other tasks, which is obviously not the case. All tasks involved pair work for the purposes of task completion.

These tasks were designed keeping in mind a few principles from Eckerth (2008a) on the nature of consciousness-raising tasks. All of them position the linguistic focus on conditional constructions through ensuring that “the productive or receptive use of certain target features is necessary for task completion” (p. 92). Also, all of them function as consciousness-raising tasks because they:

- activate learners’ background knowledge;
- make learners notice gaps between communicative needs and linguistic resources;
- raise awareness regarding the form of the target structure and the function which it can pursue or fulfill in a given usage context;
- while this is not going to be the focus of the present dissertation, such tasks also affect the process of formation and negotiation of L2 hypotheses.

(Ibid., p.112)

When selecting topics for all tasks to be used in this study, I aimed to follow these criteria and create tasks that would resemble the authentic context of target language use as much as possible. The next section provides details regarding each of the tasks mentioned in the chart above.

Task characteristics of each of the tasks used in this study.

**Task 1: Sentence strips.** This task targeted subjects’ ability to comprehend how conditionals are organized and how two sentence parts form one whole, i.e. one compound sentence. This task also targeted controlled production because subjects were supposed to fill in verb forms into the blanks present in each clause. Subjects worked in groups of two or three. Each group was given an envelope with sentence strips. Each complete conditional sentence was cut into two parts (if-clause and main clause); each clause contained blanks instead of verb tenses. Subjects were asked to think about the conditional form per se and then match if-clauses with corresponding main clauses, supplying the correct verb tenses in the blanks. Each group was supposed to provide rationale for why they matched each of the two sentence parts and contemplate rules for forming conditional sentences in general. Most subjects were done with this task within
fifteen minutes. Subjects reported that this task made sense to them and they did not have a particularly hard time completing it. The debriefing accompanying this task was relatively straightforward in the sense that subjects had little difficulty supplying correct forms in corresponding contexts of each sentence strip.

Task 2: Understanding Background Knowledge. This task had two versions: the cognitive group was given a different version than the task-supported group. The cognitive group was given four sentences and they were asked to create diagrams indicating background knowledge of the speaker and two possible outcome scenarios, following the examples provided in the first instructional PowerPoint for this group (Cognitive PPT 1). The subjects in task-supported group were given conditional sentences with two statements of speaker’s background knowledge (i.e., the information that had to be true before a corresponding felicitous conditional sentence could be formed). Subjects were asked to circle the sentence with the correct background knowledge.

For cognitive group, this task was open-ended, i.e. the diagrams drawn by them were the ultimate result – no evaluation or individual feedback on correctness was provided. The task-supported group, on the other hand, was given correct answers of the “right” background knowledge preceding each conditional sentence.

Subjects in both groups were asked to work on this task in pairs/groups of three, whichever seating arrangement was preferred or considered more convenient. After the subjects were done working on the tasks, a teacher-facilitated debriefing took place.

Task 3: Hedging in Data Commentaries. This task was embedded in the authentic context of the class. One of the topics covered during this part of the semester was data
commentary and describing graphs and charts. According to Swales and Feak (2004), the
key elements that need to be included into such a description are, first, some sort of a
general statement about the data, second, highlighting key trends, and third, discussing
the implications of the trends captured through the graph/chart. The task gives the
students a corresponding context, in which to build upon prior background knowledge
they gained on the topic, as well as the opportunity to practice their knowledge of
conditional sentences. The data represented in the chart concerns the grades
undergraduate students got on a regular exam and on a makeup exam. Since the average
makeup exam score was significantly lower than the one on the regular exam, the task
was to write an explanation exploring possible reasons for such a discrepancy. The
original variant of this task was open-ended: i.e. students were asked to write a data
commentary and summary of reasons following their own rhetoric patterns and without
being constrained to a specific grammatical structure. In order to ensure that subjects do
use conditionals, the output space was modified to include sentences with partial blanks
that need to be filled out with clauses that make up if-sentences. In filling out the blanks,
subjects were allowed to use any verb and tense they thought would fit for the context,
the idea being to allow the subjects to demonstrate their comprehension of the target
structure usage. In order to complete this task, subjects were given a choice whether to
work individually or in small groups; those who worked on their own were then allowed
to compare their answers with the one(-s) of their neighbor(-s). When debriefing the
answers provided by subjects with the whole class, explicit correct answers were not
given directly; rather, the instructor explained how different tense choices may convey
differing meanings about speaker intent.
Task 4: Global Warming Causes. This task was also embedded in a local context of the course. One of the topics covered throughout the semester is the discussion of global warming: earlier in the semester, students watched excerpts from the documentary on global warming (“Inconvenient Truth” by Al Gore) and analyzed rhetoric strategies used to discuss global warming; also, a week before the global warming task was administered, students read a polemic article on possible causes of global warming and took part in an impromptu class debate on the subject. This background allowed students to be able to follow the target goal of the task – i.e., match causes of global warming with possible effects/outcomes. They were supposed to capture the cause and effect pairs with if-clauses. Other than just sticking with the conditional structure in general, there were no other formal guidelines the students had to adhere to. Since this task was done during the second week of treatment, it allowed the students to explore a new context where they could practice their knowledge of conditionals without the scaffolding provided by the fill-in-the-blanks format. Subjects could work individually or in small groups to accomplish this task; a whole class debriefing took place after the completion of individual/group work.

Task 5: Text repair: Break-up Letter. The original idea (i.e., repairing a break-up letter) was taken from Eckerth (2008b). Eckerth’s task did not focus on any specific grammatical structure, asking subjects to correct the errors in the text, i.e. repair it, so that it would make sense as one whole. In this study, on the other hand, the text repair task featured the break-up reasons specifically using conditional sentences that were clearly ill-formed. Students were supposed to utilize their knowledge of the conditional phrase structure and of the meaning context. They were asked to correct the errors in the letter,
so that each individual sentence would make sense. Afterwards, they were supposed to rewrite the letter on the back using the correct forms in conditionals that previously featured errors. Students found this task the most “enjoyable” and fun of all tasks presented in this study.

**Task 6: Seating Chart.** The task was adapted from the description provided in Ur (1988). The original task did not favor any specific grammatical structure in particular. I took the original idea of trying to seat people of different and sometimes conflicting backgrounds around one dining table and added the context of conditional use. The conditions listed could not be satisfied in their entirety, so subjects were told to try to satisfy as many conditions as they possibly could. This was the last task administered in the course of instructional treatment; no scaffolding was built into this task. Subjects worked in groups trying to devise a mutually agreeable plan to seat all people around one common table. While discussing possible seating arrangements, they were supposed to use conditional sentences. After each group was done with creating the best possible seating arrangement given the conditions, they captured in writing their seating choices using the conditional structure. Subjects reported that trying to satisfy as many conditions as possible from this list was a relatively challenging task, which required a lot of intellectual effort. Since it was a problem-solving task and presumably required substantial cognitive effort, it was positioned as last in the instructional sequence. Its interaction with unique learner characteristics (i.e., learner interest and task motivation, etc.) was key in whether or not the task would be completed properly.

In sum, since conditionals were never truly addressed as a target structure in task-based teaching literature, the process of designing tasks for this study had to be informed
by best practices found in current studies/literature on task-based teaching and the use of
tasks, in particular form-focused and/or consciousness-raising ones, in second language
classrooms. Certain underlying ideas of what tasks were supposed to accomplish in a
language classroom were used as starting points for ideas of how concrete tasks could be
created so that they would be usage-based, targeted, and authentic as possible (both
targeting real world needs and local communicative context the students were dealing
with).

Following the completion of data collection, statistical analyses were conducted
using the test scores from all three tests. The specific statistical procedures and
corresponding results are outlined in the following chapter, Results. Qualitative data were
subsequently coded focusing on the themes that emerged most frequently during
retrospective interview sessions.

4.5 Summary

This chapter provided a general overview of the present study, highlighting
research questions, participant characteristics, instructional procedures, and most
importantly, tests and materials utilized during data collection. The following chapter will
address quantitative and qualitative results of data collection, providing the description of
the data obtained to be used for further discussion and for answering the research
questions stated earlier.
CHAPTER 5: STUDY RESULTS

5.0 Introduction

The answers to research questions 1 through 3, posited in the previous chapter, were contingent upon results of the three tests (pretest, posttest and delayed posttest) completed by all study participants. The scores obtained through these tests served as primary measures of L2 development on the participants’ knowledge of target constructions. This chapter will discuss the statistical results as measured by the three tests in the first main section, Quantitative Results.

The second section of this chapter, Qualitative Results, will address qualitative findings from the retrospective interview data related to the effects of the instructional treatment. The goal of the qualitative section of this chapter is to provide answers to research question 4.

This whole chapter establishes a basis for the next chapter, Discussion, where these results will be considered in a more theoretical context and evaluated through the perspective of the larger literature in the field.

5.1 Quantitative results

This section will have four subsections. First, descriptive statistics of the test scores by testing task type will be presented, followed by the overall ANOVA (and corresponding post-hoc) scores for performance of all three groups over time. Next, ANOVA results for each testing task will be presented, and finally, a more targeted comparison between the cognitive and the task-supported groups will be carried out in regard to both production scores and overall gain scores, using the t-test procedure.
Briefly summarizing the trends present in the data, the differences between all three groups were statistically significant, the task-supported group demonstrating greater gains than the control group, and the cognitive group in turn demonstrating greater gains than both the task-supported and the control groups. The details follow.

**Test scores: descriptive statistics.** Scoring procedures were addressed in the previous chapter; without going into too much detail, I will provide a brief overview of the test parts and possible scores below.

The total number of points possible on the entire test was 49 across all three tests. Below is the exact breakdown of how those points distributed across sections:

5) controlled production (13 items, 29 points total)
6) free production (4 items, 8 points total)
7) grammaticality judgment and comprehension: pictures (4 items, 4 points total)
8) grammaticality judgment and comprehension: sentences (8 items, 8 points total)

All tests were scored by the researcher using a comprehensive answer key for each test (i.e., for each version of pre-, post- and delayed posttest). The answer keys were designed in such a way that they reflected the opinions of native speakers obtained during the piloting process (see chapter 4 for more details). The piloting process itself was supposed to eliminate the items, which allowed for multiple interpretations, hence the answer keys did not allow for ambiguity. Since most test items were taken from authentic text sources (Corpus of Contemporary American English; see chapter 4 for more details), the opinions of native speakers were compared with the original verb tenses used in the authentic corpus excerpts; if the sources disagreed, the item was discarded. That said, there were three examples, where native speakers suggested more than one correct
variant, and one of those variants matched that found in the corpus. In these situations, there were two correct variants listed on the answer key, and if a subject had either of those variants on the form(-s), s/he was given a full point for the answer. In most situations, there was minimal room for disagreement regarding which item should be considered correct.

**Cognitive group: descriptive statistics.** The summary of means across testing tasks for the cognitive group is presented in Table 9 below.

**Table 9**
Descriptive Statistics by Testing Task: Cognitive Group (n=17)

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
<th>Delayed posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Controlled production</td>
<td>13.59</td>
<td>3.84</td>
<td>22.06</td>
</tr>
<tr>
<td>Free production</td>
<td>3.82</td>
<td>1.07</td>
<td>6.24</td>
</tr>
<tr>
<td>Comprehension: pictures</td>
<td>2.65</td>
<td>0.93</td>
<td>3.24</td>
</tr>
<tr>
<td>Comprehension: sentences</td>
<td>5.12</td>
<td>1.65</td>
<td>6.65</td>
</tr>
</tbody>
</table>

As can be seen from Table 9, the most improvement between the pretest and the delayed posttest took place in the production parts, controlled production and free production respectively. This trend may be partially explained by the fact that the comprehension parts contained a relatively small number of items, 4 and 8 respectively for the parts with pictures and sentences.

Table 10 below represents a summary of overall test scores of the cognitive group participants.
Table 10
Summary of Overall Mean Test Scores of Cognitive Group Participants (n=17)

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
<th>Delayed posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>25.18</td>
<td>5.27</td>
<td>38.06</td>
<td>3.25</td>
</tr>
</tbody>
</table>

As can be seen from Table 10, an average difference between the pretest and the posttest was 13 points, while an average difference between the pretest and the delayed posttest was 11 points.

As far as the raw scores were concerned, most subjects obtained a score in the mid-20 range on the pretest, the lowest score being 17 and the highest score (outlier) being 38. On the post-test, most subjects scored in the mid- to high 30s, the lowest score being 29 (still 12 points higher than this subject’s pretest score), and the highest score being 43. All subject improved from the pretest to the posttest. On the delayed posttest, the majority of scores were in the mid-30s, with the lowest score being 30 and the highest score 41. Only one subject scored lower on the delayed posttest than on the pretest. Score means across all three tests are discussed in a separate subsection further in this chapter.

Task-supported group: descriptive statistics. The summary of means across testing tasks for the task-supported group is presented in table 11 below.

Table 11
Descriptive Statistics by Testing Task: Task-Supported Group (n=18)

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
<th>Delayed posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Controlled production</td>
<td>12.61</td>
<td>3.01</td>
<td>18.11</td>
</tr>
<tr>
<td>Free production</td>
<td>4.11</td>
<td>1.61</td>
<td>5.56</td>
</tr>
</tbody>
</table>
As demonstrated by data in Table 1, the most progress between the pretest and posttest was made on production parts of the test, in particular the controlled production. The mean gains score between the pretest and the posttest was around 6 points, while the mean gains score between the pretest and the delayed posttest was around 4 points. The free production part, as well as both comprehension parts demonstrated relatively little change over time.

Table 12 below represents overall mean test scores of the task-supported group participants.

**Table 12**  
**Summary of Overall Test Scores of Task-Supported Group Participants** (n=18)

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
<th>Delayed posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>24.44</td>
<td>31.67</td>
<td>29.78</td>
</tr>
<tr>
<td>SD</td>
<td>4.3</td>
<td>5.34</td>
<td>4.44</td>
</tr>
</tbody>
</table>

On average, participants of the task-supported group improved by 7 points between the pretest and the posttest, and by 5 points between the pretest and the delayed posttest.

Referring to raw score data, similarly to the trends observed in the cognitive group, the majority of the participants in the task-supported group scored in the mid-20s on the pretest, the highest score being 32 and the lowest being 16. On the posttest, the majority of the participants obtained a score in early 30s, the lowest score of the group being 21 and the highest score being 40. Two subjects scored lower on the posttest than
on the pretest. On the delayed posttest, the majority of subjects scored in the high 20s to low 30s, the lowest score being 22 and the highest score being 40. One subject returned to the pretest level on the delayed posttest, and two subjects scored lower on the delayed posttest than on the pretest. For discussion of score means across all three tests, see a separate section further along in this chapter.

**Control group: descriptive statistics.** The summary of means across testing tasks for the control group is presented in Table 13 below.

### Table 13
Descriptive Statistics by Testing Task: Control Group (n=22)

<table>
<thead>
<tr>
<th></th>
<th>Pretest M</th>
<th>SD</th>
<th>Posttest M</th>
<th>SD</th>
<th>Delayed posttest M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controlled production</td>
<td>13.18</td>
<td>4.2</td>
<td>14.82</td>
<td>3.5</td>
<td>14.32</td>
<td>3.98</td>
</tr>
<tr>
<td>Free production</td>
<td>3.55</td>
<td>1.81</td>
<td>3.77</td>
<td>1.54</td>
<td>4.45</td>
<td>1.47</td>
</tr>
<tr>
<td>Comprehension: pictures</td>
<td>2.91</td>
<td>0.97</td>
<td>2.77</td>
<td>0.87</td>
<td>2.50</td>
<td>0.86</td>
</tr>
<tr>
<td>Comprehension: sentences</td>
<td>3.95</td>
<td>1.40</td>
<td>4.23</td>
<td>1.60</td>
<td>4.14</td>
<td>1.86</td>
</tr>
</tbody>
</table>

The data in Table 13 show that the control group made relatively small gains over time, improving by approximately one (1) point between the pretest, the posttest, and the delayed posttest (controlled production), and otherwise staying at approximately the same level across time on all remaining testing tasks.

Next, Table 14 below represents overall mean test scores of control group participants.
Table 14  
Summary of Overall Test Scores of Control Group Participants (n=22)  

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th></th>
<th>Posttest</th>
<th></th>
<th>Delayed posttest</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>23.59</td>
<td>4.83</td>
<td>25.59</td>
<td>4.84</td>
<td>25.45</td>
<td>5.70</td>
</tr>
</tbody>
</table>

The means in Table 14 show that the subjects of the control group improved by an average of two points between the pretest and the posttest, as well as between the pretest and the delayed posttest.

As far as the more specific scores were concerned, the majority of control group subjects scored in the low to mid-20s on the pretest, the lowest score being 16 and the highest score being 35. On the posttest, the majority of subjects scored in the mid- to high 20s, with the lowest score still being 16 and the highest score being 37. On the delayed posttest, the majority of subjects again scored in the mid- to high 20s, the lowest score being 14 and the highest being 38. Unlike the trends present in the cognitive and task-supported groups, where gains seemed to have followed a linear direction, the control group had a greater amount of discrepancy or variation, as far as gains across tests were concerned. Some subjects steadily improved between the pretest and the delayed posttest, while other subjects did worse during the same time frame. Also, some subjects did better on the delayed posttest than both on the pre- and posttest, which demonstrates that the acquisition of target forms in naturalistic contexts (i.e. without the explicitly controlled instructional treatment) may follow a rather unpredictable path. The next section provides further details on the test score means among all three groups.

Summary of descriptive statistics for all three groups. Table 15 below provides an overview of all test score means obtained on all three tests by participants of
all three groups (for standard deviations see tables reporting mean scores of specific groups in the earlier sections of this chapter).

Table 15
Descriptive Statistics by Testing Task: All Groups

<table>
<thead>
<tr>
<th></th>
<th>Pretest means</th>
<th>Posttest means</th>
<th>Delayed posttest means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cog Task Control</td>
<td>Cog Task Control</td>
<td>Cog Task Control</td>
</tr>
<tr>
<td>Controlled production</td>
<td>13.59 12.61 13.18</td>
<td>22.06 18.11 14.82</td>
<td>21.29 16.56 14.32</td>
</tr>
<tr>
<td>Free production</td>
<td>3.82 4.11 3.55</td>
<td>6.24 5.56 3.77</td>
<td>6.29 5.61 4.45</td>
</tr>
<tr>
<td>Comprehension:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pictures</td>
<td>2.65 2.83 2.91</td>
<td>3.24 2.94 2.77</td>
<td>2.71 2.50 2.50</td>
</tr>
<tr>
<td>Comprehension:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sentences</td>
<td>5.12 4.89 3.95</td>
<td>6.65 4.94 4.23</td>
<td>6.24 5.11 4.14</td>
</tr>
</tbody>
</table>

Next, Table 16 provides an overview of mean scores obtained across three tests by participants of all three groups.

