

**COLLABORATIVE DIALOGUES IN THE  
ZONE OF PROXIMAL DEVELOPMENT: GRADE EIGHT FRENCH  
IMMERSION STUDENTS LEARNING THE CONDITIONAL  
TENSE**

by

**Sylvia Justina Spielman-Davidson**

**A thesis submitted in conformity with the requirements  
for the Degree of Doctor of Philosophy  
Department of Curriculum, Teaching and Learning  
Ontario Institute for Studies in Education of the University of Toronto**

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**Collaborative Dialogues in the Zone of Proximal Development: Grade Eight  
French Immersion Students Learning the Conditional Tense**

**Doctor of Philosophy**

**2000**

**Sylvia Justina Spielman-Davidson**

**Department of Curriculum, Teaching and Learning**

**Ontario Institute for Studies in Education of the University of Toronto**

**Abstract**

This research investigates how focusing on the linguistic form and meaning of the French conditional during collaborative dialogues (CDs) improves the accuracy of learners' second language. A sociocultural framework, based on the work of Vygotsky (1978), is used to observe the development of second language learning (SLL) of four dyads in a grade 8 French immersion classroom. The research questions follow:

1. Do students within their respective ZPDs demonstrate internalization (self-regulation) of the French conditional following intervention to address its use in hypothetical contexts?
2. What linguistic knowledge do peers co-construct during CDs (other-regulation) related to the conditional?
3. During other-regulation do peers co-construct accurate linguistic knowledge related to the conditional?

This descriptive classroom-based study involves a pretest, posttest, delayed-posttest design, with two samples of eight students, one in a study group and one in a comparison group. The dialogues of four dyads were transcribed during

the course of a 4-week teaching unit. Evidence of the product and process of learning is sought through various tests and peer dialogues. The study group outperformed the comparison group on all five measures of the original teaching unit's tests (Day, Collins, Rioux, & 1989) at posttesting. In addition, tailor-made test items based on each dyad's dialogues were designed. A feature of the study was to match up identical conditionals from these tests with pretest items from the unit's tests. The study group showed progress from pretesting to posttesting and maintained high scores during delayed-posttesting on these identical conditionals.

The peer talk was analyzed in two ways. First, the content was analyzed in relation to conditional-related episodes (CREs). The linguistic information the peers provided to each other in 345 CREs was divided into three categories: formal features (39%), tense selection (39%) and lexical meaning (23%). Second, there was an in-depth qualitative examination of two CRXs (including one or more CREs). The dialogues and tests of two learners were analyzed using the five levels of transition in the ZPD (Aljaafreh & Lantolf, 1994) and in relation to Swain's output hypothesis (1985; 1997) to describe the learning of the conditional.

The interactional data combined with the test data provide evidence suggesting that these learners can and do resolve linguistic problems by jointly constructing linguistic knowledge during their CDs and applying this knowledge in subsequent SL use.



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## **Dedication**

**For Bob**

**Whose love, thoughtfulness, encouragement, understanding, patience, sacrifices,  
and unshakable support from start to finish made this thesis possible.**

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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of the Study**

In various second language (SL) programs across North America, the teaching of substantive academic content in the SL has become increasingly common. As it was intended that language learning be integrated with content instruction, investigators have focussed efforts on a number of issues (e.g., Adair-Hauck, Donato, & Cumo 1994; Celce-Murcia, 1991; Day & Shapson, 1996; Early, 1989; Rutherford & Sharwood Smith, 1985, 1988; Shrum & Glisan, 1993). One issue that has been pursued is the common underlying assumption that, without special attention, students would routinely gain accuracy in linguistic production as they learned subject matter through the SL.

There is now evidence that such accuracy is not assured, and not to be assumed. In French immersion (FI) programs for example, there is a great deal of research which demonstrates that although students are successfully acquiring satisfactory levels of content through the SL, there are indications of weaknesses, particularly grammatical, in students' production of French (Day & Shapson, 1991; Harley, 1985, 1989, 1993, 1994, 1998; Lapkin, 1979, 1984; Lyster, 1993). These student weaknesses may be taken to indicate their lack of knowledge in both the intellectual and practical ("how to") aspects, in both telling about and using correct grammar. I have witnessed such learning difficulties first-hand in my twelve years of teaching in the FI program.