Table 16
Descriptive Statistics of Mean Test Scores Across All Three Groups

<table>
<thead>
<tr>
<th></th>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest score</td>
<td>Cognitive Task Control</td>
<td>25.18 24.44 23.59</td>
<td>5.271 4.33 4.83</td>
<td>17 18 22</td>
</tr>
<tr>
<td>Posttest score</td>
<td>Cognitive Task Control</td>
<td>38.06 31.67 25.59</td>
<td>3.25 5.35 4.85</td>
<td>17 18 22</td>
</tr>
<tr>
<td>Delayed posttest score</td>
<td>Cognitive Task Control</td>
<td>36.53 29.78 25.45</td>
<td>3.00 4.44 5.71</td>
<td>17 18 22</td>
</tr>
</tbody>
</table>
As can be seen from Table 16 above, mean pretest scores were quite similar among all three groups, with 25.18, 24.44, and 23.59 for cognitive, task-supported, and control group respectively; the average standard deviation among all three groups being 4.778. On the posttest, average score of the cognitive group participants was 38.06, the one for the task-supported group participants was 31.67, and the one for the control group participants was 25.59, the standard deviation for the entire sample being 6.871. Simple mathematical calculations suggest that the average score of cognitive group participants increased by 13 points, that of task-supported group participants grew by 7 points, while that of control group – by 2 points. The delayed posttest scores were 36.53, 29.78, and 25.45 for the cognitive, task-supported, and control groups respectively, which demonstrate an average loss of about 2 points for both treatment groups; the score of control group stayed approximately the same, declining only by an average of one tenth of a point between the posttest and the delayed posttest.

As can be seen from this table, the mean score of cognitive group participants changed from 25.1 on the pretest to 38.0 and 36.5 on the posttest and delayed posttest respectively. The participants in the task-supported group progressed from 24.4 on the pretest to 31.6 and 29.7 on the two subsequent tests, respectively. Finally, participants in the control group had the mean 23.5 score on the pretest, while their posttest and delayed posttest scores were around 25. The standard error for all means was calculated to be around 1.

Figure 6 below represents these differences among groups in visual form.
The subjects of the cognitive group improved the most over time, while the subjects of the control group stayed at approximately the same level throughout. Between the two treatment groups – cognitive and task-supported – the cognitive group outperformed the task-supported group: the average pretest-posttest gains score was 7 for the task-supported group as opposed to the 13 for the cognitive group (see tables and graph above). The implications of such score differences for the answers to research questions will be discussed in the next chapter of this dissertation.

**ANOVA comparison among all three groups.** This section will address the issue of effectiveness of any type instruction for the acquisition of English conditionals and will therefore highlight comparisons among all three groups.
To ensure that all groups were at the same level at pretest, one-way ANOVA was calculated to measure possible differences between pretest scores. The differences among all three groups were not statistically significant (cognitive vs. task-supported: $p = 0.904$, SE = 1.6; task-supported vs. control: $p = 0.86$, SE = 1.5; cognitive vs. control: $p = 0.60$, SE = 1.55), which provided a basis for further comparison.

To examine the difference between the test scores obtained on each test, the analysis of variance, or ANOVA, was selected as the most appropriate technique for this purpose due to a number of reasons. The independent variables are group assignment and test time, while the dependent variable was the score on each test. The ANOVA allows examination of how several independent variables might interact with each other and what type of effect such interactions might have on the dependent variable. The data sample used in this study satisfies all of the key assumptions necessary for an ANOVA: the variances are fairly similar, the measured observations come from independent groups, and the dependent variable is measured on an interval scale (Field, 2005).

The ANOVA allows comparison of “the ratio of systematic variance to unsystematic variance in an experimental study” (Field, 2005, p. 428), which is expressed through the F-ratio value. In the present study, a **repeated-measures within-subjects ANOVA** is appropriate because the same subjects contributed to means at different points of the experiment (i.e. different test times), albeit these subjects differed as far as their group affiliation and type of instructional treatment were concerned. Mauchly’s test of sphericity was conducted to ensure that the variances of the differences between conditions are equal. The $p$-value obtained on this test equaled .448, which allows us to conclude that the variances of the differences are not significantly different; therefore, the
condition of sphericity can be considered satisfied for the present data and study context.

Normality assumptions (skewness and kurtosis) were also met for this dataset. The data in Table 17 below provides an overview of tests of within-subjects effects, while Table 18 reports the results of multivariate tests.

**Table 17**
Repeated Measures ANOVA: Tests of Within-Subjects Effects

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphericity Assumed</td>
<td>2</td>
<td>881.486</td>
<td>70.66</td>
<td>.000</td>
</tr>
<tr>
<td>Greenhouse-Geisser</td>
<td>1.942</td>
<td>907.824</td>
<td>70.66</td>
<td>.000</td>
</tr>
<tr>
<td>Huynh-Feldt</td>
<td>2.000</td>
<td>881.486</td>
<td>70.66</td>
<td>.000</td>
</tr>
<tr>
<td>Lower-bound</td>
<td>1.000</td>
<td>1762.973</td>
<td>70.66</td>
<td>.000</td>
</tr>
<tr>
<td>Time * GROUP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sphericity Assumed</td>
<td>4</td>
<td>170.188</td>
<td>13.64</td>
<td>.000</td>
</tr>
<tr>
<td>Greenhouse-Geisser</td>
<td>3.884</td>
<td>175.273</td>
<td>13.64</td>
<td>.000</td>
</tr>
<tr>
<td>Huynh-Feldt</td>
<td>4.000</td>
<td>170.188</td>
<td>13.64</td>
<td>.000</td>
</tr>
<tr>
<td>Lower-bound</td>
<td>2.000</td>
<td>340.376</td>
<td>13.64</td>
<td>.000</td>
</tr>
</tbody>
</table>

**p < .01**

**Table 18**
Repeated-Measures ANOVA: Multivariate Tests for Performance Across Time in Three Groups

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pillai's Trace</td>
<td>.74</td>
<td>77.08</td>
<td>.000</td>
<td>.74</td>
</tr>
<tr>
<td>Wilks' Lambda</td>
<td>.26</td>
<td>77.08</td>
<td>.000</td>
<td>.74</td>
</tr>
<tr>
<td>Hotelling's Trace</td>
<td>2.91</td>
<td>77.08</td>
<td>.000</td>
<td>.74</td>
</tr>
<tr>
<td>Roy's Largest Root</td>
<td>2.91</td>
<td>77.08</td>
<td>.000</td>
<td>.74</td>
</tr>
<tr>
<td>Pillai's Trace</td>
<td>.54</td>
<td>9.86</td>
<td>.000</td>
<td>.27</td>
</tr>
<tr>
<td>Time * GROUP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wilks' Lambda</td>
<td>.47</td>
<td>12.12</td>
<td>.000</td>
<td>.31</td>
</tr>
<tr>
<td>Hotelling's Trace</td>
<td>1.11</td>
<td>14.44</td>
<td>.000</td>
<td>.36</td>
</tr>
<tr>
<td>Roy's Largest Root</td>
<td>1.10</td>
<td>29.7</td>
<td>.000</td>
<td>.52</td>
</tr>
</tbody>
</table>
Since the assumption of sphericity was confirmed by Mauchly’s test, we can assume the corresponding line in Table 17. As can be seen, the $p$ value is <0.05 at $p<0.001$, which demonstrates that the differences between subjects’ mean scores on three tests are statistically significant. In other words, the differences between test means as measured at three distinct points of time were significant between cognitive and task-supported groups, between task-supported and control groups, and between cognitive and control groups.

As can be seen from Table 18, multivariate tests focusing on the interaction between time and group variables demonstrate medium-strength effect sizes (partial eta squared).

In order to check the specific areas of interaction between groups, Scheffe’s post-hoc comparison was conducted; the results are represented in Table 19 below.

**Table 19**  
Repeated Measures ANOVA: Multiple Comparisons, Scheffe’s Post-Hoc test

<table>
<thead>
<tr>
<th>(I) Group</th>
<th>(J) Group</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive</td>
<td>Task</td>
<td>4.63*</td>
<td>1.251</td>
<td>.002</td>
</tr>
<tr>
<td>Control</td>
<td>Cognitive</td>
<td>8.38*</td>
<td>1.195</td>
<td>.000</td>
</tr>
<tr>
<td>Task</td>
<td>Cognitive</td>
<td>-4.63*</td>
<td>1.251</td>
<td>.002</td>
</tr>
<tr>
<td>Control</td>
<td>Cognitive</td>
<td>3.75*</td>
<td>1.176</td>
<td>.009</td>
</tr>
<tr>
<td>Control</td>
<td>Cognitive</td>
<td>-8.38*</td>
<td>1.195</td>
<td>.000</td>
</tr>
</tbody>
</table>
As can be seen from details in Table 19, the relationships between all group pairings were statistically significant with $p$ value always being < 0.01.

A visual representation of the how participants of each group scored across all three tests is given in Figure 7 below.

**Figure 7**
Means of test performance over time

The biggest leaps in mean test scores took place in the cognitive and task-supported groups between the pretest and the posttest; the participants in the control
group did increase their posttest scores compared to the pretest, but not nearly as much as
the participants of the other two groups did. The posttest gains obtained by the subjects
from the cognitive and task-supported groups were preserved to some extent on the
delayed posttest; however, the mean scores went down on the delayed posttest in
comparison to those on the posttest. A similar trend – slight decline of test means on the
delayed posttest compared to the regular posttest – was also observed for the participants
of the control group, albeit to a much lesser degree than for the other two groups.
Participants of the cognitive group demonstrated the largest range of score means
improvement, with the task-supported group participants being second and the control
group participants third.

Since select subjects from the cognitive and task-supported groups were
interviewed after they took posttests, their delayed posttest scores could have been
confounded by this fact. In order to test for differences between groups without this
possible bias in the data, a separate set of repeated measures ANOVA and corresponding
post-hoc tests were run. The specific interactions between groups for Scheffe’s Post-Hoc
tests are presented in Table 20 and Figure 8 below.

Table 20
Repeated Measures ANOVA: Multiple Comparisons, Scheffe’s Post-Hoc test

<table>
<thead>
<tr>
<th>(I) Group</th>
<th>(J) Group</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive</td>
<td>Task</td>
<td>4.28*</td>
<td>1.458</td>
<td>.019</td>
</tr>
<tr>
<td>Control</td>
<td>Task</td>
<td>8.02*</td>
<td>1.346</td>
<td>.000</td>
</tr>
<tr>
<td>Task</td>
<td>Cognitive</td>
<td>-4.28*</td>
<td>1.458</td>
<td>.019</td>
</tr>
</tbody>
</table>
The numbers in this chart demonstrate that the differences between groups were statistically significant with p value being on average equal to or lower than 0.02. The visual representation of these statistical outcomes is provided in the Figure 8 below.

**Figure 8. Means of Test Performance over Time**
(dataset did not include subjects who participated in retrospective interviews)

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Cognitive</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.74*</td>
<td>-8.02*</td>
<td>-3.74*</td>
</tr>
<tr>
<td></td>
<td>1.289</td>
<td>1.346</td>
<td>1.289</td>
</tr>
<tr>
<td>p value</td>
<td>.021</td>
<td>.000</td>
<td>.021</td>
</tr>
</tbody>
</table>

Note: dataset did not include subjects who participated in retrospective interviews.

*p<0.01

Note: dataset did not include subjects who participated in retrospective interviews.
Again, this graph demonstrated that the differences between groups still proved to be statistically significant over time, even excluding the data from the subjects who took part in introspective interviews.

Furthermore, ANOVAs to compare performance on each testing task were produced in order to determine the areas of greatest and least improvement over the period of the study. The next section outlines the results from each of the tests.

**ANOVA for controlled production.** Overall differences between all three groups for this testing task were found to be statistically significant (between-subjects effects for interaction between time and group: $F=8.4$, $p=0.001$, partial eta-squared=0.237). In order to avoid possible redundancy in discussion, only the data demonstrating actual interactions between groups will be reported. Scheffe’s post-hoc test showed that the differences between the cognitive and task-supported groups and the cognitive and control groups were statistically significant, while the differences between the task-supported and the control groups were not statistically significant. Table 21 below provides the specific details of this post-hoc test, including the significance levels and mean differences.

<table>
<thead>
<tr>
<th>(I) Group</th>
<th>(J) Group</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task</td>
<td>Control</td>
<td>.87 ̄</td>
<td>.783</td>
<td>.000</td>
</tr>
<tr>
<td>Cognitive</td>
<td>Task</td>
<td>3.22 ̄</td>
<td>.820</td>
<td>.001</td>
</tr>
<tr>
<td>Task</td>
<td>Cognitive</td>
<td>-3.22 ̄</td>
<td>.820</td>
<td>.001</td>
</tr>
</tbody>
</table>
ANOVA for free production. For the free production part of the tests (between-subjects effects for interaction between time and group: F=3.5, p=0.01, partial eta squared=0.11), the interactions between cognitive and control group, as well as task-supported and the control group were found to be statistically significant, while the interactions between the cognitive and the task-supported group were not statistically significant. The details of Scheffe’s post-hoc test showing exact interactions between groups are provided in Table 22 below.

Table 22
Repeated Measures ANOVA: Multiple Comparisons (Scheffe’s post-hoc) for the Free Production Parts of Tests

<table>
<thead>
<tr>
<th>(I) Group</th>
<th>(J) Group</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive</td>
<td>Task</td>
<td>.36</td>
<td>.321</td>
<td>.540</td>
</tr>
<tr>
<td>Cognitive</td>
<td>Control</td>
<td>1.53*</td>
<td>.306</td>
<td>.000</td>
</tr>
<tr>
<td>Task</td>
<td>Cognitive</td>
<td>-.36</td>
<td>.321</td>
<td>.540</td>
</tr>
<tr>
<td>Task</td>
<td>Control</td>
<td>1.17*</td>
<td>.301</td>
<td>.001</td>
</tr>
<tr>
<td>Control</td>
<td>Cognitive</td>
<td>-1.53*</td>
<td>.306</td>
<td>.000</td>
</tr>
<tr>
<td>Control</td>
<td>Task</td>
<td>-1.17*</td>
<td>.301</td>
<td>.001</td>
</tr>
</tbody>
</table>
ANOVA for ‘comprehension: pictures’. For the ‘comprehension: pictures’ part, none of the interactions between groups proved to be statistically significant (between-subjects effects for interaction between time and group: $F=1.0$, $p=0.4$, partial eta squared = 0.03). This may (but does not have to) be related to the small number of items in this part of the test (four total). The details of Scheffe’s post-hoc test showing exact interactions between groups are provided in Table 23 below.

Table 23
Repeated Measures ANOVA: Multiple Comparisons (Scheffe’s post-hoc) for the ‘Comprehension: Pictures’ Parts of Tests

<table>
<thead>
<tr>
<th>(I) Group</th>
<th>(J) Group</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive</td>
<td>Task</td>
<td>.10</td>
<td>.140</td>
<td>.761</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>.14</td>
<td>.133</td>
<td>.600</td>
</tr>
<tr>
<td>Task</td>
<td>Cognitive</td>
<td>-.10</td>
<td>.140</td>
<td>.761</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>.03</td>
<td>.131</td>
<td>.971</td>
</tr>
<tr>
<td>Control</td>
<td>Cognitive</td>
<td>-.14</td>
<td>.133</td>
<td>.600</td>
</tr>
<tr>
<td></td>
<td>Task</td>
<td>-.03</td>
<td>.131</td>
<td>.971</td>
</tr>
</tbody>
</table>

ANOVA for ‘comprehension: sentences’. Finally, for the last part of the test, ‘comprehension: sentences’, the differences between all group pairings proved to be statistically significant. The calculations of between-subjects effects for interaction between time and group were as follows: $F=3.4$, $p=0.04$, partial eta squared = 0.06.

In Scheffe’s post-hoc tests, as provided in Table 24 below, $p$ values were on average equal to or lower than 0.02.
Table 24  
Repeated Measures ANOVA: Multiple Comparisons (Scheffe’s post-hoc) for the ‘Comprehension: Sentences’ Parts of Tests

<table>
<thead>
<tr>
<th>(I) Group</th>
<th>(J) Group</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive</td>
<td>Task</td>
<td>1.02*</td>
<td>.320</td>
<td>.010</td>
</tr>
<tr>
<td>Control</td>
<td>Task</td>
<td>1.89*</td>
<td>.306</td>
<td>.000</td>
</tr>
<tr>
<td>Task</td>
<td>Cognitive</td>
<td>-1.02*</td>
<td>.320</td>
<td>.010</td>
</tr>
<tr>
<td>Control</td>
<td>Cognitive</td>
<td>-1.89*</td>
<td>.306</td>
<td>.000</td>
</tr>
<tr>
<td>Control</td>
<td>Task</td>
<td>-.88*</td>
<td>.301</td>
<td>.020</td>
</tr>
</tbody>
</table>

These numbers suggest that the instructional treatment produced a positive effect for the development of participants’ comprehension (grammaticality judgment) skills in regard to conditional sentences. Keeping in mind the overall trends suggested by these findings, production parts of the tests – in particular, the controlled production part – were the areas where most improvement took place over the course of the study. Since one of the research questions is concerned with the efficacy of the cognitive linguistic treatment in comparison with traditional task-supported treatment, the next section will focus on the more targeted comparison between the cognitive and the task-supported groups in production scores and overall test gain scores.

Comparison between cognitive and task-supported groups on production test scores. The descriptive statistics of overall test scores provided in the earlier part of this chapter, as well as the descriptive analysis of production scores allows us to notice clear differences between posttest outcomes in cognitive as opposed to task-supported groups. To measure these differences and determine whether they are statistically significant, two
sets of independent sample $t$-tests were conducted: first, to measure the differences in production gains scores between the cognitive and the task-supported groups, and second, to measure the differences in overall test gain scores between the cognitive and the task-supported groups. The production gains scores met assumptions for distribution of normality.

Descriptive statistics associated with production gain scores are provided in Table 25 below.

**Table 25**
Descriptive Statistics for Production Gains Scores: Cognitive and Task-supported Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SE Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive</td>
<td>17</td>
<td>11.06</td>
<td>4.19</td>
<td>1.01</td>
</tr>
<tr>
<td>Task-supported</td>
<td>18</td>
<td>7.16</td>
<td>4.25</td>
<td>1.00</td>
</tr>
</tbody>
</table>

The choice of the independent, rather than dependent, $t$-test procedure is justified by the fact that there are two experimental conditions present here (cognitive vs. task-supported) and that different (rather than identical) participants took part in each of the conditions of the experiment. Consequently, different groups of people produced scores that were independent. In this particular case, the assumption of equal variance was supported by Levene’s Test of Equality of Variances, which is another key characteristic of a $t$-test procedure.

The numbers capturing the differences between cognitive and task-supported production test scores are presented in Table 26 below.
The F value on Levene’s test for equality of variances was 0.086 and significance equaled 0.771, which is why it can be further assumed that the difference between variances is zero, or in other words, the variances are roughly equal. As Table 26 shows, the difference between cognitive and task-supported production gains scores was found to be statistically significant with p=0.01, with the $t(33) = 2.723$.

The next section will take the comparison between the cognitive and the task-supported group to the next level, focusing on the $t$-test comparison between the two groups’ overall gains scores.

### $T$-test comparison between cognitive and task-supported groups on overall test gain scores.

Descriptive statistics for the overall gains scores between the cognitive and task-supported groups are presented in Table 27 below.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SE Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive</td>
<td>17</td>
<td>12.82</td>
<td>5.01</td>
<td>1.21</td>
</tr>
<tr>
<td>Task-supported</td>
<td>18</td>
<td>7.28</td>
<td>5.43</td>
<td>1.28</td>
</tr>
</tbody>
</table>

As can be seen from the table, the mean overall gain score for the cognitive group was 12.82, while the mean overall gain score for the task-supported group was 7.28, with the standard deviation being in the low 5+ range (SE = 1.216 and 1.280 for the cognitive
and the task-supported groups respectively). The overview of the $t$-test comparison between these trends is provided in Table 28.

**Table 28**

*T*-test on Overall Gains Scores: Cognitive and Task-supported Groups

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$t$</td>
<td>df</td>
<td>Sig. (2-tailed)</td>
<td>Mean difference</td>
</tr>
<tr>
<td>3.13</td>
<td>33</td>
<td>0.004</td>
<td>5.55</td>
</tr>
</tbody>
</table>

Like in the case of production gains score trends (see previous subsection), an independent samples $t$-test procedure was chosen because differences between two distinct groups were being measured through comparing individual/independent scores on two sets of tests. Levene’s test for equality of variances ($p=.826; F=0.049$) confirmed that equal variances can be assumed for this analysis. The 2-tailed test for equality of means proved to be statistically significant with $p=0.004$ with $t(33) = 3.133$. Accordingly, the difference between overall gains scores achieved by the cognitive and task-supported groups can be considered supported by statistical calculations.

**Summary.** The general overview of the quantitative results presented in this part of the chapter indicated that the statistical differences between all three groups were significant. The participants in the cognitive group obtained greater production score and overall test score gains between the pretest and the posttest, than the participants of both the task-supported and the control groups did. Participants of both the cognitive and the task-supported groups were able to obtain greater test score gains between the pretest and the posttest, than the participants of the control group, thus providing support for the value of task-based classroom instruction for the acquisition of English conditionals. The
implications of these statistical trends, as well as the specific and extended answers to the research questions provided in the previous chapter will be covered in detail in the next chapter, Discussion. The next section of this chapter will focus on qualitative results obtained from retrospective interviews with select subjects from the cognitive and task-supported groups. The qualitative trends will help elucidate some of the statistical trends found in this subsection as well as offer some new insights into the on-line, qualitative process of acquisition of English conditional constructions.

5.2 Qualitative results

Introduction. The qualitative trends discussed in this section came from retrospective interviews that took place with select participants from each instructional treatment group. The logistical process of getting volunteers involved in collection of qualitative data was organized as follows: an email was sent out to those subjects from each group whose scores on pretest and posttest were notable in some way, i.e. either the gains score was very significant, or it was average and/or smaller than one would expect from a given student. The volunteers who responded to this call for interviews were the ones who took part in retrospective interviews. Each interview took approximately 10-15 minutes. Subjects were given copies of class tasks and were also shown briefly the PowerPoint presentations that constituted the teacher-facilitated part of the instructional treatment. Subjects were asked to contemplate the question of what was going through their mind(-s) as they were engaging in these tasks and/or participated in activities structured around the instructional PowerPoints. Each subject was prompted no more than twice about each instructional piece; i.e. if they did not have anything particular to say about a given task or PowerPoint, the interviewer (author) moved on to the next
question/material. All interviews were digitally recorded and later transcribed; transcripts were subsequently coded and analyzed for presence of recurrent themes and motives.

This section is divided into two subsections. The first subsection will cover insights of four subjects from the cognitive group, while the second will address the input from three participants of the task-supported group.

**Findings from the cognitive group.** As stated above, each interview lasted between ten to fifteen minutes. For the participants of the cognitive group, the focus of questions was on the relatively unfamiliar (for these subjects) type of characterization of conditionals provided through the instructional PowerPoint, on the use of cognitive chart (see Chapter 4 and Appendix E for more details), and on pedagogical tasks. The following themes emerged from these subjects’ comments.

1) **Pedagogic tasks supported instructional PowerPoints**

Students commented that it made sense to use the tasks in conjunction with the PowerPoint presentations and that the type of information that was targeted through the PowerPoint was also practiced through the tasks. This student, in particular, appreciated being able to use conditionals in tasks after having been taken through the instructional sequence in class:

> every sheet we were practicing one skill several times in different conditions and I like this kind of practice, actually, and I think at first I don't know how can I get after this because I still feel confusing while I was doing this, but after that, we were doing discussing about that, and I liked that part because I get really good practice in what we learned from the PPT, especially in the… if… and would have… part… I was really confused before…

She also commented that one of the key useful aspects was learning about tenses:
Student: …tense is proper and I think that's useful. You put two pictures, one is yesterday, one is today, and we know how to, how to finish this, this sentence…
Researcher: so the time reference?
Student: yes, the time reference was good

Going beyond general alignment between the PowerPoint and tasks, participants brought up a number of more specific themes that addressed the structural aspects of the treatment materials.

2) Focus on meaning was appreciated

Every single participant from the cognitive group who took part in retrospective interview sessions commented that s/he liked the examples and visual support provided through instructional PowerPoints and thought these examples supported the focus on meaning.

The following student – let us refer to him as “A” – specifically commented that realistic examples and usage patterns appear to be the best way to learn grammar; the following were the comments he shared on this topic in response to multiple questions.

Put together into one selection, these comments make up a cohesive theme:

• “don’t like the traditional way, examples are the best way to deliver information to the student”
• “but here, it’s different because you used like realistic examples. For example I remember the example, or the video that you played, like from “Avatar,” so it’s still in mind, so when I want to build a conditional sentence, I remember that I remember that example, so it helps me to build my sentences. This is specifically about the conditional statement…”
• “mentioned like yes, like I said, the video that you played, “The Avatar”, it helped me to understand the idea, to get the idea”
• “you know, doing things like or like feel the example that you have make sense to you if you discuss it with your partner, or if you saw if you watch a video or something, so here we draw something like… we draw something so it helped…”
“A” specifically stated he did not like the traditional way and hence was open-minded to alternative instructional approaches. But the other three students also commented on the meaning diversity that they saw in all instructional materials, in particularly, stories:

- “on the PPT… they were like stories, different stories they’re to see… not really academic ones where we can put attention on it…”
- “yes, the stories have different tense in them, and that's what we talked about the present things or the past things in the same paragraph”

Pictures and visual support were also found to be quite helpful in both instructional and testing materials:

- “I liked pictures and sentences in the test, pictures help you remember how things work”
- “pictures and time references were good”
- [NJ: when commenting what was useful]: “the picture one… use the picture and write down the sentences”
- “…it’s easy to remember cause it have a picture, and this means that I could have a situation for it… so it’s easy to remember…”

The cognitive chart was perceived as helpful overall but at the same time a bit challenging to use on-line for completion of every task:

- “yes… actually the chart directions were really helpful, but I can’t use it in every word…”
- “like to, to know the sentence, like… which like, which tense… it helps me to organize my ideas about the tenses.”

In general, all of the subjects commented on the helpfulness of the focus on meaning assumed throughout the cognitive instructional treatment. However, their comments also implied that this type of approach was different from what they were accustomed to during their prior schooling experience, hence the next theme.
3) “We didn't have this kind of stuff in my country”

The novelty of the cognitive linguistic approach was perceived as a positive feature that helped subjects see new things in the conceptual organization of conditionals. The aforementioned student “A” (who articulated opposition to the traditional instructional approaches) provided the following commentary:

- “don’t like the traditional way that you know this grammar book named Azar, published by Azar, it’s helpful but you know sometimes… ugh… I don’t like”

- “in my country [NJ: Saudi Arabia], we don't really focus that part… like [on] a chapter or something… we just really […] up and then skip that… I think it’s really helpful, especially this one, I think”

- “the way it tells you this is past perfect so if you have past perfect then you have to use something, you know… I don’t like this way of teaching, I like to have like examples, like realistic examples, realistic examples.”

A fellow classmate of “A” whose country of origin was China commented that these new resources were helpful for her in the sense that she became aware of a number of grammatical aspects she was not aware of in the past:

Student: [this type of instruction was useful] because it provide many examples to every feature, every different situations, so when I’m like writing papers, I really need that to check … how did I express the right,…the situation that I want to convey… yeah

Researcher: I see… okay so you don't see that happening through traditional?

Student: yeah, and also we have less resource about just the tense and conditional sentence

However, the fact that the methodology, layout and conceptual organization took some getting used to was making the learning curve a bit higher for the subjects. For instance, the following quote highlights how this student started seeing more complexity
in English tenses, but he was unclear how exactly to conceptualize and use this new knowledge in his English tense patterns:

**Student**: just d… done something… did something… have done and did… because before I’m confused about this but I think ‘did’ is also okay for some… some situations… but maybe have done is better… it is hard, I think… is hardest… before, in China, I just used ‘did’, I don't use ‘have’, ‘have done’, so… I just used did.

**Researcher**: okay, do you think you might use more ‘had done’ now?

**Student**: yes, a little more, but… I also prefer to use ‘did’ sometimes… period before. I think it’s easier for me to remember… if we want to make an assumption that yesterday… if only I did something, we just use past, perfect past tense

Since speaker choice and speaker agency emphasized throughout this instructional treatment were new things to contemplate for these students who were more accustomed to following directions and getting clear, straightforward instructions from the teacher, they had a bit of a hard time with developing the metalinguistic skills. Also, the fact that English – rather than the native language – was the language of instruction about English added another layer of difficulty.

**Researcher**: right, right, right. And we talked about that too, we were just talking more about your own choices… so did you say the choices were confusing to you?

**Student**: uh… I know that… I think in China… we just get used to use Chinese to follow the instruction… it’s easier to remember… but now we use English to explain English how to use English maybe is a little bit confuse…

These students raise important points of how culturally established learning and teaching patterns, as well as expectations, might affect the students’ perceptions of new instructional experiences. Subjects from the task-supported group also had comments to add along similar lines; see the corresponding subsection later in this chapter for details.
The implications associated with culturally-determined learning preferences and trends will also be addressed in the next chapter of this dissertation, Discussion.

Last but not least, a number of comments were dedicated to specific tasks and task characteristics that students had to complete in class.

4) **Text repair (break-up letter) task was admitted to be the most popular** and interesting one of all, as it provided a meaningful context for understanding how tenses work and made differences between tenses very clear to participants. The following are comments from two different students:

I guess there are… this is a complete article and you have to pay attention to the difference between what the situations they have and why they say this ‘would’, and also we have to think about uh… attitude she used, what she wants to infer – it’s really helpful for international students because we don't really uh, detect what we are talking about, while we are using like… the wrong tense or something…

many different statement here that are different… that is different from each other, so it makes you able to distinguish the differences between them, so for example if I want to use the past simple or past perfect…. So this example, like… makes the differences between them, like, clear to you… so this one helps me a lot…

Regardless of the fact that for this generation and in this day and age, a more common format for breaking up would probably be a tweet or a Facebook status update, the context of writing a break-up letter was particularly easy for subjects to relate to, which is why they enjoyed being able to construct and reconstruct conditional meaning for this exact purpose.
5) Seating chart task was perceived to be most fun and most like a “game,” and it also facilitated the students’ understanding of certain aspects of the American culture. Even though it was emphasized to them that the task was “made up” and that the conditions were not realistic, the fact that one sometimes needs to think about how to seat his/her guests around a table encouraged students to consider a number of cultural implications associated with this type of situation. The students appreciated being able to access the common life background knowledge in order to complete this task; having to solve a problem was perceived as a “fun” assignment. The fact that this task was relatively more challenging compared to other tasks was not perceived as a disadvantage but rather as a fun and useful difference:

• “like a game that we can… we have to… care… take care of… all of the condition that make sure that everyone seated get good seats they want… and also it helps us to understand American culture.”

• “I remember it clearly just because some days before this task I have to I go to a real life family and have same program, yeah… yeah, it’s very interesting.”

• “yeah, for this one, I think it’s interesting and is the most difficult to finish… but is required teamwork… it’s fine in the class…”

6) Focus on production was helpful for being able to understand and use the target category better, in particular, in group work settings. The following dialogic excerpt illustrates this theme very well:

Student: I think we did more participating and creating of new sentences… before we were like reading a paragraph and discuss the question with our partner, but here we had a lot of opportunities to write down what we were thinking like brainstorming…

Researcher: so, in the past when you did conditional sentences, you just filled out, right?..
**Student**: or, after we discuss, we got everything... we really had to write out differently... when we talked we didn't really check the grammar...

**Researcher**: I see... so having to produce was helpful for you?

**Student**: yes.

Working in groups and/or discussing tense choices with a partner was perceived as helpful because such arrangements allowed for more meaningful use of language in context:

- “because you know it [working with others] helps you to exchange language, especially if this like assignment or homework forces you to use conditional statement... so it helps you to use the conditional statement... if it helps you to use conditional statement... it’s good.”

- “… I prefer maybe do it by yourself and then discuss with your partner…”

- “yeah... and we share ideas, everyone’s different, why you use these and I use other tense.”

In brief, the perception of the cognitive treatment appeared to be predominantly positive for the majority of reasons that were highlighted in the earlier chapters of this dissertation. Specific value of the cognitive treatment and how it elucidates quantitative results provided in the first subsection of this chapter will be addressed in the next chapter where the findings from the retrospective interviews will be positioned in the context of Research Question #4 and also discussed in the context of existing literature on instruction of conditionals, applied cognitive linguistics, and applications of task-based/-supported language teaching.
Findings from task-supported group. The participants of the task-supported group were interviewed in similar conditions, as the ones of the cognitive group participants. Each interview took place after class and lasted between 10-15 minutes; the main focus of questions was on eliciting students’ reactions to pedagogic tasks and instructional PowerPoints. The findings from the interviews with task-supported group participants are in some way similar to the thoughts voiced by participants of the cognitive group but a number of differences also emerge. The key themes are summarized next.

1) The theoretical presentation was similar to what participants were previously taught about conditionals in native country (EFL) environment.

Subjects commented that the traditional explanation they were exposed to was indeed traditional in the sense, that it was not conceptually new for them or visibly innovative for their perception in any other way, even though they did appreciate the overview of the rules and further specification regarding tense patterns:

- “if I have ten conditional sentences, maybe without your PPT, [NJ: can do] correct answers -- six or seven, I think, but after your PPT and after you told us how to do tense… maybe we can do the whole thing right.”

- “Because some grammar I just forgot… That [NJ: the PPT] is very useful for me, and also the breakup letter very interesting to learn about the conditional sentences.

In comparison to the “traditional” grammar rules presented on the PowerPoint, the tasks appeared to be slightly more challenging because they were a “different” instructional method for the majority of participants:
like this kind of tasks but I think some of them are difficult for us to do this kind of, because the power point you give us during the class is, sometimes is simple, so maybe we cannot ... sometimes the tasks were a little bit harder... yeah, a little bit harder

Even though tasks were relatively “harder” than the rules presented on the PowerPoint, they were still perceived to be as interesting and fun by all three students who participated in retrospective interviews.

2) Pedagogic tasks were considered to be a fun, creative, and interesting form for teaching conditionals. Even though other tasks like the sentence strips and the seating chart task were perceived as useful (“I think fill the blank maybe is useful and this one is useful, the table chart”), the break-up was considered the most engaging and memorable - a conclusion similar to that of the cognitive group participants. The following comments characterize the break-up letter task:

- “…this one is breakup letters. I think this was very interesting, I think the form is very…. It’s new, it’s something creative. And those others, I think, they have more traditional forms for us to do the conditionals… Yes, I think this was very interesting”

- “my .. you know, the letter, the breakup letter, it really impressed me a lot, I think that it’s very interesting and help me to understand the “if” conditional sentence activities, and also the.. I remember that in class, you in class, you told us specifically about the “if” conditional sentence activities, so it helped.”

- “it’s great because I think, first, it is a story, I love the story, and I think I must think about a tense, I must think about situation they are talking about, so a lot of thinking. I think it’s useful. I just don’t like the one without thinking.”
• “it is right or just wrong. So I think breakup letter is very useful. And also interesting because if we continue writing about it, maybe we cannot figure out it is right or wrong.”

These comments suggest that the storytelling and critical thinking elements present in the break-up letter task were crucial for making the subjects think and consider the local context when deciding on tenses in conditional sentences. The relative syntactic complexity present in this task form clearly had a positive effect on perception of the task by the students. The implications behind these connections will be covered in greater detail in the next chapter.

Looking at the relative impact of other tasks, the seating chart task was perceived to be interesting because it featured some type of achievement at the end:

“Table task… Yes, I think when we do something like these tasks, when we finish, we feel we get some achievement, we feel it is good.”

While it did appear that tasks provided a meaningful way for the students to practice their knowledge of conditionals, a number of them commented that in any instructional situation, context was always perceived as a positive thing, hence the next theme.

3) Tasks with limited contextual knowledge/information were more challenging to complete than tasks with relatively richer context.

Lack of context was perceived as “confusing” whenever putting causes and effects together; the first two comments in the selection below address the process of matching of causes and effects in the global warming task. Even though subjects had background knowledge on the topic due to prior class activities and readings (a movie by Al Gore and a previously read article on effects of global warming), the lack of
immediate textual context was perceived as unhelpful. In other words, the local organization of the task did not have enough discourse support or triggers to activate the corresponding background knowledge that subjects had:

- we are not familiar with this sentence, because we… there are some sentence which we find … you mean the meanings, they are context, there is some context meanings, we should make them in a group, and this make us a little bit confused. We have to choose the one way which sure it is correct, and then… do you know what I mean?

- This one is okay, too, but this one make me a little bit confused, because I think, this is cause, and this is result, and I think, so about the intro how to describe this.. is introduction? According to the introduction, you say, there are some freedom, because one cause can have many effects…

- have any context, we can’t put them into exactly context, or between them.. they has any relationship.. so when I do this, at last I thought, maybe I have two results and the two causes. I didn’t .. I can’t put them into group.

This subject in particular commented on the helpfulness of contextual factors when completing activities that have *if*-sentences:

without a context or the whole passages, just to write “if” sentences, sometimes I feel a little confused because I’m not sure which tense should we use, maybe I could choose to use another tense, maybe that also worked. If I write a conditional sentence for long time, I will be..how to say..make it a tense just bother me I don’t know the meaning of it.

Whenever multiple meanings or multiple possibilities of how to interpret or construct a given sentence were concerned, context played a crucial role for helping subjects go through the corresponding thinking process:

Sometimes just like you said in class, the sentence maybe ..can have different meanings, so sometimes it will confuse me a little, because if I changed … how to say.. change tense, yeah, I change the tense, then the sentence will be a different
meaning, and if without other words before or behind a sentence maybe
sometimes I just confused when to use which tense

The perception of the role of context is apparently something that is connected with
the subjects’ prior experience, which provides an appropriate segue to the next and final
theme that emerged during retrospective interviews:

4) **The more varied the types of practice are, the more beneficial is the**
**instruction; past learning experiences and culturally-based learning styles**
**also play a role.**

All three subjects from the task-supported group who took part in retrospective
interview sessions came from China. Two out of three subjects specifically
commented that the type of extensive grammar practice they did back home is
something they are very familiar with and therefore find helpful:

In our country we do a lot of practice during the classes, so maybe we are familiar
with this method or this kind of class. If you put a lot of similar sentence, we can
do it without thinking. So maybe this kind of practice is less important than you
can mix or combine some variety of practice, I don’t know how to describe it.