The conditional is a linguistic feature that can be problematic even for native speakers (NSs). The semantics of the numerous conditional clauses are subtle and can be difficult to understand. One can express conditional notions without using a conditional verb form in English (Celce-Murcia and Larsen-Freeman, 1999) as well as French (Grevisse, 1990). Previous research for francophone NSs indicates that the accuracy rate for conditionals in obligatory contexts was over 94% in Grades 1, 4, 6, and 10. Young Grade 1 francophones had a 95% accuracy rate in an oral interview with an obligatory hypothetical context (Harley & Swain, 1984).

FL learners on the other hand make slow progress in acquiring productive control of the conditional (Day & Shapson, 1991; Harley & Swain, 1977, 1984). The accuracy rate for Ontario immersion students was 0% in grade 1, 15% in grade 4, 41% in grade 6, and 56% in grade 10 (Harley & Swain, 1984). In addition, past research indicated that there is restricted input of the conditional in the classroom. Only 4% of finite verbs used by Grade 3 and 6 immersion teachers were in the conditional (Swain and Lapkin, 1986). Personal observations of the grade eight students in the classroom months before my study demonstrated that an instructional unit on the French conditional would be of benefit. For these reasons and the existence of such a unit (Day, Collins & Rioux, 1989), the conditional was chosen as the feature to be taught in this study.

The question arises as to how linguistic weaknesses might be addressed. In keeping with recent collaborative approaches the present classroom study encouraged students to attend to both meaning and grammar as they worked on various activities. Since the goal is to examine learning and collaboration, it is essential to use a theoretical framework which takes into consideration both the process and product of learning (Wells, 1998) of individuals and dyads. To this end, a particular theoretical framework which I have found useful in enriching my

understanding of second language learning (SLL) is Vygotsky's (Vygotsky, 1962, 1978, 1986, 1987). This theory emphasizes the social origins of learning.

The role of interaction in SLL, and in particular, two conditions of interaction, input and output, have been the focus of much research. Recently some investigators have criticized the concept of input (van Lier, 2000) and output (Kramsch, 1995; van Lier, 2000), claiming it leads to a narrow perspective of SLL. Understood in a Vygotskian framework, dialogues have proven in recent research to be a useful unit of analysis of the process of learning (Adair-Hauck & Donato, 1994; Aljaafreh, 1992; Aljaafreh & Lantolf, 1994). Collaborative dialogue (CD), in which students jointly use and co-construct linguistic knowledge has been proposed (Swain, 2000) as a broader concept within which to understand SLL.

## 1.2 Purpose of the Study

This study is based on an intervention including CD to enhance accuracy in SLL. The central objective of this exploratory, descriptive investigation is to examine how dyads co-construct linguistic knowledge and, specifically, to determine how the process and product of this co-construction results in linguistic change among and within individuals during joint and independent activity. A sample of Grade 8 early FI students, in their intact class, underwent a structured intervention emphasizing *focus on form* instruction (Doughty and Williams, 1998) and collaborative writing tasks related to the French conditional. Students' movement away from dependence upon others toward self-regulation of knowledge is examined. Knowledge in the present case encompasses knowing about the meaning and formation of the conditional and its use in a hypothetical situation. This study explores CD as a "window" through which to see what unfolds during SLL, and how this occurs. Evidence for SLL is sought at a microgenetic and

macrogenetic level; that is, over short periods of time (seconds and minutes) and longer periods of time (days and weeks).

The specific research questions about these grade eight FI students are as follows:

1. Do students within their respective ZPDs demonstrate internalization (self-regulation) of the French conditional following intervention to address its use in hypothetical contexts?
  - a) What internalization occurred, if any, of linguistic knowledge related to specific conditionals?
  - b) What internalization occurred, if any, of linguistic knowledge related to other conditionals?
2. What linguistic knowledge do peers co-construct during CDs (other-regulation) related to the conditional?
3. During other-regulation do peers co-construct accurate linguistic knowledge related to the conditional?

### **1.3 Overview of the Thesis**

In chapter 2, the background of the issues related to different components of interaction is presented. The chapter begins with an overview of Vygotskian theory to further develop the concept of CD, the focus of the investigation. The chapter introduces the notions of internalization, the ZPD, and regulation. Focus on form is described before presenting a brief literature review of the role of interaction in SLL. Studies that deal with interaction both in theory and pedagogy are discussed and the interfaces between input, output and CDs are examined. The weaknesses of previous studies with regard to lack of examination of the

processes involved, problems of assessment, including availability of pretest items and the difficulty of creating tailor-made tests, are discussed.

Chapter 3 details the methodology and design of this classroom-based investigation, which employs a longitudinal, quantitative and qualitative approach to the description and assessment of the process and product of learning. The data are gathered from a study group, consisting of four dyads of students, who studied a 4-week teaching unit on the conditional in a classroom context and a comparison group of eight students who underwent their regular classroom treatment. The evidence presented directly links what an individual student says about specific conditionals while undertaking collaborative writing tasks, and what the student learns, according to traditional and tailor-made test results.

Chapters 4, 5, 6, and 7 report the findings of this study. Chapter 4 presents evidence of student self-regulation. The three tests from the original unit were administered during pre, post and delayed posttesting to the study group as well as to a comparison group. Statistical analyses of the tests are presented. Second, in addition to the original unit's three more traditional tests, tailor-made test items were designed based on the dialogues of each dyad. A feature of this study was to match up some of these conditionals with identical pretest items from the unit's tests. Ultimately pretest, posttest and delayed-posttest items were available for specific conditionals discussed.

Chapter 5 reports evidence of other-regulation where students co-construct linguistic knowledge. The findings related to the substance of the talk were qualitatively and quantitatively analyzed in relation to conditional-related episodes based upon language-related episodes (Swain & Lapkin, 1995). Instances of the conditional are discussed in terms of three categories: formal features, tense selection, and lexical meaning.

Chapters 6 and 7 present an in-depth, qualitative analysis of one conditional discussed in two dialogues. The substance of the dialogues is analyzed applying a sociocultural framework. First, the substance of the dialogues is qualitatively analyzed in relation to conditional-related episodes. For a specific conditional form, *irions*, the present investigator examines the links the students made between the three categories of formal features, tense selection and lexical meaning.

Second, the substance of the dialogues is analyzed using the five levels of transition in the ZPD (Aljaafreh & Lantolf, 1994) and in relation to Swain's output hypothesis (1985, 1997) to describe and assess the learning of the conditional. Evidence is provided showing students taking increasing responsibility for the co-construction of linguistic knowledge. The expected movement from other-regulation during the dialogues toward self-regulation at testing is described. Students engaged in noticing, hypothesis formation and metatalk during their CDs. Chapter 7 presents an in-depth analysis of the test results of the same two students discussed in the previous chapter. The dissertation concludes in chapter 8 with a brief summary of the findings and a discussion of the implications for SLL learning theory, research and practice.



## **CHAPTER TWO**

### **VYGOTSKIAN THEORY AND INTERACTION IN SLL**

#### **2.1 Theoretical Orientation: A Vygotskian Perspective**

Although Vygotskian Sociocultural Theory has been widely used and accepted by researchers in the Soviet Union for many decades, only in the recent past have North American developmental psychologists had access to Vygotsky's theories in translation (1962, 1978, 1986, 1987). There are now numerous accounts of Vygotsky's work (Minnick, 1987; Wertsch, 1979, 1984, 1985; Wertsch & Stone, 1985), and this has spurred much recent research in SL and foreign language (e.g., Cole, 1985; Faltis, 1990; Frawley & Lantolf, 1985; Froc, 1995; Hawkins, 1988; Lantolf & Ahmed, 1989; Lantolf & Frawley, 1983).

The chapter has three main sections. First a general account of the major concepts of the theory is provided as a framework for understanding collaborative<sup>1</sup> dialogue (CD) among learners; there is a brief review of research in SLL based on these concepts. Second, the notion of focus on form will be briefly presented. Third, SLL concepts of input, output and interaction are described: an overview of empirical research is briefly outlined. Fourth, such concepts are critiqued and

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<sup>1</sup> The term "collaborative" is taken from Kowal and Swain (1994). The term "collaborative" rather than "cooperative" is used "as a general term to refer to group work situations where participants learn from the expert knowledge of their peer and in turn, provide assistance to the group. Ideally, the interaction which occurs is similar to that described by Vygotsky (1978) in reference to teaching and learning within the zone of proximal development. We claim there is not a hard and fast distinction between the terms 'collaborative' and 'cooperative,' we simply wish to avoid confusion with other specific approaches to group work commonly referred to by the term 'cooperative'" (p. 16).

incorporated into a Vygotskian framework based on CD. I state how the framework and the proposed investigation help remedy the gaps in previous studies.