The next quotes refer to the subject’s comment that they did a lot of “fill-in-the-
blank” style exercises in China, which addressed the knowledge of the target structure in
some way but not in many others; accordingly, this person felt that the instructional
treatment of this study, especially the pedagogic tasks, were teaching him other, new
things in addition to what he had already learned in the past:

- “because in China we mostly focus on the grammar and do many, many of
  these exercises, so this one is interesting, and I think it’s better than this
one, because this one we finish it, it is test or game yes, and there are many conditions, and this is a little bit like a game”

- “just maybe some simple sentences, but after that when I write or say maybe I will… can say more about how we use condition sentence. Before that maybe I don’t use it this condition sentence many times”

- “tasks practice it more, you use it more convenient, more smooth”

In other words, even though pedagogic tasks were generally perceived to be a new and creative approach, being able to rely on previously familiar methods seemed to have its own benefits in the minds of participants and allowed them to start from a certain level of background knowledge “right off the bat.”

Last but not least, subjects thought that working in groups was a helpful practice that complemented individual work.

working with other people, I like working in groups, but I think that we should do it first ourselves, then we can share. I think this way we can learn about. But good when learn conditional sentences, I think. So maybe we should do it first by ourselves, then share. That’s what I think about…

In brief, subjects from task-supported group generally perceived tasks to be a successful instructional method that was new for them, as well as creative and fun at the same time. They also favored group work and presence of context knowledge surrounding target forms. Original learning experiences and learning styles played a certain role in how the new instructional methods would be perceived; in other words, subjects filtered new information through the prism of their past educational experiences and made judgments about efficiency of instructional methods accordingly.
Summary of qualitative results. Based on this overview of findings from the retrospective interview data, it is fair to conclude that the cognitive linguistic task-supported instructional treatment elicited a generally more positive response among subjects than the traditional task-supported treatment did. That said, pedagogic tasks were perceived to be a favorable format regardless of theoretical contents that might be accompanying the tasks. These findings will be discussed in greater detail in relation to Research Question #4 and in the context of the larger literature in the field in the next chapter, Discussion.
CHAPTER 6: DISCUSSION

The goal of this chapter is to provide a discussion of the results presented in the previous chapter and to position them in a more general conceptual context. Structurally, this chapter will consist of the following subsections: discussion of answers to research questions 1-3, discussion of qualitative findings (research question 4), implications of findings for applied cognitive linguistic scholarship, implications of findings for further research on task-based pedagogy, and study limitations.

6.1 Answers to research questions

As stated in earlier parts of this dissertation, no prior research on acquisition of conditionals was previously conducted in either the larger SLA field or in the more narrowly defined applied cognitive linguistic field. Because of that, the originally stated hypotheses for the first three research questions were null statements: i.e. no correlation was expected between independent and dependent variables. This section will focus on highlighting the research hypotheses and corresponding answers to research questions.

The first research question addressed the issue of whether task-supported instruction of conditionals was more effective for L2 development than no instruction, namely:

**Research Question 1:** Does task-supported instruction (alone) produce an effect for L2 development of conditional constructions?

The original hypothesis was a null statement:

**H01:** Task-supported instruction will not produce any effect for the L2 development of conditional constructions.
However, based on the statistical findings, provided in Chapter 5, the task-supported group outperformed the control group on both the posttest and the delayed posttest. The differences between the participants of the task-supported group and the participants of the control group were statistically significant on the two tests measuring L2 development. This finding allows us to reject the originally stated null hypothesis and to provide the following answer to the first research question:

**Research Answer 1:** Yes, task-supported instruction (alone) does indeed produce an effect for L2 development of conditional constructions.

The second research question concerned the efficacy of adding cognitive linguistic insights into task-supported instruction of conditionals. The original statement of the research question was as follows:

**Research Question 2:** Does task-supported instruction with added cognitively-based insights produce an effect for L2 development of conditional constructions?

If focused on the notion of treatment groups, this question can be rephrased as follows: did the cognitive group do better than the control group? Similarly to the first research hypothesis, the second hypothesis was a null statement:

**H02:** Task-supported instruction with added cognitively-based insights will not produce any effect for L2 development of conditional constructions.
Descriptive statistics of scores on all three tests, as well as inferential statistical analyses conducted in regard to all three study groups demonstrated that the group that received task-supported instruction with cognitive insights (i.e. the “cognitive” group) did significantly better on both the posttest and the delayed posttest than the control group. In other words, the null hypothesis can be rejected, and the answer to the second research question is as follows:

**Research Answer 2:** Yes, task-supported instruction with added cognitively-based insights does produce an effect for L2 development of conditional constructions.

In sum, both groups with instructional conditions outperformed the control group, thus demonstrating that explicit instruction of conditionals supported by pedagogic tasks is more effective for L2 development of this target form than no instruction.

Finally, the third research question concerned the comparison between the task-supported and the cognitive groups.

**Research Question 3:** Does the addition of cognitive insights into task-supported instruction produce a greater degree of L2 development of conditional constructions than absence thereof, or than task-supported instruction alone?

Similarly to research questions 1 and 2, the third hypothesis was also phrased as a null statement:
**H03**: The addition of cognitive insights into task-supported instruction will not produce greater L2 development of conditional constructions than absence thereof, i.e. than task-supported instruction alone.

Descriptive statistics of test gains scores on production parts, as well as overall test gain scores demonstrated that the cognitive group did better on both the posttest and the delayed posttest than the task-supported group. The greater L2 development of the cognitive group participants was also confirmed by t-tests comparing production test gains scores, as well as overall test gains scores between the cognitive and the task-supported group; in sum, cognitive group outperformed the task-supported group ($p = 0.004$ for t-test; $p < 0.0010$ for ANOVA between all three groups).

As a result, the answer to this third research question can be rephrased as follows:

**Research Answer 3**: Yes, the addition of cognitive insights into task-supported instruction does produce a greater L2 development of conditional constructions than absence thereof, i.e. than the task-supported instruction can produce on its own.

In summary, while both the task-supported group and the cognitive group made greater gains on the two posttests in comparison with the control group, thus providing support for instructional interventions related to conditionals, the cognitive group produced greater gains on both the posttest and delayed posttest than the task-supported group did. In other words, positive effects were found for both types of instruction of conditional phrases, but the cognitive instruction was more effective, which supports the value of using cognitive linguistic insights in classroom instruction.
In addition to general trends regarding effectiveness of instruction types, the analysis of posttest data revealed the following trends that are worth highlighting and discussing in greater detail:

1) **Changes in comprehension scores.** Prior research has generally assumed that comprehension knowledge is supposed to precede production and, accordingly, the receptive knowledge exceeds productive knowledge for second language learners overall (Ellis, 2004; Lightbown, 1985, 2000). Judging by pretest scores on comprehension sections, all groups initially were at approximately the same level. After the instructional treatment, almost all of the cognitive group participants made consistent, albeit small (around 1-2 points) gains on the comprehension sections of their test scores, while for participants of the task-supported and control groups, the gains in comprehension scores were not as consistent. While some participants of the task-supported and control groups made considerable (i.e. around 5 points) gains between the pre- and the posttest, other participants’ scores decreased or stayed at the same level. Even though the numbers of comprehension items in the tests were too small for inferential statistics and this whole research issue would certainly need further testing and clarification, the initial trend that is seen for this limited group of participants is such that the cognitive treatment helped systematize learners’ ideas about the meaning of conditionals, which likely caused the consistent small increase in the cognitive group participants’ comprehension scores. The task-supported treatment alone (or absence of instructional treatment
altogether, as it was the case for the control group) did not produce a similar effect. Thus, these results are suggestive of improved comprehension of conditionals that results from exposure to cognitive linguistic explanation of the target structure.

2) **Changes in production scores.** Among the three groups, cognitive group participants achieved the highest scores on production portions of the tests. Production parts of the tests were the parts where most improvement took place between the pretest and the posttest. These results demonstrate that the instructional treatment was instrumental for promoting production (more so than comprehension; but again, the numbers of items are too small for proper statistical calculations). It can be inferred that pedagogical tasks and the communicatively focused organization of the teacher-facilitated instructional PowerPoint presentations were effective methods for improving the participants’ production skills. Between the two treatment groups, the cognitive group outperformed the task-supported group on the production parts of the test, and the difference was calculated to be statistically significant with $p < 0.01$. The implication of this finding is that the combination of cognitive and task-supported treatment was more effective in improving the participants’ production of conditionals than the task-supported treatment alone. Granted, the number of participants and test items were still not large enough for far-reaching generalizations (see section on limitations later within this chapter); however, this finding gives a good orientation for future studies. Conducting
further research focusing specifically on production aspects of conditional phrases would be necessary, before any further, more certain conclusions can be drawn in this regard.

3) Changes in overall test gain scores. As mentioned in the Results chapter, $t$-test comparison between the overall test gain scores demonstrated that the difference between the gains made by participants of the two treatment groups was statistically significant with $p < 0.004$. This statistical finding suggests that the combination of the cognitive linguistic presentation of conditionals complemented by pedagogical tasks was more effective overall than the task-supported treatment alone. The mean test gain score of the cognitive group was 13, while that of the task-supported group was 7; accordingly, the gains made by the cognitive group participants were almost double compared to those of the task-supported group participants. This difference raises the question of what exactly within the cognitive instructional treatment contributed to better performance on the posttests.

As described in greater detail in Chapter 4, while both instructional groups completed identical pedagogic tasks that were sequenced in exactly the same manner, the difference between their classroom experiences lay in the instructional PowerPoints. Again, as stated in Chapter 4, the task-supported group received a traditional presentation of the English conditionals informed by the ESL textbooks (see Chapter 2 for a more detailed overview) and “ESL
Grammar Book” by Celce-Murcia and Larsen-Freeman. The treatment basically presented patterned tense correspondences between the clauses in conditional statements, following the standard classification (present, hypothetical and counterfactual sentence types). After reviewing this classification in class and then going over the tense pairings emphasized in the majority of ESL/EFL materials, subjects got a chance to practice making conditional sentences using this information. The third instructional PowerPoint (after the classification one and the tenses one) was dedicated to using conditionals and filling in blanks with corresponding tense forms. In short, while they received a traditionally balanced presentation of various aspects of the conditional form, subjects of the task-supported group were not asked about to think about meaning behind different tense pairings (beyond the range of meaning as discussed by textbooks).

The cognitive PowerPoint presentations followed roughly the same pattern, as the presentations of the task-supported group, in the sense that they also explained the general system behind the notion of conditional sentences on the first day, focused on tense pairings on the second day, and highlighted how conditionals can be used in various contextual settings on the third day. That said, each instructional PowerPoint presented to the cognitive group had a focus on meaning behind every single grammatical form and pairing thereof; subjects were asked to think about meaning quite a bit, as well, and discuss how meaning is expressed in various contexts of conditional use. Subjects in
the cognitive group also had access to the so-called “cognitive chart” (see Appendix E), which was supposed to capture all the conceptual components that go into online creation of an English conditional sentence. Also, from the first day on, subjects were asked to contemplate the perspective of the speaker and the background knowledge that always had to underlie the construction of a given conditional phrase. Because all three cognitive PowerPoints were informed by a single cognitive linguistic account of conditional (i.e., Dancygier and Sweetser, 2005), it would be fair to hypothesize that the overall presentation of conditionals to the cognitive group was more cohesive and meaningful just because it had a consistent foundation in the shape of cognitive linguistic presentation of language. Accordingly, the significantly better performance of the cognitive group participants can be attributed to the presence of the overall focus on meaning and the insights from cognitive linguistics emphasizing the role of local context and speaker’s background knowledge when creating a conditional phrase.

Taking these trends into a broader theoretical context, it is important to highlight the fact that focus on form alone (as received by the task-supported group) was not demonstrated to be as effective as the focus on form combined with cognitive linguistic insights. While the manner of instructional delivery (consciousness-raising tasks) mattered and produced gains for both treatment groups, the underlying theory of language assumed in teacher-facilitated presentation played a further facilitative role for L2 development. Since the cognitive group outperformed the task-supported group, it can be implied that
the cognitive linguistic theory has the potential of further facilitating successful language teaching. More generally, this finding calls for more re-inserting of (appropriate) language theory into language teaching.

The implications behind answers to these research questions will be discussed in greater detail within a larger research context in further sections of this chapter. However, before we can proceed to the next part of this discussion, it is necessary to discuss the findings from retrospective interview data and how they elucidate statistical findings highlighted in research answers 1 through 3.

The fourth and last research question was concerned with qualitative insights obtained from interviews with subjects from each of the two treatment groups. An overview of themes that emerged during these interviews was already provided in Chapter 5; here, in turn, the question becomes how these insights can shed light on procedural aspects of acquisition of conditionals.

The fourth and last research question was initially stated as follows:

**Research Question 4:** What is the possible qualitative effect of using cognitively-based insights in task-supported instruction?

The essence of this question was concerned with what the participants of the cognitive group noticed about the instructional treatment that made an impression on them and/or produced an effect of some sort onto their performance or understanding of the target structure. To answer this research question, findings from the retrospective interview transcripts with the cognitive group participants were used. Prior research in
the field of SLA has found the retrospective interview data to be a valid way of obtaining insight into learners’ metalinguistic declarative knowledge (Hu, 2002; Ellis, 2006; Gass and Mackey, 2000). Moreover, there has been established a positive relationship between metalinguistic knowledge and overall L2 proficiency Ellis (2004, 2006), as well as between metalinguistic knowledge and a higher degree of accuracy in L2 (Hu, 1999; Hulstijn & Hulstijn, 1984). In the present study, the focus of analysis of the retrospective interview data was on what Hu (2002) referred to as “explicit and verbalizable knowledge about L2 grammar” (p. 348), as well as on the range of issues connected with the efficacy of methodology utilized (in this case, pedagogic methodology informed by cognitive linguistic research).

A more detailed overview of the subjects’ comments was already provided in chapter 5; some of the trends in those interviews coincided with the trends in interviews with the subjects from task-supported group. In this section, only the unique trends from the cognitive group participants will be discussed (trends overlapping between the cognitive and the task-supported groups will be the focus of a subsequent section).

The comments voiced by the cognitive group participants could be generally aligned with two key directions. First of all, subjects recognized the instructional treatment they were exposed to as “different” (NJ: emphasis added here and further in this section) and as something they were not familiar with in their prior educational contexts.

Departure from traditional methods was perceived as positive overall, despite the fact that some elements of the treatment required some adjustment on behalf of the subjects. The main idea associated with this direction of comments was that the
orientation of the instructional PowerPoint generally coincided with the direction of pedagogic tasks; put together, the two aspects of instruction were consistent with each other and addressed similar types of knowledge, as perceived by the subjects. The instructional PowerPoint and the pedagogic tasks complemented each other in the sense that they were targeting similar types of linguistic information and skills, according to the students’ comments. More specifically, both addressed the meaning behind construction of conditional phrases, hence the emergence of the next thematic trend associated with the cognitive group.

Secondly, all cognitive group subjects who took part in retrospective interviews commented that they appreciated the focus on usage and meaning that they felt came through the instructional treatment. More specifically, they appreciated usage-based illustrations of conditionals that were included into the PowerPoint through various means, such as authentic examples, visuals and pictures, as well as the use of video excerpts. Subjects overwhelmingly felt that exposure to different ways conditionals were used in realistic contexts was key to their improved understanding of the target structure. Visual aspects of representation of conditionals, time markers (expressed either through explicit visual or through more subtle context cues), as well as illustration of some key concepts through video were also perceived as very helpful elements of this type of presentation. In other words, subjects saw the exposed contextual knowledge as a big plus: the instructional PowerPoint addressed the conceptual aspects of the target structure, while tasks provided a meaningful context for that knowledge to be practiced in. Also, tasks with the richest contextual knowledge incorporated into them – the break-up letter task and the seating chart task – were considered to be most successful; but since
this trend was not unique to cognitive group participants but rather was voiced by both groups, it will be discussed as part of broader findings from both groups as presented in the next section of this chapter.

In sum, subjects realized that the focus on conditional meaning emphasized throughout the cognitive treatment was helpful for their learning process and for gaining a better understanding of the target structure. This qualitative finding is thus suggestive of the value of bringing cognitive linguistic accounts of target language structures into second language classroom settings. The key concepts of cognitive linguistics, such as speaker construal and cognitive grammar explanations for the use of past and present tenses allowed to provide a more focused presentation of conditionals to L2 learners and to emphasize aspects that were previously treated as merely formal (as opposed to semantic) by traditional materials. Last but not least, use of authentic examples in materials provided a felicitous context for learners to practice and deepen their knowledge in.

Even though originally, there was not included a separate research question concerned with this direction, the findings from interviews with participants of the task-supported group also produced interesting thematic trends that could be brought to discussion within a larger context of how the acquisition of English conditionals takes place and what may be some helpful and unhelpful elements contributing to and/or detracting from it. This will be the focus of attention in the following section.
6.2 How the findings elucidate the process of acquiring conditionals by advanced adult learners of English

Looking at the narrative trends that came through the interviews with participants from both treatment groups made it clear that the importance of certain instructional elements could be properly gauged only in the context in their absence. In other words, what the participants of task-supported group said during their interviews indirectly characterizes the efficacy of a number of things that were taken for granted by the cognitive group participants. The next section will discuss comments of the task-supported group participants, as well as thematic trends that were found to be relevant for both treatment groups.

Regardless of the group assignment, participants thought that tasks were a useful and interesting instructional method that allowed them to see new aspects of the conditional form and to practice their comprehension of the target structure in a relatively meaningful and authentic manner (as much as practice within classroom instructional setting can be to begin with). Since both treatment groups demonstrated improvement on test scores between the pretest and the posttest and since tasks were the instructional element shared by both groups, it is highly likely that tasks (in addition to teacher-facilitated presentations) were the crucial instructional aspect contributing to L2 development within both treatment groups in comparison with the control group that did not get any instructional treatment at all.

Out of all six tasks, those that facilitated an easier understanding of local context – i.e. the break-up letter task and the seating chart task – were most popular among subjects of both groups. The break-up letter task provided a context of a real life situation that was easy to relate to for all participants; also, the fact that subjects needed
to rely on and utilize textual organization of the letter was considered to be very helpful for task completion purposes. The narrative sequence and elements of critical thinking present in the break-up letter task served as certain “hooks” that grabbed students’ interest and attention throughout the process of working on it. Learners were asked to analyze how tense sequences in adjacent conditional sentences corresponded with each other and contributed to the overall narrative of the letter. Relying on and making an active use of the information from local discourse context in order to understand and make appropriate corrections in sentences ensured that learners were able to see relatively straightforward semantic links between form and meaning of English conditionals.

The seating chart task was also perceived as very helpful and interesting, because its completion required elements of critical thinking and included a certain degree of excitement and even suspense. Participants needed to complete the seating chart while trying to satisfy certain conditions that could not by default be satisfied in their entirety; accordingly, subjects had to exercise certain mental effort while producing language in a meaningful way at the same time. Being able to have a sense of achievement at the end was also perceived to be a positive task characteristic by subjects from both groups.

On the other hand, tasks that did not provide as rich of a context were perceived to be more challenging by the subjects, especially by those from the task-supported group. The overall trend was such that subjects from task-supported group voiced more opinions that had to do with expressing concern or perception of challenge than the subjects of the cognitive group did. More specifically, among the subjects of the task-supported group, there emerged an explicit theme of how context should be used to support the presentation of target structures, and the tasks with less clear local contextual
knowledge (e.g., the global warming task) were perceived to be slightly more challenging than the other tasks (see chapter 5 for more detailed overview of such comments). This finding is consistent with Moder’s (2010) conclusion regarding the facilitative role of local discourse context for completion of pedagogic tasks that have to do with analyzing language patterns (like constructions in Moder’s case).

Out of all tasks, subjects from both groups favored the tasks that **encouraged production and required group work** for their completion. Students from both groups appreciated being able to learn from each other and thought that group activities and/or practice were a more effective way to gain understanding of the target structure than working individually. This finding is supported by prior research from sociocultural theory favoring collaboration in instructional settings. Fullan (1999) claims that collaboration supports the emergence of new knowledge and growth for all participants involved in a given group. Donato (1988) found that collaborative work on a role-play task produced greater learning outcomes both for the group and for individuals, than when the students worked separately from each other. Storch (2001) found that while completing pair work tasks, pairs that exhibited a collaborative attitude to their work produced results demonstrating co-construction of new knowledge, such as learning of grammatical form and new vocabulary. Ethnographic research focusing on cultural aspects of learning pointed out that the learning process is a way for the participants to create a community of practice (Gee 2003; Holland and Lave, 2000). Members of such communities or groups inherently bond with each other and learn through jointly constructed behavior focused on completing a specifically outlined instructional endeavor. A number of qualitative studies identified various processes of how learning
occurs through collaboration (Donato, 2004; Kinginger, 2000; Mori, 2002); further research on the nature and use of pedagogic tasks targeting the knowledge of conditional constructions would be needed in order to identify more specific aspects of how collaboration promotes L2 development of conditional constructions. In sum, the finding from the combined (i.e. from both groups) retrospective interview data that tasks are perceived to function as a useful instructional method to promote collaboration among participants and to enhance the range of production for the target structure is key for considering the larger implications of the instructional treatment in this study.

Overall findings from the retrospective interview data demonstrated that students from both groups explicitly favored tasks that were relatively more complex (i.e. some type of cognitive effort was necessary for their completion), included relatively richer contextual knowledge, and required production and group work. While this study did not explicitly test for effects of task complexity on L2 development, this finding appears to be consistent with Robinson’s (2001, 2005, 2011) research on cognitive task demands and their effects upon L2 development. More controlled studies focusing on the components of the Triadic Componential Framework would be necessary to shape this preliminary trend any further. Another possible direction of related future research would be to analyze the discourse specific to language-related episodes connected with the completion of conditional tasks and to examine how the use of language affects the comprehension or production of the target structure, as well as how the use of language is tied with the reliance on local context. However, since such direction lies beyond the set of research goals posited by the present study, it will not be discussed in further detail here.
Another key trend voiced in the interviews with members of both groups was some type of inherent comparison that subjects had to draw between the instructional treatment they were exposed to during the course of the present study and the instructional methods they relied on in their home countries. Participants from both groups commented that elements of this instructional treatment were novel to them in some way. While participants of the cognitive group appreciated the additional focus on context and usage patterns present in the cognitive instructional PowerPoint, participants of the task-supported group pointed out that the more “traditional” PowerPoint did not always directly support the skills emphasized by pedagogic tasks. More specifically, subjects from the task-supported group felt that some of the tasks were “harder” to complete in comparison with what they learned from and were asked to do during the instructional PowerPoint. Apparently, since the instructional PowerPoint of the task-supported group did not carry a novel explanation for the target structure, subjects may have assumed that the practice activities would also be something that they had done in the past (such as controlled fill-in-the-blank worksheets); so when faced with the locally new and unexpected organization of tasks, they had to deal with a learning curve to a certain degree. The inherent comparison between the newer and the older methods is expressed through the following theme that emerged across interviews from both groups.

The comments from participants of both groups demonstrated that **culturally established learning patterns and styles play a crucial role when students are exposed to new instructional methods.** Learners may appreciate new approaches and materials but reverting to old patterns that they were trained in may be their first,
instinctive response. Interestingly enough, participants of each group commented on different aspects of this theme.

Participants from the cognitive group recognized that the cognitive treatment was something very different from what they had been taught in the past and appreciated the novel aspects of the treatment, such as speaker construal of the situation, cognitive grammar implications of English tenses, focus on meaning in explanations of the target form, use of authentic examples, reliance on pedagogic tasks, and the complementary role of tasks in regard to the teacher-facilitated PowerPoint presentation. Participants also admitted that following the novel explanations was a bit challenging at times and required a certain learning curve, but it was generally a positive experience nonetheless.

Participants of the task-supported group, on the other hand, noted that they had already studied similar rules before and commented that tasks were not necessarily as aligned with the PowerPoint as they may have expected. This finding suggests that the traditional form of delivery can and should be improved with the use of a more insightful theory of language than the one assumed in majority of ESL/EFL textbooks. The lack of what is referred to as ‘usage-based view of language’ (Barlow & Kemmer, 2000; Ellis & Cadierno, 2009; Tyler, 2010) predominant in the traditional materials must have affected participants’ perceptions and the corresponding lesser progress than they made between the tests than the participants of the cognitive group.

Another possible reason for the lesser amount of L2 development and the corresponding perceptions may be in the culturally instilled expectations and learning patterns. Since task-supported group participants were accustomed to extensive practice activities in their home country (China; NJ: since only one participant came from a non-
Chinese background, Chinese learning and teaching style patterns will be discussed here), they thought that incorporating more of such traditional practice elements into the treatment would have made the transition to tasks a bit easier. The relatively higher learning curve experienced by the participants of the task-supported group can be discussed in the context of the larger cultural knowledge about learning and teaching shared by all participants.

Prior research has identified a number of problems practitioners have been facing when incorporating “Western” teaching methods into Asian, in particular, Chinese classrooms. For instance, Hu (2002) claims that communicative language teaching (CLT), which has become the predominantly favored teaching paradigm in the Western world over the course of the last few decades, has been treated with a considerable degree of resistance in China. Communicatively-based approaches to language teaching in general often contradict Chinese traditional concepts of what teaching and learning are supposed to be and look like in the classroom setting.

Traditionally, proponents of CLT have viewed language learning processes as means for developing communicative competence and the skills of being able to deal with various social functions (Brown, 2001; Widdowson, 1990). In the case of task-based language teaching, classrooms activities (activities here referring to what generally happens in a language classroom, rather than to a specific type of exercise) are ideally supposed to connect with target tasks and be contextualized within and through authentic (or striving towards authenticity) materials, situations, and pedagogic tasks emulating real-world language use (Skehan, 1998). On the other hand, the Chinese view of language learning and teaching is based on Confucian philosophy. One of the key views of
Confucianism is regarding education as a serious and highly revered undertaking that should not be associated with lightheartedness and fun but should instead require intensive and earnest effort (Cortazzi & Jin, 1996). Accordingly, “the Chinese tend to associate games and communicative activities in class with entertainment exclusively and are skeptical of their use as learning tools” (Rao, 1996, p. 467). Also, the Confucian model of education emphasizes moral development, focusing on a person’s helpful contributions to society and somewhat disregarding individual expression and choice, which, in contrast, are the values highlighted by the proponents of communicative language teaching. Education is also traditionally viewed as a process of accumulating knowledge, rather than construing it and/or using it for immediate social purposes (Hu, 2002). In connection to that, books used for education, such as classic and/or authoritative books, are highly regarded as sacred sources of knowledge that should be treated with utmost care and respect (Scollon, 1999; Wang, 2001). Learning is thus traditionally associated with reading books and retaining knowledge gleaned from them. Teachers are supposed to be the ideal models to pass on the knowledge to their students and to ensure that the learners properly capture everything that was conveyed by a lesson. The instructional process is traditionally revolving around the 4 R’s and 3 M’s: reception, repetition, review, and reproduction, and meticulousness, memorization, mental activeness, and mastery (Hu, 2002, pp. 100-101).

It can be assumed that students from task-supported group inherently carried this cultural knowledge, favoring reception and reproduction of information and treating the instructional process as a responsible endeavor, rather than as a means to gain more skills that could be used in the real world. Since the instructional PowerPoints of the task-
supported group relied on a more traditional (in the sense of familiarity for subjects, rather than in a sense favoring any specific cultural patterns) explanation, the tasks stood out as particularly novel instructional elements in such a context. The shared cultural understanding of how language learning and teaching should be organized may have been one of the elements that made the transition to tasks a bit more challenging for participants of the task-supported group. In the case of the cognitive group, the PowerPoint and the tasks were equally novel concepts for subjects, which is why one part was not perceived more novel and thus a bit more challenging that the other, both parts (i.e. the PPT and the tasks) seeming equally different in a positive way. Besides, as was stated earlier, the cognitive linguistic approach assumes the same key elements as the task-based teaching approach, such as reliance on usage-based, contextualized, and authentic input, and the elements of this linguistic theory combined with current pedagogical research allow for an overall more insightful, explanatory, and coherent presentation. While this lies beyond the scope of research goals stated by this dissertation, the connections between culturally determined language learning and teaching styles and second language development should certainly be explored further in future research.

Summarizing the first half of this chapter, the answers to this study’s research questions demonstrated that both conditions of instruction – cognitive and task-supported (as operationalized in Chapter 4) – were effective for producing L2 development of the target form, as measured by the tests. The combination of the cognitive and task-supported instruction proved to be more effective in the context of this specific study than the task-supported instruction alone. Cognitive linguistics appears to provide a better
theory of language in general than the traditional (formal and structural) approaches to
language analysis. Combined with qualitative findings, these results suggest that the
focus on usage-based patterns and meaning overall were the elements of the cognitive
instructional treatment that made a difference in the subjects’ ultimate performance.
Tasks were perceived to be a successful instructional element across groups. If drawing a
comparison among task features, tasks that offered a rich context for task completion and
that called for active production and group work were considered most salient for the
practice of the target feature and therefore most engaging in the pedagogical sense.

In general, instruction that is based in a structuralist or rule-based (traditional)
model of language does not seem to provide any new insights into how conditionals work
and, in fact, may reinforce misinformation. The findings of this experiment have
demonstrated that, while pedagogic tasks are a great addition to the instructional process
no matter what, the improved teaching methods are not sufficient; we also need a more
accurate, more insightful theory of language itself in order to make language teaching a
more meaningful process overall.

Last but not least, culturally-grounded teaching and learning styles need to be
taken into account when designing and implementing relatively novel instructional
treatments. Background knowledge about what was common and appropriate in a
language classroom affected the subjects’ perception and attitude to the current treatment
and served as an instrument that either helped or impeded the students’ responses to
and/or uptake of the new treatment. Consequently, subjects’ prior instructional
experience should be taken into consideration when designing innovative lessons of any
kind.
6.3 How the findings fit with patterns in applied cognitive linguistic literature

The first half of this chapter focused on discussing the answers to the research questions posited in Chapter 4, all of those questions targeting a single overall research direction. The second half of this chapter will consider the answers to the research questions from the perspective of a wider context of relevant literature. The first section will focus on positioning the findings from this dissertation in the context of the prior work in applied cognitive linguistics.

Since this study was primarily concerned with testing whether cognitive linguistic treatment can be more successful than traditional instructional approaches in the sense that it would address meaning patterns behind grammatical elements, it might be helpful to revisit the original list of problems with traditional instructional methods as formulated by Tyler (2012) and stated in Chapter 1 of this dissertation. In the interest of space preservation and avoidance of redundancy, only brief highlights of Tyler’s critique are presented below (for fuller discussion of her points, see Chapter 1).

- Language is understood as a compartmentalized system, parts of which (such as syntax, morphology, pragmatics, etc.) are not connected with each other.
- Traditional approaches assume that language is acquired, not learned.
- Syntax is viewed as completely separated from the lexical and semantic aspects of language, which leads to the assumption that syntactic patterns do not carry meaning of their own significance.
- No connections are explicitly drawn between meanings associated with particular forms.
This study essentially attempted to address the majority of shortcomings of traditional approaches to instruction. First of all, the cognitive linguistic treatment of conditionals allowed for treating their grammatical meaning as a connected system. The composition of the conditional subordinate organization is inherently affected by tense patterns and/or modal verb usage within each of the clauses, as well as by local discourse information; the cognitive linguistic treatment conveyed these semantic connections to learners in full. Secondly, the study provided multiple contexts for learners to experience the target structure usage, thus exposing them to input imitating authentic usage patterns. Thirdly, it was emphasized to learners that syntactic structures are meaningful in their own right, and explicit connections were indeed drawn between various grammatical forms contributing to the overall conditional meaning. In other words, the study conducted for this dissertation proved that it was possible to treat conditionals as symbolic units with their own meanings, and it is indeed possible to break down the symbolic meaning of the whole phrase into teachable chunks (tense, combination of clauses, etc.).

More generally, this experiment has validated the use of a number of underlying cognitive linguistic assumptions (see chapter 1 for fuller overview) relevant for second language instruction. Insights from cognitive linguistics and, in particular, cognitive grammar, can bring out the knowledge about grammatical features as meaningful “packages” accessible to language learners (Achard, 1997). In situations where L1 and L2 construal patterns may be in conflict with each other, i.e. whenever learners may be experiencing difficulty construing or grasping certain aspects of target language structure(-s), cognitive linguistic tools can be used to highlight the specifics of the target
language construal and make the problematic structure(-s) more analyzable and transparent for the learner. Overall, cognitive linguistic tenets offer a viable theoretical basis that can be used in contexts of second language learning, making the inherent linguistic organization explicit and thus logically understandable for the learners.

Considering the challenge of making theory comprehensible to learners, this study demonstrated that cognitive linguistic theory can be transferred into instructional materials without disturbing learner expectations too much (however, a learning curve of some degree is inevitable) and making it a worthwhile and valuable enterprise overall. The methodological organization of this study and the statistically significant findings supporting the use of cognitive linguistics in L2 instructional contexts partially addressed the gap in applied cognitive linguistic research, where many previous studies were not sufficiently rigorous methodologically (Achard, 2004; Boers & Demecheleer, 1998; Chen & Oller, 2008; Csabi, 2004; etc.) and/or had a largely qualitative focus (Dirven, 2001; Kurtyka, 2001; Lindstromberg, 1996; Meunier, 2008; Niemeier & Reif, 2008; etc.). This dissertation supported the implications of recent studies (Tyler, Mueller, & Ho, 2010, 2011; Tyler, 2012) suggesting that the efficacy of implementing cognitive linguistics into instruction can be tested within the ramifications of a controlled research design, which would hopefully allow to treat any conclusions regarding the use of cognitive linguistics in L2 contexts as more generalizable and replicable than before. A recommendation that can be made based on the outcome of the present study is that uses of cognitive linguistics in L2 instructional contexts should be explored further using standard methodology from the larger fields of SLA and applied linguistics (Mackey & Gass, 2005).
More general implications of this line of research concern the fact that theoretical linguistic knowledge can indeed be of use in second language classrooms (Tyler & Evans, 2004; Achard & Niemeier, 2004a, 2004b; Gries, Hampe & Schoenefeld, 2005; Tyler, 2012; among others). Within the narrow context of this quasi-experimental study, using the cognitive linguistic explanation of English conditionals proved to be a fruitful endeavor. Expanding the findings of the present study into a broader context, bringing the much needed and currently lacking theoretical framework into the classroom can work as a supportive foundation that will ensure the stability of teaching practices and will hopefully systematize how language is presented to learners. If consistently translated into second language materials, cognitive linguistic insights can provide a unified view of language to learners and show numerous logical connections between language structures, currently hidden from view by the majority of traditional approaches to language description and presentation. In other words, such comprehensive theory can function as strong support to successful L2 instruction.

In contexts where L2 learners are not getting a sufficient exposure to L1 input, it is particularly important to complement instruction with examples from and/or references to naturally occurring L1 discourse. As Tyler (2012) suggests: “carefully chosen authentic discourse should be a foundational component of L2 materials” (p. 85). Materials utilized in this study were informed by authentic discourse as captured through L1 corpora resources, and learners were asked to engage in analysis of such authentic discourse on multiple occasions throughout instructional treatment. There is no doubt that elements of visual support available through the cognitive linguistic treatment contributed to its eventual success in promoting L2 development and production of English
conditionals. This finding supports prior research that suggested positive effects associated with the use of visuals for cognitive linguistic instruction (Berendi, Csabi and Kovesces, 2008; Boers et al., 2008; Knop & Dirven, 2008a; Tyler, 2012).

The role of the teacher cannot be underestimated for experimental treatments of such kind. Since in many EFL contexts, learners are accustomed to “black-and-white” style rules, it would be a complete departure from their expectations to immerse them in a purely learner-centered usage-based instructional model. This problem could, however, be addressed by creating a full curriculum that is based on cognitive linguistics. Also, since cognitive linguistic theory is heavy with professional terminology and jargon, it is important to adapt those aspects of theory to learner-friendly levels of comprehension and familiarity with grammatical theory. Teacher-facilitated presentations of novel information provide a bridge to the learners in that sense. There is no doubt that adaptations done for this study, such as substitution of linguistic jargon with “simpler” terms that were still accurate conceptually (i.e., referring to speaker’s background knowledge instead of using the terms ‘generic space’ or ‘base space’), the use of visuals and other non-language support, and considering the subjects’ educational context as much as possible, contributed to the overall success of the cognitive linguistic treatment.

This study focused specifically on the instruction of conditionals, but taking these findings into a larger context of designing an intervention study for EFL/ESL instruction, one would need to start with identifying aspects of target language structure that are most difficult to learners and then examine if those aspects can be targeted and made explicit with cognitive linguistic terminology. For an adaptation to be successful, it is not necessary for learners to get the full picture of a cognitive linguistic analysis: i.e. in this
study, they were explained only the very basics of the blending process happening when a conditional clause is being built. As long as the given intervention highlights the aspects of meaning that were not highlighted in the past by traditional approaches and thus elucidates possible problems that learners might have with the target structure, the intervention can still be successful. Again, any future cognitive linguistic intervention needs to be adapted to the learners’ levels. In the case of this dissertation, the participants were advanced learners in an academic English setting; accordingly, testing materials, instructional PowerPoints and pedagogic tasks were constructed to match their level of linguistic and general educational proficiency and development. If the target audience were children or adult learners at a lower level of proficiency, a different type of approach and corresponding adjustments might have been more efficient. Also, including multiple sensory domains – visual and audio support (in videos) proved to be helpful, as well as including discussion and debriefing of all points that are problematic for learners in any way.

Adapting cognitive linguistic research to learner needs is important, but it is only half of the equation in the context of present study. In line with a former recommendation by Niemeier & Reif (2008) to adopt methodologies incorporating both communicative principles and explicit grammar instruction to make introduction of grammatical points as meaningful and context-based as possible, this study was also informed by current developments in pedagogic research, in particular, focus on form and select elements/principles of task-based language teaching. More specifically, in this case, principles of task-based instruction were taken into account in order to create a task-supported learning context. Both cognitive linguistic theory and task-based language
teaching share the common focus on the usage-based nature of language. Tasks provided a meaningful and semi-authentic context for learners to practice their knowledge and skills throughout the length of instructional treatment. As highlighted in the earlier section of this chapter, tasks were perceived to be successful instructional elements by all learners; it is the use of tasks that accounted for improvement by the subjects of task-supported group (since they did not receive any cognitively-based instruction). That said, this study was constrained in the sheer number (i.e., quantity) of tasks that could be implemented during classroom time due to local instructional (curricular, etc.) restrictions. More research should be done adapting cognitive linguistic principles with targeted focus on form through pedagogic tasks – ideally, this would be done in a setting where the whole curriculum is designed around cognitive linguistic representation of the English grammar.