### **2.1.1 Vygotsky's Genetic Law of Development**

Underlying Vygotskian psycholinguistics is the thesis that higher mental functions are social in origin and are mediated by semiotic tools. This theory situates the phenomenon of learning (which one may equate to the gaining of knowledge in the broadest sense) in the dialogic interactions that occur between learners (and others) as they are engaged in collaborative tasks. Language is an important tool. Accordingly, language acquisition and concept formation occur as the result of interaction. Vygotsky points out that a child's learning is social, not individual, and is the result of joint problem-solving activities (Schinke-Llano, 1993, p. 123). Vygotsky (1978) claimed,

Every function in the child's cultural development appears twice, on two levels. First, on the social, and later on the psychological level; first, between people as an interpsychological category, and then inside the child, as an intrapsychological category. (p. 86)

Through this process external activities are transformed into mental ones (Vygotsky, 1978). In addition, as Vygotsky (1978) stated, learning does not happen in a linear, incremental fashion. The development of learning is highly complex and dynamic.

Essential to the genetic method is the idea that development entails qualitative revolutionary changes rather than quantitative increments. Thus, development is seen as a complex dialectical process characterized by periodicity, unevenness in the development of different functions, metamorphosis or qualitative transformation of one form into another, intertwining of external and internal factors,

and adaptive processes which overcome impediments the child encounters. (p. 73)

#### 2.1.1.1 Internalization

Internalization<sup>2</sup> refers to the process of "internal reconstruction of an external operation" (Vygotsky, 1978, p. 56). In Vygotsky's genetic law of cultural development, it is stated that "internalization transforms the process itself and changes its structure and functions" (Vygotsky, 1981, p. 163). According to Wertsch (1985a), Vygotsky's description of the process of internalization is based upon four criteria:

(1) Internalization is not a process of copying external reality on a preexisting internal plane; rather, it is a process wherein an internal plane of consciousness is formed. (2) The external reality at issue is a social interactional one. (3) The specific mechanism at issue is the mastery of external sign forms. And (4) the internal plane of consciousness takes on the "quasi-social" nature of its origins. (pp. 66-67)

#### 2.1.1.2 The Zone of Proximal Development

The ZPD plays an important role in relation to socially mediated internalization. Vygotsky used the metaphor of the ZPD to refer to types of

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<sup>2</sup> The concept of internalization has undergone scrutiny within the sociocultural approach in developmental psychology. "A persistent criticism that has been leveled at Vygotskian theory is its apparent inability to explain precisely how internalization of social processes occurs. As Newman *et al.* (1989:68) point out, however, internalization is only a problem for those who assume the 'primacy of the individual.' For Vygotskian theory, on the other hand, primary importance is assigned, not to the individual, but to the sociocultural dyad that is formed between knower, or transmitter of the culture, and the child, the recipient of cultural modes of thinking. While internalization is a one-way process, that process which takes place in the dyadic relationship established between knower and child is a two-way process. For this reason, Leont'ev (1976-1977) adopted the term 'appropriation' rather than internalization. We cannot do justice to this important and complex issue here and refer the reader to Newman *et al.* (1989) for a fuller discussion of the matter" (Lantolf, DiCamilla and Ahmed 1997, p.163). Further discussions are found in Arieviditch & van der Veer (1995) and Stetsenko & Arieviditch (1997). For purposes of this thesis the term "internalization" has been adopted.

interactions in which children are helped to internalize a culture/society's knowledge through the mediation of others. Rogoff and Wertsch (1984) summarized the concept of the ZPD as follows:

The Russian word *blizhaishego* is the superlative form of the word for close. Hence, the literal translation *zona blizhaishego razvitiya* is zone of closest or nearest development. ...Vygotsky's concept focuses on the phase in development in which the child has only partially mastered a task but can participate in its execution with the assistance and supervision of an adult or more capable peer. The zone of proximal development is this dynamic region of sensitivity in which cognitive development advances. (p. 1)

According to Aljaafreh and Lantolf,

The ZPD is the framework, par excellence, which brings all of the pieces of the learning setting together--the teacher, the learner, their dialogic interaction, their social and cultural history, their goals and motives, as well as the resources available to them, including those that are jointly constructed in their interaction. Indeed, Vygotsky draws attention to the utility of the ZPD as a tool for the researcher to explore and come to an understanding of the internal course of development when he states:

"By using this method we can take account of not only the cycles and maturation processes that have already been completed but also those that are currently in the state of formation, that are just beginning to mature and develop."  
(1978, p. 87 [as cited in Aljaafreh & Lantolf, 1994, p. 468])

The ZPD has been used as a metaphor to understand cognitive growth in several past SLL studies (Adair-Hauck & Donato, 1994; Aljaafreh, 1992; Aljaafreh & Lantolf, 1994; Faltis, 1990; Frawley & Lantolf, 1985; Hawkins, 1988; Kowal, 1997; Lantolf & Frawley, 1983; Washburn, 1994).

### 2.1.1.3 Regulation

Learning, as task mastery, necessarily involves a component of reliance upon oneself; thus one arrives at the concept of regulation or control in Vygotskian psycholinguistics. Other-regulation is a transitory stage between object-regulation where the child is still dominated by the objects in the environment and self-regulation (Villamil & De Guerrero, 1994). Wertsch (1979) has outlined four stages through which learners pass from other- to self-regulation in the internalization of knowledge. In the first stage the novice is unable to recognize the expert's utterances in relation to the task at hand. In the second stage, the learner becomes aware of the expert's utterance but is unable to participate fully in the task. In the third stage, there is some movement from other- to self-regulation. The learner is able to assume some responsibility for the task. In the fourth stage, the learner assumes responsibility and is able to perform the task without expert assistance and is self-regulated; knowledge is internalized.

The concept of regulation and related categories have been applied to SLL by many researchers (Adair-Hauck & Donato, 1994; Aljaafreh, 1992; Aljaafreh & Lantolf, 1994; Wertsch, 1984). Adair-Hauck and Donato (1994) examined the microgenetic development of secondary-school beginning learners of French over the span of one hour to trace the learning process through four levels; from other-regulation to self-regulation. The authors concluded that learning in the ZPD is contextualized and purposeful, that explanations are co-constructed and that other-regulated skill-using precedes skill-getting. However, no longitudinal data were presented.

Further instances of research into regulation, within a Vygotskian framework are as follows: Lantolf and Appel (1994) showed how students take over a larger portion of the responsibility of learning. Frawley and Lantolf (1985)

applied regulation to the analysis of SL oral narrative discourse. Schinke-Llano (1993) examined regulation in teacher-student interaction. De Guerrero and Villamil (1994) explored the social-cognitive dimensions of verbal interaction during peer revision.

Aljaafreh and Lantolf (1994) investigated the nature and type of feedback required in SL development. These researchers' unique contribution is that they measured not only the linguistic changes (product), but in addition, the level of help (process) negotiated between expert and novice. It is essential to know the degree to which other-regulation, or mediation, affects the learner's production of the particular forms. The study investigated how negative feedback, as other-regulation, results in the learning of specific linguistic features: such learning occurs provided that the corrective moves of the expert are sensitive to the learner's level of development of a specific interlanguage feature within the learner's ZPD. A regulatory scale designed to capture the developmental progress through the ZPD was used (Aljaafreh, 1992; Aljaafreh & Lantolf, 1994). They did not ignore the content of the dialogues. The kinds of help jointly created between experts and novices were categorized from implicit to explicit feedback. However, no pretests were given and evidence of learning specific linguistic features talked about during the interactions was limited to subsequent written work. The methods of analysis of these dialogues influenced the research design used in the present study.