A successful example of prior research in adapting theory to classroom practices that could be used as guidance for creating a cognitive linguistic curriculum is the combined adaptation of systemic functional linguistic (SFL) theory (Bhatia, 2002; Halliday, 1994; Halliday and Hasan, 1975; Martin, 1985) and task-based language teaching implemented in the German department of Georgetown University. Heidi Byrnes and her colleagues (Byrnes, 2002; Byrnes & Sprang, 2003; Byrnes et al, 2006) started with a needs analysis identifying target tasks and texts that college-level learners of German needed to master in order to become functionally proficient. The needs analysis identified target themes to base the curriculum on; the underlying notions of learning were inherently centered around contextually-relevant functions that could be achieved through the use of language. The new curriculum was informed by a number of
theories: in addition to SFL, which was the primary influence, research in sociocultural theory, content-based instruction, and language processing SLA literature contributed to the process of shaping the content of the new curriculum. Since this dissertation is concerned with adapting linguistic theory to instruction, I will only highlight the aspects of SFL that were used to inform the task creation process, leaving aside (for the present dissertation goals) other theoretical underpinnings of the curriculum. The concept of genre was the central notion for organizing course syllabi; distinctive features and characteristics of a number of target language genres were the foci of instruction. The sequence of genres taught across courses of different levels followed the progression of discourses associated with everyday, familiar tasks (e.g., informal conversation) to types of discourse associated with public institutions and more “official” language functions (e.g., writing a job application letter). The SFL theory thus informed target tasks, which were consistently genre-based from the beginning to the advanced levels. The effort invested into creating task-based materials informed by current and highly relevant linguistic theory led to significant level of success achieved by the students of this department: by the end of their sophomore year, most German majors would be prepared to study abroad at a German university. The success of this curriculum redesign has since been recognized internationally through multiple publications and the general educational prestige associated with Georgetown’s German program. If faculty and time resources were available for a similar curricular “overhaul” informed by cognitive linguistics, it would be an ideal method of bridging the gap between the theory and practice in English language teaching and learning.
A most recent attempt to create a learner-friendly cognitive linguistic grammar – i.e., the “Cognitive English Grammar” book by Radden & Dirven (2007) – provides a first step in highlighting the elements of the English language that can targeted using the tools of cognitive linguistics. However, while this text is a useful summary of cognitive linguistic representation of a number of the English language structures, it is not very learner-friendly, as it is quite rich with cognitive linguistic terminology and does not specifically focus on the aspects of meaning that learners find problematic. In the ideal case scenario, the principles highlighted in this book, as well as in Taylor’s “Cognitive Grammar” (2003), could be translated into more learner-friendly materials that are also informed by targeted focus on form. As one direction, some way of combining TBLT research (and possibly other pedagogically-oriented paradigms) with existing findings in applied cognitive linguistics would be the possible direction of future research that is worth exploring. This study did not utilize Robinson’s model of task complexity based on Cognition Hypothesis in full (Robinson, 2003, 2005, 2001); however, future research should potentially target how the organization of tasks according to their degree of complexity and accompanying task conditions can affect L2 development.

One way or the other, it is necessary to conduct more methodologically controlled studies testing cognitive linguistic applications of individual rules/features of the English language in various instructional contexts. Without further statistical findings supporting the use of cognitive linguistic theory in L2 classrooms, it will be difficult to envision further developments in applied cognitive linguistic research. As mentioned earlier, an important consideration to keep in mind for any future adaptations is adjusting to local
instructional contexts and delivering instruction at the level of participants as much as it might be possible.

In sum, applied cognitive linguistic research should focus on finding common ground with quantitative research in second language acquisition, as well as in pedagogically-oriented directions, such as task-based language teaching. Another direction for applied cognitive linguistic research to go in should be exploring structures problematic for L2 learners using the corpus linguistic tools.

There should be more collaborations going on between applied cognitive linguists and corpus linguists to identify the best possible ways to target learner problem areas. Ellis and Cadierno (2009) claim that “the realization of the primacy of language usage to language acquisition necessitates a commitment to corpus linguistic methods and to the study of contextualized functional discourse” (p. 112). Gries (2008) is proposing that SLA research should utilize corpus linguistic frequency research (targeting lexical co-occurrences that are treated as constructions) in areas of syllabus and/or curriculum development in order to determine “what to attend to first and foremost, and in what order, ideally focusing (first) on what is typical/atypical rather than on what is possible/impossible” (p. 415). Notably, some studies have already been carried out in this direction: e.g., Grabowski and Mindt (1995) developed a frequency list of irregular verbs that could be very helpful for L2 learners; Cadierno (2004) used type-token ratio to analyze usage patterns behind expressing motion events in verb-framed and satellite-framed languages; etc. An extension of lexical/morphological frequency research might be in the area of investigating interdependencies and co-occurrence patterns in syntactic

In addition to identifying structures problematic for L2 learners and thus informing the design of future studies, corpus tools should also be used for pedagogical purposes. For instance, the Corpus of Contemporary American English (COCA) has a wealth of resources, and not all of them appear to be self-explanatory for researchers and practitioners. In the context of this dissertation, I used COCA for creating items and tests, but not having the computational linguistic background, it is highly doubtful that I managed to utilize the whole wealth of available features. A greater degree of collaboration is necessary between cognitive, applied, and corpus linguists, in order to identify a range of pedagogic tasks that could be developed with the help of corpus-based searches and underlying analysis. Confining the searches to specific genre and/or usage contexts (e.g., general academic, colloquial, jargon characteristic of research articles, etc.) would also allow to identify potentially relevant target discourse patterns that could be further utilized for informing creation of pedagogic tasks to be used in this context. For instance, if the setting continued to be English for Academic Purposes (like it was the case for this study), advanced corpus searches (conducted in both native language corpora, as well as in L2 learner corpora) could potentially identify problematic areas that could be targeted through instructional interventions. Prior research addressed the use of genres in English for Academic Purposes (Swales 1990, 2004) suggested that every genre has its own phraseology and discourse patterns, and successful learning of the target forms cannot happen without learning this phraseology and discourse patterns. Determining such features through corpus-based methods could facilitate further creation
of more specific pedagogic tasks addressing the said problematic areas through cognitive
linguistic treatment.

Last but not least, another useful direction for collaboration of applied cognitive
linguists would be with materials developers and specialists in the area of instructional
technology. In the present study, cognitive linguistic insights were transferred into
instructional PowerPoint presentations through the use of diagrams and charts, as well as
visuals and select video. More sophisticated adaptations of cognitive diagrams to learning
materials should be explored, using specialized software (Adobe InDesign, etc.) and other
tools of modern instructional technology. Exploring technological adjustments of this
type would also potentially allow for addressing the needs of learners of multiple learning
styles.

To sum up, even though this study represents a hopeful step towards establishing
a pattern of methodologically controlled applied cognitive linguistic research, a much
greater amount of targeted investigation needs to be carried out in order to establish the
efficiency and explore the full range of usefulness of cognitive linguistics in L2 learning
contexts. Directions for future research include collaborative efforts between applied
cognitive linguists and applied linguists working in the areas of second language
quantitative research and task-based language teaching. Also, collaborative efforts with
corpus linguists and instructional designers would be instrumental in identifying the
possible range of target tasks and making the instruction maximally geared towards
learners’ needs in a given instructional context.

The next section of this chapter discussed the implications of this study for
research on focus on form and task-based teaching.
6.4 How the findings fit with literature on task-supported language teaching

In this study, the presence of pedagogic tasks was not prominent enough for creating an entirely task-based language teaching context; however, they were crucial enough to qualify for the task-supported definition (Samuda & Bygate, 2008). As stated earlier in this chapter, as well as in Chapter 5, the use of tasks was instrumental for the gains made by both the task-supported and cognitive groups between the pretest and the posttest. Pedagogic tasks were seen by learners to be a successful and pedagogically engaging instructional method. One of the original premises of task-based language teaching paradigm was to create an instructional methodology that would facilitate naturally-occurring language use processes; in other words, the underlying idea behind TBLT was positioning language teaching against traditional teaching approaches that are focused solely on formal rather than semantic aspects of problematic L2 forms (Candlin, 1987; Ellis, 2003). Since it emphasizes the focus on meaning and usage-based view language, TBLT is generally compatible with key principles of cognitive linguistics. This study addressed the questions of whether pedagogic tasks can be an effective instructional method on their own (in addition to focus on form inherently present in traditional materials) and whether combining tasks with the cognitive linguistic presentation of target structure can have an even greater instructional value and/or effect than the use of pedagogic tasks alone.

The use of pedagogic tasks alone proved to be an effective method for promoting L2 development: participants of the task-supported group outperformed the participants of control group on both the posttest and delayed posttest. This finding supports the use of meaningful and proactive focus on form (Doughty & Williams, 1998) in communicatively oriented language classrooms. More generally, the results of this study
provide support to claims backing the effectiveness of targeted focus on form (Ellis, 2002; Norris & Ortega, 2000; Spada & Tomita, 2010; etc.) and confirm that pedagogic consciousness-raising tasks can function as a valid method of directing learners’ attention to specific aspects of L2 structures.

The qualitative findings from retrospective interview data suggest that, whenever focus on meaning of target forms is emphasized through an informed teacher-led presentation, as well as through coherently structured and sequenced pedagogic tasks, learners get a more cohesive representation of the target structure. Since focus on meaning was incorporated more consistently into the presentations for the cognitive group, but not as much into the presentations for the task-supported group, cognitive group participants had a more positive view of the compatibility between teacher-facilitated portions of instructional treatment and the pedagogic tasks, than the participants of the task-supported group did.

More specifically, the qualitative findings demonstrated the recurrent critique that traditional materials do not sufficiently emphasize meaning is shared by the learners, as well as by researchers (Tyler, 2012). Participants of task-supported group expressed that the PPT presentations informed by traditional ESL accounts of conditionals were not focusing on the same aspects of language as the pedagogic tasks used in the study. The PowerPoint presentations informed by traditional analyses of conditionals were addressing form but not so much meaning, while pedagogic tasks targeted meaningful practice in contexts resembling semi-authentic usage patterns. It can thus be concluded that in cases when they are not used in a comprehensive controlled TBLT setting (i.e., where pedagogic tasks are the principal organizing elements of the entire curriculum),
tasks should be combined with instructional approaches that also favor focus on meaning behind the target forms.

Viewing the results of this experiment from a broader perspective, the findings of research on focus on form highlighting benefits associated with explicit instruction (Doughty and Williams, 1998; VanPatten, Williams, Rott, & Overstreet, 2004) were confirmed in this study. However, a crucial finding was such that focus on form alone is not ideal, and reliance on usage-based contexts and uncovering meaningful connections between co-occurrence of target forms is more beneficial for L2 development than focus on form alone. This conclusion is consistent with Holme’s (2009) recommendation, as well as with other findings of applied cognitive linguistic studies that highlighted the importance of drawing on meaning in local context (Liamkina, 2008; Moder, 2010; Tyler, 2012).

Further applications of task-based/-supported language teaching methodology could be centered around combining applied cognitive linguistic research with research on task complexity and task sequencing motivated by Robinson’s Cognitive Hypothesis. As far as task sequencing was concerned, this study took into account production and comprehension aspects related to the tasks, but did not directly address criteria of task complexity from Robinson’s framework (2003, 2005, 2011). Recapturing what was previously stated in Chapter 3, Robinson claims that if tasks are sequenced according to their cognitive complexity, task performance leads to greater degree of ‘noticing’ (Schmidt, 1990, 2001), progressively more analysis of the input and output occurring during task work (Doughty 2001; Muranoi, 2000), and to more interaction that will facilitate attention and analysis processes in learners’ cognition (Mackey 1999).
combination of all of these factors is supposed to facilitate subsequent language
development. This study did not utilize a fine-grained enough framework of task
sequencing to take into account Robinson’s Cognition Hypothesis; ideally, future
research should also investigate how task characteristics might affect the subsequent
performance of language learners on posttests.

A next step in this direction would be controlling the sequence of tasks to a
greater degree in accordance with Robinson’s Triadic Componential Framework and
possibly investigating more refined differences in L1 and L2 construal of target structures
(similarly to how Cadierno and Robinson (2009) analyzed encoding of motion events by
speakers of typologically similar or divergent language). In the case of conditionals, the
next step would be analyzing the effects of cross-linguistic influences on L2 production
of conditionals and examining which types of tasks (i.e., the degree of complexity and
other characteristics associated with them) further facilitate or impede successful L2
construal of target forms.

6.5 Limitations

This section focuses on a number of limitations that constrain the generalizability
of findings from this study.

1) **Small sample size:** this study included a total of three groups with an \( N \) of 57.

While these numbers were sufficient for running inferential statistics, it would be
helpful to have at least twice that size for being able to draw more overarching
instructional conclusions and make the findings more generalizable.
2) **Same country of origin** for large part of the student sample: most students who took part in this study came from China, which is why the results may have been different if this had been a more culturally diverse group of students. It may be possible that the results were affected by the fact that the instructional methods tested in this study mapped well onto the educational background of participants. Alternatively, because the instructor had sufficient familiarity with her students’ prior educational backgrounds, the treatment materials were inherently designed with all of those factors in mind. Replication with students from other backgrounds would be instrumental for establishing the degree of generalizability of this study’s findings.

3) **Length of treatment:** the whole instructional treatment lasted a total of 3 weeks. Given that applying cognitive linguistic to classroom instruction is a relatively novel pedagogical approach, it would be helpful to have the instructional treatment “stretched” over a couple of months or ideally a whole semester. That way, more tasks could be done (as mentioned in methodology, two additional tasks were prepared but were not included into the treatment due to lack of time and other instructional constraints). Also, PPTs could be developed further and/or divided into shorter more digestible chunks. In the context of this study, instructional PowerPoints constituted about a half of the class time, but perhaps a quarter or third of one instructional period would have been more reasonable pedagogically.
4) **Constraints of given curriculum.** This study took place with intact classrooms where certain instructional routines had already been set in place even prior to the beginning of data collection. Also, because of syllabus constraints, study procedures could not take up more than half of each class. In that sense, it would be helpful to take this study outside of intact classrooms and potentially test its applicability in laboratory settings. In the ideal case scenario, a whole curriculum could be organized following principles of cognitive linguistic view of language conveyed with the help of pedagogic tasks (similarly to Byrnes, 2006), but that would require a certain degree of effort and resources well beyond the scope of this dissertation.

5) **Lack of data on learners’ individual differences.** The data collected for this study did not include any motivational questionnaires and/or other tools allowing to gain insight regarding the subjects’ original motivational levels. Accordingly, possible differences between participants’ motivational levels were not controlled for. Also, additional data about the subjects would be helpful, such as working memory tests and the like. The more information we have about learners’ individual characteristics, the more we can customize the instructional treatment, on the one hand, and account for the origins of the differences in scores, on the other hand.

6) **In connection with the previous point,** it would be helpful to have access to learners’ **general aptitude information** and to try to determine possible correlations between L2 development of conditionals and individual language aptitude
patterns. Also, additional tests accounting for the exact degree of L2 development would be beneficial for making the findings more specific and streamlined. To meet this goal, it would be necessary to conduct further grounding research in the field of language assessment, which, again, is beyond the scope of this dissertation but would be a valuable future research endeavor.

In sum, this chapter provided an overview of this study’s findings as they relate to the larger literature in the field. The next section will give the conclusion to the entire dissertation.
CONCLUSION: WHY WE SHOULD BRING COGNITIVE LINGUISTICS INTO THE CLASSROOM

This section represents a summary of key points conveyed by the entire dissertation. Aiming to contribute to the research foci of applied cognitive linguistics, this study tested the applicability of using cognitive linguistic research on English conditionals in L2 instructional context.

The target structure of English conditionals was selected because, being a highly complex form, conditionals represent a significant challenge for second language learners. Existing ESL materials are of limited help, as they present simplified classifications of conditional forms and ignore the presentation of discourse and usage patterns associated with them. Also, the vast majority of theoretical approaches to the analysis of conditionals are too abstract and therefore ill-served for addressing the needs of second language learners. As far as the population involved in this study, i.e. the advanced-level graduate students, is concerned, they continued to show confusion over how to use the conditionals appropriately in order to convey their ideas.

Approaching the study of language from the perspective of human cognitive processes, cognitive linguists claim that language naturally reflects the human experience and subsequent conceptualization of the world, or the internal world, as uniquely captured by each individual. Cognitive linguistic theory emphasizes the usage-based nature of language and inherent connections between form and meaning. A growing number of researchers (Achard, 2008; Robinson & Ellis, 2008; Tyler, 2012; among others) argue that this underlying conceptual view of the language can be of particular use for second language learners. Another advantage of using cognitive linguistic theory
in second language contexts involves bringing a coherent and relevant linguistic theory back into the materials, which could work as a supportive pillar ensuring the stability of teaching practices across various aspects of language (de Knop and Dirven, 2008; Tyler, 2008; 2012).

A number of recent studies have explored applications of cognitive linguistics to second language instruction of various target forms (see chapter 1 for a more detailed overview). However, much of the prior research (with few notable exceptions) did not follow strict methodological guidelines accepted in the field of SLA. Also, many of the earlier applied cognitive linguistic studies did not utilize current pedagogical methods that might have aided successful instruction and/or acquisition of target forms.

Accordingly, the present study aimed to address this gap by investigating the efficacy of applying the cognitive linguistic analysis of English conditionals to second language instruction through the use of focus on form and task-supported language teaching. Task-supported language teaching was chosen because of its conceptual compatibility with the underlying principles of cognitive linguistics (both areas of research targeting complementary usage-based aspects of language), as well as its experimentally established superiority as a language teaching methodology. The goal of the study was to test the whether translating cognitive linguistic insights into classroom materials and supplementing them with pedagogic tasks would more effectively facilitate the development of the target form.

More specifically, the study addressed three quantitative and one qualitative research questions:
1) Does task-supported instruction produce a positive effect for L2 development of conditional constructions?
2) Does task-supported instruction with added cognitively-based insights produce a positive effect for L2 development of conditional constructions?
3) Does the addition of cognitive insights into task-supported instruction produce greater L2 development of conditional constructions than absence thereof, or than task-supported instruction alone?
4) What is the possible qualitative effect of using cognitively-based insights in task-supported instruction?

Three groups took part in the study: cognitive, task-supported, and control. The study design consisted of a pretest, posttest and a delayed posttest, administered over the course of six weeks total. Participants of the cognitive group received instructional treatment informed by the cognitive linguistic analysis of conditionals by Dancygier and Sweetser (2005) and completed six pedagogic tasks. They also had access to a supplementary piece called ‘the cognitive chart’. Participants of the task-supported group received instructional treatment informed by the traditional analysis/classification of conditionals and completed the same six pedagogic tasks as the participants of the cognitive group. Participants of the control group did not receive any explicit instruction of conditionals and only completed the three tests.

Statistical analyses of test gain scores indicated that the differences between all three groups were significant. The participants in the cognitive group obtained greater production score and overall test score gains between the pretest and the posttest, than the participants of both the task-supported and the control groups did. Participants of both the
cognitive and the task-supported groups were able to obtain greater test score gains between the pretest and the posttest, than the participants of the control group, thus providing support for the value of task-supported classroom instruction for the purpose of acquisition of English conditionals. Retrospective interviews with select subjects from each treatment group demonstrated that cognitive linguistic task-supported instructional treatment elicited a generally more positive response among subjects than the traditional task-supported treatment did. That said, tasks were perceived to be a favorable pedagogic format regardless of the accompanying theoretical contents. If drawing a comparison among task features, tasks that offered a rich context for task completion and that called for active production and group work were considered most salient for the practice of the target feature and therefore most engaging in the pedagogical sense.

Results obtained in the course of statistical analyses demonstrated that both conditions of instruction – cognitive and task-supported (as operationalized in Chapter 4) – were effective for producing L2 development of the target form, as measured by the tests. The combination of the cognitive and task-supported instruction proved to be more effective in the context of this specific study than the task-supported instruction alone. Combined with qualitative findings, these results suggest that the focus on usage-based patterns and overall meaning were the elements of the cognitive instructional treatment that made a difference in the subjects’ ultimate performance.

Taking these trends into a broader theoretical context, it is important to highlight the fact that focus on form alone (as received by the task-supported group) was not demonstrated to be as effective as the focus on form combined with cognitive linguistic insights. While the manner of instructional delivery (consciousness-raising pedagogic
tasks) mattered and produced gains for both treatment groups, the underlying theory of language assumed in teacher-facilitated presentation played a further facilitative role for L2 development. Since the cognitive group outperformed the task-supported group, it can be implied that the cognitive linguistic theory has the potential of further facilitating successful language teaching. Cognitive linguistic tenets offer a viable theoretical basis that can be used in contexts of second language learning, making the inherent linguistic organization explicit and thus more understandable for the learners. More generally, this finding calls for more re-inserting of (appropriate) language theory into language teaching.

The methodological organization of this study and the statistically significant findings supporting the use of cognitive linguistics in L2 instructional contexts partially addressed the gap in applied cognitive linguistic research. As noted earlier, many previous studies were not sufficiently rigorous methodologically (e.g., Achard, 2004; Boers & Demecheleer, 1998; Chen & Oller, 2008; Csabi, 2004; etc.) and/or had a largely qualitative focus (e.g., Dirven, 2001; Kurtyka, 2001; Lindstromberg, 1996; Meunier, 2008; Niemeier & Reif, 2008; etc.). This dissertation supported the implications of recent studies (Tyler, Mueller, & Ho, 2010, 2011; Tyler, 2012) suggesting that the efficacy of implementing cognitive linguistics in instruction can be tested within the confines of a controlled research design, thus raising our confidence in the probable successful application of cognitive linguistics to other L2 forms and in other L2 contexts. A recommendation that can be made based on the outcome of the present study is that uses of cognitive linguistics in L2 instructional contexts should be explored further using
standard methodology from the larger fields of SLA and applied linguistics (Mackey & Gass, 2005).

The limitations of this study include a relatively small sample of participants, uniform cultural background for the majority of participants, relatively short length of instructional treatment, curricular constraints that the data collection process had to be organized around, and lack of data on learners’ individual characteristics, such as motivation, working memory and aptitude.
APPENDICES

APPENDIX A: Free Online Learner Data Corpora

(used for investigation of most problematic conditional sentence types)

<table>
<thead>
<tr>
<th>Name of corpus</th>
<th>Type of data available</th>
<th>Web address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asao Kojiro’s Learner Corpus Data</td>
<td>Essays and stories written or reproduced by Japanese college students.</td>
<td><a href="http://www.eng.ritsumei.ac.jp/asao/lcorpus/">http://www.eng.ritsumei.ac.jp/asao/lcorpus/</a></td>
</tr>
<tr>
<td>(CEEUSA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Janus Pannonius University (JPU) Corpus</td>
<td>Essays and research papers written by university students</td>
<td><a href="http://joeandco.blogspot.com/">http://joeandco.blogspot.com/</a></td>
</tr>
<tr>
<td>The Learner Corpus of English for Business Communication</td>
<td>Different types of business correspondence</td>
<td><a href="http://langbank.engl.polyu.edu.hk/index1.html">http://langbank.engl.polyu.edu.hk/index1.html</a></td>
</tr>
<tr>
<td>The Michigan Corpus of Upper-level Student Papers (MICUSP)</td>
<td>A-level papers written by both native and non-native speakers</td>
<td><a href="http://micusp.elicorpora.info/">http://micusp.elicorpora.info/</a></td>
</tr>
<tr>
<td>The Montclair Electronic Language Database (MELD)</td>
<td>Student essays</td>
<td><a href="http://www.chss.montclair.edu/linguistics/MELD/">http://www.chss.montclair.edu/linguistics/MELD/</a></td>
</tr>
</tbody>
</table>
APPENDIX B: Consent Form for the Experiment

GEORGE WASHINGTON UNIVERSITY

INVITATION TO PARTICIPATE IN RESEARCH

PROJECT TITLE
Applying cognitive linguistics and task-supported language teaching to instruction of English conditional phrases

PROJECT DIRECTOR
Natalia Dolgova Jacobsen

PRINCIPAL INVESTIGATOR       TELEPHONE

Dr. Shoko Hamano                202-994-6333
Natalia Dolgova Jacobsen       703-868-3420

INTRODUCTION
You are invited to consider participating in a research study to test how effective certain techniques to teach English conditional constructions may be because you are an ESL student. This research is part of a doctoral dissertation. This form will describe the purpose and nature of the research, its possible risks and benefits, and your rights as a participant in the study. The decision to participate, or not to participate, is yours. Your academic status will not, in any way, be affected should you choose to not participate or if you withdraw your participation at any time.

WHY IS THIS RESEARCH STUDY BEING DONE?
In this research study, we are investigating how cognitive linguistic theory may be used to help teach English conditional constructions.

263
There exists an extremely wide range of theoretical analyses of conditional constructions, but most of them appear to be quite complex and thus ill-fitted for presentation to second language learners. Consequently, it is not surprising that most ESL grammar books are lacking precise explanations.

In contrast, the paradigm of cognitive linguistics has the necessary tools to address these shortcomings, as it takes into consideration usage-based patterns in language and provides the tools to make some implicit linguistic knowledge explicit and thus more accessible to second language learners. Accordingly, this study is designed to investigate possible positive effects of applying cognitive linguistics in classroom contexts.

HOW MANY PEOPLE WILL TAKE PART IN THE STUDY?

About 60 (sixty) people will take part in this study. Participants in the study are referred to as "subjects."

WHAT IS INVOLVED IN THE STUDY?

This study will take place during your regular class time. You will be assigned to one of 3 research groups. Prior to instruction of conditional phrases, you will be given some class assignments that will determine which type of activities you will be asked to take part in, or which research group you will be a part of.

In the beginning of the instructional process, you will be given a special presentation of English conditional phrases. Afterwards, you and your classmates will participate in certain activities to practice the new knowledge and skills. Such an instructional sequence might happen two or three times before the end of the semester. Finally, you will be given a test to assess how well the special presentation and activities worked. Your participation in these activities will not be graded, and it is not going to affect your performance in class. If you choose not to participate in the experimental activities, you will be given alternative, more traditional assignments (the kind that can be found in the majority of ESL (English as a Second Language) textbooks).

Later on in the semester, you may be asked to answer a few questions about the instructional activities that took place during class time. These questions will be asked during separate interview sessions with the researcher. You can participate in
such interviews only if you volunteer to do so. The interview part of this study will be audio recorded, but your name will not be identified anywhere in the recording.

**HOW LONG WILL I BE IN THE STUDY?**

We expect that you will be in the study for a maximum of one (1) month, or for the duration of the class you are attending, whichever is earlier.

You can stop participating at any time. However, if you decide to stop participating in the study, we encourage you to talk to the researcher first.

**WHAT ARE THE RISKS OF THE STUDY?**

Every effort will be made to keep your research records and other personal information confidential; however, it may be possible that someone may know about your participation. Please see the “What about confidentiality” section for more information about how your information will be protected.

**ARE THERE BENEFITS TO TAKING PART IN THE STUDY?**

There are no expected direct benefits to you other than learning more about conditional sentences. Others may benefit in the future from the information we obtain in this study by finding more effective ways to teach English conditional phrases.

**WHAT ABOUT CONFIDENTIALITY?**

Your name will not be used when data from this study are published.

Every effort will be made to keep your research records and other personal information confidential. However, we cannot guarantee absolute confidentiality. The co-PI will do her best to ensure that nobody else can access the test information, storing the documents in a fire-proof cabinet in her home office. Recordings of the interviews (if you choose to take part in interviews) will be destroyed after the data analysis is finished.
Individuals from the George Washington University IRB may look at records related to this study, both to assure quality control and to analyze data. Your name and any material that could identify you will remain confidential except as may be required by law.

We will take the following steps to keep information about you confidential, and to protect it from unauthorized disclosure, tampering, or damage:

• You will use numbers instead of your name to sign any of the tests that will be given throughout the instructional phase of this study.
• The test scores and any other research data will be kept on a password-protected laptop computer as well as on a flash drive that will be placed in a locked filing cabinet. When the password-protected laptop is not worked on, it will be locked in a filing cabinet in a suite with locked doors. Nobody, except for the researcher, will have access to the data collected in the process of this study.

As already mentioned above, only the data that you provide, when aggregated with data provided by others and with all indicators that could personally identify you removed, will be reported as the results of this study.

**WILL I BE PAID FOR PARTICIPATING?**

You will not be paid for participating in this study.

**WHAT ARE MY RIGHTS AS A RESEARCH PARTICIPANT?**

Participation in this study is entirely voluntary at all times. You have the right not to participate at all or to leave the study at any time. Deciding not to participate or choosing to leave the study will not result in any penalty or loss of benefits to which you are entitled, and it will not harm your relationship with Georgetown University, George Washington University, or any of its employees.

If you decide to leave the study, the procedure is: contact the researcher (by e-mail – ndj5@georgetown.edu or natalia@gwu.edu, or by telephone at (703)-868-3420) and notify her that you would like to withdraw from the study. No further actions are necessary on your part.
WHOM DO I CONTACT IF I HAVE QUESTIONS OR PROBLEMS?

Call Natalia D. Jacobsen at 703-868-3420 or the Principal Investigator, Shoko Hamano at 202-994-6333 during regular business hours if you have questions about the study, any problems, unexpected physical or psychological discomforts, any injuries, or think that something unusual or unexpected is happening.

To contact GWU's office of Human Research, please call 202-994-2715 or email at ohrirb@gwumc.edu.

IF YOU AGREE TO CONDITIONS OUTLINED IN THIS INFORMATION SHEET, PLEASE CLICK ON THE FOLLOWING LINK AND CONFIRM:

https://www.surveymonkey.com/s/conditionals_form
APPENDIX C: Sample Test Materials Used in the Experiment

Appendix C1: Controlled production

Directions: Fill in the blanks with correct verb forms in the following sentences. Some of them are short sentences, while others are short paragraphs. In paragraphs, you are given a short description of the context you need to think about when considering the content of the sentences. Select the verb form(-s) that you think make the most sense and work the best in this particular context.

1. If I (be) ____________________________ you, I (wear) ____________________________ a different dress to the party tonight.

2. If it (rain) __________________________ yesterday, we (spend) ____________________________ the entire day at home, but luckily it did not.

3. From a history article: In effect, a small band of German revolutionaries accomplished in St. Louis what they had failed to do in Vienna and Heidelberg: overthrow a reactionary state government. And they had done it in a matter of weeks, while in the East the armies were stumbling toward a war of attrition that would last almost four years. If Lincoln and his generals in 1861 ____________________________ (be) more like Lyon and his Germans, the Union's conquest of the South ____________________________ (may play) out very differently. But even swift victory did not come without a price.

4. Dialogue:

Anna: why didn’t we talk to Ashley about the changing real estate prices? A timely conversation would have saved her a lot of money!

Ben: well, you know how she is! Even if we ____________________________ (talk) to her, she ____________________________ (listen) to us, and now it’s too late!

5. From a personal memoir: What I know about myself comes from the limited memory of a New York City girl. What I presume to guess about others must come from what I have read about and been told. If I ____________________________ (speak) in architectural terms, I ____________________________ (say) now that we are the country's ruins. So, my description of us and our time will not make entirely cheerful reading. Despite long and careful research I have not been able to discover dependable evidence for what literature often calls the golden years.
6. From a personal account on one’s motivation to learn heritage language (Italian): I DECIDED to relearn the language when I realized that my mother was getting ready to die. Although I had never had an easy closeness with her, much about her values and tastes impressed me, and she had passed along a pleasure in things Italian. I felt that somehow, if I _______________ (learn) her native tongue, it _______________ (may provide) a fond way to keep her with me. Family legend has it that relatives of hers once owned the land in the middle of the city on which the Neapolitans built the elegant, glass-domed Galleria Umberto, with its grand mosaic floor and arcades, a 19th-century antecedent to our shopping malls. And I think I was looking for a way to join her there.

7. From a popular article on people’s perception of time: Here’s the tradeoff: if you _______________ (want) to slow up the subjective sense of time, _______________ (do) little but sit in a lot of waiting rooms. While waiting, the time will seem endless. But, as a cruel irony, if you _______________ (experience) enough of those boring episodes, your life _______________ (seem) in retrospect to have "raced by " at an accelerated pace. In the absence of much happening, your brain didn’t have much information to process.

8. From a description of a scientific experience: As an example of this process, taken from an experiment, picture yourself at a computer, rapidly shifting your attention from a word game to a briefly presented target flashed on the screen: After a few minutes you are told you are being observed by a video camera during some parts of the experiment but not others. Further, you will be informed when the camera is on and when it is off. What effect do you think the camera-on segments will have on your experience, in contrast to the camera-off periods? If you _______________ (be) like the subjects who participated in this study, you _______________ (become) slightly uneasy when the camera is on. "I feel like people are watching me" and "I wonder how I look" were typical comments. Your reaction time will also increase when the camera is on.

9. From an economic article: The world’s budget deficit as a percentage of gross domestic product now stands at 6 percent, up from just 0.3 percent before the financial crisis. If public debt _______________ (be) not lowered back to pre-crisis levels, the I.M.F. report said, growth in advanced economies _______________ (can decline) by half a percentage point annually.
10. I’m glad we didn’t leave the patio furniture outside with the beginning of the rainy season. If we ________________ (leave) it outside, it ________________ (damage) badly by torrential rain that we’ve been getting in the last month and a half. Luckily, it’s been safe and sound inside.

11. From an article on economics of airline business: Southwest Airlines said Monday that it will buy smaller rival AirTran for $1.4 billion, creating the most expansive network of any low-cost carrier in the U.S. and giving the feisty airline a chance to grab business travelers in the nation’s busiest markets. If the merger ________________ (be approved) by regulators, Southwest, which already carries more domestic fliers than any other U.S. airline, ________________ (go) head to head with Delta on its home turf at Atlanta’s Hartsfield-Jackson International, the busiest passenger airport in the world. It ______ (gain) access to Reagan Washington National Airport and capture increased share at Boston Logan and New York LaGuardia.

12. From a novel: "So it's like a fashion show? " Cooper asked, silently wondering if she had the name right. "Exactly. And all the women attending are married and go to my church, so I doubt there'll be anything too scandalous for sale afterwards." Ashley added, "I know it's not your scene, Cooper, but it really ________________ (mean) a lot to me if you ________________ (be) with me. And you might even find yourself picking out something to wear for that magical moment when you and Nathan are ready."

13. From an article on the development of libraries: Developing culturally responsive instruction is one way the teacher-librarian can play an important role in the education of students. If students are hesitant to use school library resources, or instructions for searching and finding materials are not clear to them, they may not feel comfortable asking for help. Feeling ignored, judged, or disrespected will very likely adversely affect students' experiences. However, if students ________________ (have) successful experiences in the school library, they ________________ (come) to believe the library's resources (including staff resources) can help them in their research and can enhance their academic potential. They will learn there are trained professionals to help them navigate the sea of resources.
Appendix C2: Free production

Directions: look at the pictures below and create conditional sentences describing what you see in the pictures. If there is a reference to specific time, be sure to include it into your sentence. You do not need to use negation, unless specified separately.

1.

Tomorrow:

If the sun _______________________, the laundry ____________________

2.

10am

If I ______________________ before 10am, I __________________________

___________________________________________________________________
3. (may use negation)

Last week: ____________________________________________________________

Now: _________________________________________________________________

If I ____________________________, the flowers ____________________________.

4. (use negation)

If ________________________________________, John_______________________.
Appendix C3: Grammaticality Judgment and Comprehension: Pictures

Directions: look at the picture(-s) and decide which sentence describes it/them best. Circle the sentence you have chosen.

1. Millions years ago: Now:

   a) If it is true that new galaxies are forever being formed, then the universe today looks just as it did millions of years ago.
   b) If it were true that new galaxies were being formed forever, then the universe would still look today as it did millions of years ago.

2. 

   a) According to the old superstition, if you see a small spider, you will get a lot of money.
   b) According to the old superstition, if you had seen a small spider, you would have gotten a lot of money.
3. a) If you leave the apple on the counter for several days, it will surely turn rotten.
   b) If you hadn’t left the apple on the counter for several days, it wouldn’t have turned rotten.

4. a) If he had marinated the meat for the barbeque, it would not have been so tough.
   b) If he marinates the meat for the barbeque, it will be less tough.
### Appendix C4: Grammaticality Judgment and Comprehension: Sentences

**Directions**: read each text excerpt and decide whether the *if*-sentence(-s) (bolded) is/are used in a grammatically correct way. Rate each sentence from **1 to 5**: **1** being completely ungrammatical (UG) and **5** being completely grammatical (G).

<table>
<thead>
<tr>
<th>Sentence</th>
<th>Grammaticality range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>CAN WE BE BUSINESS PARTNERS?</strong> My boyfriend, 50, wants to start a business and, despite the economy, I** would start it with him immediately if things between us were perfect.** We both work in finance and for the past 25 years he has been so committed to work that his previous marriage dissolved. Another result of his lifestyle of overdedication to work is that he doesn't have great interpersonal skills.</td>
<td>UG</td>
</tr>
<tr>
<td>2. **In this rich home, where Lara was considered one of their own, they did not remember the debt she had incurred for Rodya and did not remind her of it. <strong>Lara would have repaid this debt long ago, if she had not had permanent expenses, the destination of which she kept hidden.</strong> In secret from Pasha, she sent money to his father, Antipov, who was living in exile, and helped his often ailing, peevish mother.</td>
<td>G</td>
</tr>
<tr>
<td>3. <strong>Before he has time to think, he'll be on the ground. A perfect jump!</strong> Later, he will glide across an icy field to victory. &quot;Wouldn't that be great?&quot; says Demong. He would love to win, but there's one more thing he's learned - to have fun. <strong>If you had worked hard at something you love and you have fun, the results would have followed!</strong></td>
<td>G</td>
</tr>
<tr>
<td>4. <strong>The streak of light you see - often called a falling or shooting star - is a &quot;meteor.&quot; Very bright meteors are &quot;fireballs.&quot; And if a fireball breaks up, it is called a &quot;bolide.&quot; If the meteoritic material made it to Earth's surface, then it would have been a &quot;meteorite.&quot;</strong> The colors of meteors or fireballs are due to the light emitted from the atoms that make up a meteoroid, as well as the atoms and molecules in the air. As a meteoroid enters Earth's atmosphere at high speed, the interaction between the object and the air creates heat and light energy.</td>
<td>G</td>
</tr>
<tr>
<td>5. <strong>&quot;Are you sure you won't take our original offer?&quot; That night, Denise and I reviewed Cora's video-blog from the time she first complained about insects. Nothing conclusive, but we both reached the same conclusion. &quot;The bathroom,&quot; Denise said. &quot;That's the best bet. Maybe she managed to hit a few</strong></td>
<td>G</td>
</tr>
</tbody>
</table>
more. "Another day, another airplane. At least this one wasn't a redeye. Getting into the apartment was a different matter. **It was second-floor, which made coming in through a window difficult, even if we were willing to risk it.** And there was no key in any of the obvious places: under the doormat, in or under the potted plants on her stoop, on the doorframe. Nothing we could find on or under her car, either.

6. As expected, the movie ended happily. Stephanie had enjoyed the movie immensely and remarked to Patrick how wonderful it was that the children finally accepted their new stepparents in spite of their earlier misgivings. He hadn’t called since. Something was up with him, though she hadn’t known what it could be and didn’t ask. He was her boss, and she wasn’t going to jeopardize her job by asking him why he hadn't called again. **If she is completely honest with herself, she will admit it had hurt her feelings when he hadn't bothered to call or offer an explanation for his sudden lack of interest in her.** Even worse, Amanda and Ashley continued to ask when Patrick was coming over again. She had put them off, telling them it was the busy season at the resort.
APPENDIX D: Sample PPT Presentation for Cognitive Group

6/11/12

Things we will talk about
- How language is organized
- How conditional sentences are organized
- What you should keep in mind when interpreting and making conditional sentences

Look at the puzzle: What does it make you think of?

If we were talking about language, we would say
- Language works as a puzzle, as it consists of many parts that fit into one whole
- Parts have to fit into each other, hence the need for grammar rules

What about this one?

Language assumptions to keep in mind
- Different configurations of puzzle pieces, or language parts will signal different meanings
- As a speaker, you have A LOT of choice as to how you put these parts together
Please keep these things in mind as we talk more about conditionals

But first let’s discuss:
- In what situations do we require sentences that use if?
- What do you find the most challenging about these if sentences?

Big picture
- Two key functions of if-sentences:
  - Prediction
  - Establishing cause-effect relations
- We can use if-sentences to refer to current or future situations when we hypothesize about reasons for how things were, are, or will be in the future.

A little bit of theory
- If - phrases: “propositional conditional constructions”
- They portray different scenarios and outcomes of these scenarios
- How can we signal different types of outcomes:
  - Very terse
  - Time references (adverbs, adjectives, etc.)
  - Context cues

What would have happened if Alice hadn’t seen the rabbit?
[link]
... she would have gotten named...
... she would not have fallen down the hole...
... she would have never found herself in Wonderland.

Look at these sentences
- If it rains tomorrow, they’ll cancel the picnic.
- If I had done my homework, I would have done better on the test.

What is the key purpose of these sentences?
two typical parts

- The if clause
  - If it rains tomorrow,
  - They’ll cancel the picnic.
- The main clause
  - If I had done my homework,
  - I would have done better on the test.

Components that create conditional meaning

- We are going to look at conditionals in a somewhat different way than what you may be used to.
- We’ll start with discussing speaker’s assumptions and different language components that make up the core of conditional meaning.

Speaker’s reality

- As a language speaker, you recreate the reality that “you” believe exists or is possible to exist.
- To make judgment about whether or not certain outcomes are possible, you need to use corresponding language tools, pressing appropriate keys when they sound right.

Hypothetically speaking

- Conditional sentences allow us to hypothesize about the present or the future.
- Whenever we hypothesize, we think of more than one outcome.
- Whenever we hypothesize, we have more than one version of what is currently true and what is possible.

Think about alternative outcomes of:
Think about alternative outcomes of:

Questions to keep in mind
- Language codes different outcomes with different means;
- You can adjust the linguistic means that you have available to match your desired message.

Read the following sentences
- If Dan finds the necessary data, he will share it with us in class.
- If Dan found the necessary data, he would share it with us in class.

How do they differ from each other?

Let’s look at these sentences more closely

If Dan finds the necessary data, he will share it with us in class.

- What do we assume? Speaker’s background knowledge:
  - Dan has access to the data
  - It is not readily available → it needs to be found
  - We believe it is indeed possible for Dan to find the data
  - Since it is possible for the data to be found, we can make predictions about its use, i.e. share in class

So a picture of it will look like this:
If Dan finds the necessary data, he will share it with us in class.

**Likely scenario/Red**
- Dan finds the data
- He will share it with us in class

**Unlikely scenario/Alternative**
- Dan doesn’t find the data
- He won’t share it with us in class

Because we think the situation is realistic, which version of reality is being highlighted?

In other words, which version of reality is being brought to the foreground?

If Dan finds the necessary data, he will share it with us in class.

**Background knowledge**
- Dan has the data
- It can be found

**Likely scenario**
- Dan finds the data
- He will share it with us in class

**Unlikely scenario**
- Dan doesn’t find the data
- He won’t share it with us in class

If Dan finds the necessary data, he will share it with us in class.

**Background knowledge**
- Dan has the data
- It can be found

**Likely scenario**
- Dan finds the data
- He will share it with us in class

So how is it different from the other one?

Speaker’s stance, or attitude toward situation

- Speaker believes that situation can still change
- Speaker’s stance/attitude toward situation: neutral/positive
- When we use if-clauses, language features that allowed the speaker to signal possible outcomes: present and future tense
If Dan found the necessary data, he would share it with us in class.

- Background knowledge:
  - There is no evidence that Dan has found the necessary data yet.

Speaker’s stance, or attitude toward situation

- Speaker believes that situation cannot change at this point.
- Speaker’s stance/attitude toward situation: negative.
- In it-causes, language features that allowed the speaker to signal the negative outcome: past tense & would+infinitive (would= historical past tense).

We’ll try more next time.

Lot’s try again

- If she misses the train, she will not meet her husband.
- If she had missed the train, she would have not met her husband.
If she misses her train, she will not meet her husband

Background knowledge:
- The train is coming in the near future
- It is important to be on time to catch it

A train is coming. One needs to be on time to catch it.

Possible outcome:
- It is possible for her to miss the train.
- She will not meet her husband.

Alternative outcome:
- It is not possible for her to miss the train.
- She will meet her husband.

Let’s do this one together.

If she had missed her train, she would have never met her husband

Background knowledge:
- She did not miss the train

Summary:
- If you believe or want to signal that the outcome can still change, you use present and future tense.
- If you believe or want to signal that the outcome cannot be changed at this point, you use a combination of past tense(s) and would.
Appendix E: Cognitive Chart
**APPENDIX F: Pedagogic Tasks** (provided in corresponding instructional sequence)

**Appendix F1: Sentence Strips** (each sentence is cut into two parts; students have to match them and insert correct verb forms)

<table>
<thead>
<tr>
<th>If I _____ (go) to France this summer,</th>
<th>I _____ visit the famous bridge over the Seine.</th>
</tr>
</thead>
<tbody>
<tr>
<td>If I _____ (feel) very hungry this evening,</td>
<td>I _______ eat some pasta.</td>
</tr>
<tr>
<td>If I _____ (have) time next weekend,</td>
<td>I ________ go to the fair.</td>
</tr>
<tr>
<td>If I _____ (have to) write a story for homework,</td>
<td>I ______ tell about my summer vacation.</td>
</tr>
<tr>
<td>If you _____ (come) to my home,</td>
<td>you ____ see my collection of antique dishes.</td>
</tr>
<tr>
<td>If I _____ (have) a million dollars,</td>
<td>I _______ buy a house on the beach.</td>
</tr>
<tr>
<td>If you _____ (ask) me out to a restaurant,</td>
<td>I ______ order steak.</td>
</tr>
<tr>
<td>If I _____ (can) live anywhere I wanted,</td>
<td>I _______ live in the south of Spain.</td>
</tr>
<tr>
<td>If I _____ (have) a museum,</td>
<td>I ______ collect and display old maps.</td>
</tr>
<tr>
<td>If I _____ (can) choose my major again,</td>
<td>I ______ choose graphic design.</td>
</tr>
</tbody>
</table>
APPENDIX F2a: Understanding Background Knowledge (for cognitive group)

**Understanding Background Knowledge: Cognitive consciousness-raising task**

Look at the following sentences. Think about the tenses and other indicators of speaker’s perspective in these statements. Build a picture of reality each of these sentences portrays. Use the questions in the flowchart to help you navigate through different components. Think about the background knowledge of the speaker.

| If he hadn’t attended the party, he would have never met Sam. |
| If I get good grades in my senior year, I should have a good chance of getting into law school. |
If there was more rain last year, the wheat crops would be much better now.
APPENDIX F2b: Understanding Background Knowledge (for task-supported group)

Understanding Background Knowledge in Conditional Sentences

Look at the following sentences.

a) If Dan finds the necessary data, he will share it with us in class.
b) If Dan found the necessary data, he would share it with us in class.

Think about the difference in background knowledge between these two sentences. What do we know about a) that is different from what we know about b)?

Now look at the sentences in the chart below. On the left, there is a conditional sentence. On the right, there are assumptions that go with the conditional sentence on the left. One of the assumptions is true, and the other is false. Circle the assumption that you think is true. Then discuss your choice with your classmate and see if both of you agree.

| If he hadn’t attended the party, he would have never met Sam. | a) He had attended the party and met Sam.  
b) He did not attend the party and never met Sam. |
|-------------------------------------------------------------|-------------------------------------------------------------------|
| If I get good grades in my senior year, I should have a good chance of getting into law school. | a) It is possible for me to get good grades in my senior year.  
b) It is NOT possible for me to get good grades in my senior year. |
| If there was more rain last year, the wheat crops would be much better now. | a) There was enough rain last year. The crops are good now.  
b) There was not enough rain last year. The crops are not that good now. |
| --- | --- |
| If I returned his call on time, we would be meeting up today. | a) I returned his call on time. We are meeting up today.  
b) I didn’t return his call on time. We are not meeting up today. |
| If I ate fruit and not croissants for breakfast, I would be feeling less guilty now. | a) I ate fruit for breakfast. I am not feeling guilty.  
b) I ate croissants for breakfast. I believe I should eat fruit. I am feeling guilty. |
| If Jim had renewed his license on time, he wouldn’t have had troubles with the city commission. | a) Jim did not renew his license on time. He is having troubles with the city commission.  
b) Jim renewed his license on time. He has no troubles with the city commission. |
| If we left house at 6am, we would be at the beach by now. | a) We left the house at 6am. We are now at the beach.  
b) We did not leave the house at 6am. We are not at the beach yet. |
APPENDIX F3: Hedging in Data Commentaries

Hedging in Data Commentaries

You are a teaching assistant for an introductory engineering course with a total enrollment of 150. Exams are usually given in the evening to avoid losing valuable class time. Because some students have evening commitments, a makeup exam is always given. The professor has noticed a big discrepancy between the scores of the last regular exam and those of the makeup exam. Because you administered the last makeup exam, you have been asked to offer an explanation. You have prepared the data in Table 16.

Table 16: A Comparison of the Regular and Makeup Exam

<table>
<thead>
<tr>
<th></th>
<th>Regular exam</th>
<th>Makeup exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average score (out of 100)</td>
<td>86</td>
<td>72</td>
</tr>
<tr>
<td>Time administered</td>
<td>Wednesday, 7:00 p.m.</td>
<td>Friday, 4:00 p.m.</td>
</tr>
<tr>
<td>Difficulty of questions</td>
<td>average</td>
<td>average</td>
</tr>
<tr>
<td>Number of students</td>
<td>125</td>
<td>25</td>
</tr>
<tr>
<td>Proctor</td>
<td>professor</td>
<td>teaching assistant</td>
</tr>
<tr>
<td>Board examples</td>
<td>yes</td>
<td>no (not considered necessary)</td>
</tr>
<tr>
<td>Room environment</td>
<td>about 20C</td>
<td>about 28C</td>
</tr>
<tr>
<td>Length of exam</td>
<td>1 hour</td>
<td>45 minutes</td>
</tr>
<tr>
<td>Surrounding conditions</td>
<td>No noise</td>
<td>Loud drilling noise from above</td>
</tr>
</tbody>
</table>

Find the reasons that may be responsible for the lower scores on the make-up exam. Using **conditional sentences**, write down possible reasons for the lower scores in the spaces below. The effect clause has already been created for you, so you need to think of a list of possible causes. You can add one more cause of your own.

1. The average makeup exam score ____________ if ________________________.
2. The average makeup exam score ____________ if ________________________.
3. The average makeup exam score ____________ if ________________________.
4. The average makeup exam score ____________ if ________________________.
5. The average makeup exam score ____________ if ________________________.
6. The average makeup exam score ____________ if ________________________.
APPENDIX F4: Global Warming Causes and Effects

Look at the list of global warming causes and results. Work with the partner to match the corresponding causes and results into complete conditional sentences. When you look at the results, think about the current condition and whether it is possible to change the outcome or not, then select the corresponding tenses to use. Some causes may be connected to more than one result. Again, think about the context of the article before selecting the tense sequence.

<table>
<thead>
<tr>
<th>Global warming cause</th>
<th>Global warming result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average yearly temperature go up.</td>
<td>Insects travel and spread bacteria and disease.</td>
</tr>
<tr>
<td>Polar ice caps melt.</td>
<td>Several species of animals become endangered.</td>
</tr>
<tr>
<td>Ocean temperatures rise.</td>
<td>Icebergs in Antarctica melt.</td>
</tr>
<tr>
<td>Northern countries become warmer.</td>
<td>Sea levels rise.</td>
</tr>
<tr>
<td>Landscapes in arctic circle change.</td>
<td>Ice caps desalinate the ocean (make it less salty).</td>
</tr>
<tr>
<td>Human greenhouse gas concentrations increase.</td>
<td>Number of hurricanes increases.</td>
</tr>
</tbody>
</table>

1. ____________________________
2. ____________________________
3. ____________________________
4. ____________________________
5. ____________________________
6. ____________________________
APPENDIX F5: Break-Up Letter Task

Text repair task: A farewell letter*

Directions: Please read the following text carefully and try to understand its meaning. After that, work with your partner and try to “repair” each sentence so that it becomes grammatically correct. For your ease, the sentences that need repair are marked with italics. As you work through the text, make sure that the entire text is meaningful and makes sense as a farewell letter. Finally, write down your version of the corrected letter on the following page.

Mattias,

I decided to write you instead of having an awkward conversation. We need to break up. It has to happen. I’ve wanted to do this for the past month but the right opportunity to talk never came up.

I was hoping all along that things might change. *If only you are more attentive to my needs over the course of the past year, things are different now. I am a perfect girlfriend to you if you will be paying proper attention to our relationship. If you don’t chat with other women during our dates, I didn’t get angry. If you remember my birthday, I show you more affection.* But somehow this never ever happened. I tried to talk about this, but you never wanted to listen. You often behaved rudely and carelessly, disregarding other people’s needs. *If you will act a bit kinder to other people, you have much less trouble relating to them. Also, other people liked you much more, if you will not assume that everyone except you is at fault at all times.* A little bit of positive attitude and critical thinking goes a long way. I wish you could work on your critical thinking skills a bit more while we were together. Thankfully, this is not my problem anymore. *If you ever had wanted to meet the right woman in the future, you needed to change your ways.* I sincerely wish you the best of luck with that, despite all the hurt that you have caused me.

A couple more words for you. Life works in a very simple way. In general and in all life contexts, *if you had wanted to be loved, then you will be needed to give and show love yourself.* Until you learn how to do that, you cannot expect to be in a healthy and respectful relationship. *We* did not work out, so let us each hope for better chances in the future.

Goodbye.

Leslie

p.s. *I would appreciate it if you could have removed my pictures from your hard drive, once you get a chance.* The past should remain in the past.

---

* Adapted from Eckerth (2008)
Write the corrected text in the space provided below.

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________
Seating chart task

Imagine you are hosting a dinner party, and you have invited ten guests. Below is the seating plan for the party.

- Mr. Smith (m)
- Mrs. Smith’s Mother (f)
  - Mary Smith (f)
    - (daughter of Mr. & Mrs. Smith)
- Colin Smith (m)
- Amy Eliot (f)
- Pablo Gonzalez (m)
- Pavel Ivanoff (m)
- Yi Han (f)
- Jennifer Taylor (f)
- Mrs. Smith (f)
However, it turns out that there may be some difficulties in getting the guests to get along with each other. Below are some conditions along with the characteristics of the guests that need to be considered to make this party a success.

1. Mr. and Mrs. Smith should sit opposite each other at the ends of the table. Apart from this, members of the same family should NOT sit next to or directly opposite each other.
2. Men and women should be seated alternately round the table.
3. Amy Eliot and Colin Smith are in love; everyone knows about it, but they are still trying to be secret.
4. Pablo Gonzalez is anti-Soviet and hates everything Soviet or Russian. He speaks excellent English; his native language is Spanish.
5. Pavel Ivanoff is a patriotic Russian. His English is not very good, but his Russian and Spanish are excellent.
6. Yi Han is a friend of Colin Smith’s and would prefer to sit next to him, if possible.
7. Jennifer Taylor is secretly in love with Colin Smith but is trying to hide it, since Amy Eliot is her best friend.
8. Pavel Ivanoff and Jennifer Taylor are coworkers and don’t like each other. At work, they just say hi to each other and never really talk.

You and your partner should work together. Using if-sentences, please write down the reasons why certain details of current seating arrangements would not work.

For example: if Colin Smith and Amy Eliot sat across from each other, it would become obvious to everyone that they are in love.

You can use any combination of tenses that you think are reasonable and/or would make sense to describe what you want to describe.

After you are done outlining things that are wrong with the current arrangement, brainstorm and provide your own seating arrangement plan for your dinner party using the template on the next page.

Note: it’s not possible to satisfy all conditions but do your best to satisfy as many as you can. You can decide which ones should be the priorities and just focus on those.
Your suggested seating arrangement
REFERENCES


299


Goldberg, Conceptual structure, discourse and language (pp. 113-130). Stanford,
CA: CSLI Publications.

Science, 22 (1), 133-187

Linguistics, 11, 283-304

Fauconnier, G. & Turner, M. (2002). The way we think: conceptual blending and the

C. Ferguson (Eds.), On conditionals (pp. 3-20). Cambridge: Cambridge University
Press.

Field, A. P. (2005). Discovering statistics using SPSS: And sex and drugs and rock ‘n’

Fotos, S. (1993) Consciousness raising and noticing through focus on form: grammar

Fotos, S. (1994). Integrating grammar instruction and communicative language use
through grammar consciousness-raising tasks. TESOL Quarterly, Vol. 28 (2),
323-351

TESOL Quarterly, 25, 605-628.

Heinle.


Funk, W.-P. (1985). On a semantic typology of conditional sentences. Folia Linguistica,
19 (3-4), 365-414.

Lawrence Erlbaum.