#### 2.1.1.4 Language as a Mediating Tool

The process of internalization is mediated by semiotic tools of which language is one of the most important. Individuals use semiotic tools to restructure their own mental activity. Language itself can mediate language

learning (Vygotsky, 1978). As a cognitive tool, language can regulate oneself or others. Some research has shown how language mediates the learning of content in various subjects (Bereiter, 1994). Talyzina (1981) demonstrated the importance of language in the learning of the formation of geometrical shapes in an experimental study undertaken within a Vygotskian framework (as reported in Swain, 2000). In the transformation of material forms of activity to mental forms of activity, three stages were deemed important: 1) a material action stage; 2) an external speech stage; and 3) a final mental stage. The second stage was operationalized by having the learners verbalize what they carried out materially. The performance of students for whom the second stage was omitted was analyzed in relation to the performance of a comparison group who underwent all three stages. It was concluded that the omission of the external speech stage inhibited the transformation of the material activity into a mental activity and that verbalization in the second stage may mediate the internalization of external activity (Talyzina, 1981, as reported in Swain, 2000).

Similarly, Holunga (1994) conducted a study to investigate the effects of metacognitive strategy training on the oral accuracy of verb forms. Instruction was given in the metacognitive strategies of predicting, planning, monitoring and evaluating. One group of learners was instructed to talk through the metacognitive strategies as tasks were carried out in dyads. The second group was taught the strategies but not asked to verbalize them. The third group, a comparison group, was given instruction in the verbs only. As in the Talyzina study (1981), those students who were instructed to verbalize their actions (strategies) were more successful than the group who were not asked to verbalize their strategies, and this latter group was more successful than the verb instruction only group. These test results suggest that interactional verbalization enhanced their knowledge about the verbs and their use.

The concept of language as mediating language learning has been applied to the dialogues of FI students engaged in various tasks in which they were encouraged to focus on meaning and grammar (Swain & Lapkin, 1998); suggestive evidence has been gathered. In the dialogues, discussions of particular linguistic features, that is, language-related episodes were identified (Swain & Lapkin, 1995, 1998). It is suggested that these episodes played the role of external speech as explained by Talyzina. In other words, verbalization mediated the internalization of linguistic knowledge.

Evidence that language-related episodes mediated language learning for students in a FI classroom was found by LaPierre (1994). To assess learning that took place during dialogues, this researcher first designed dyad-specific posttests based on the content of the language-related episodes. Dyad-specific results corresponding to 70-80% of the decisions reached in the language-related episodes suggested strongly that the dialogues mediate the construction of linguistic knowledge, however no pretest or delayed-posttest items were available. In order to address this methodological weakness and trace learning over a longer period, pretests were added in a subsequent investigation (Swain & Lapkin, 1997, 1998) where pretests for the study group were designed by analyzing the content of the dialogues of another group facing the same task. However, only a relatively small number of pretest items corresponded to what the study group ultimately discussed. Focus on form will be briefly presented before discussing the role of interaction in SLL.

#### 2.1.1.5 *Focus on Form*

Focus on form in the SL curriculum, instruction involving specific grammatical points in meaningful contexts, has been proposed as a possible



means of overcoming learners' linguistic weaknesses (Doughty, 1991, 1994; Lightbown, 1992; 1994; Lightbown & Spada, 1990; Long, 1991, 1994; Lyster, 1994; Swain, 1993, 1995, 1998; White, 1991). The issue of focus on form has emerged in the change from the traditional approach of teaching grammar explicitly to a communicative approach where grammar is taught implicitly (Doughty, 1994; Lightbown & Spada, 1990). Focus on form arises in contrast to focus on meaning, the latter defined as the subject matter or the message to be communicated. The crucial distinction is that focus on form<sup>3</sup> entails a prerequisite engagement in meaning, after that, attention to linguistic features can be expected to be effective (Doughty & Williams, 1998, p. 3).

There are many reports of encouraging results using materials that have a focus on form approach (Day & Shapson, 1991; Harley, 1989, 1993, 1994; Lyster, 1993; Warden, 1997). Studies conducted in a FI context (Day & Shapson, 1991; Harley, 1989; Lyster, 1990; Warden, 1997) indicated that focus on form instruction is relatively effective regardless of the various teaching styles, grammatical points, or age groups. However, a weakness of these large scale experimental studies is an inadequate description of the learning process that led to the linguistic product. This study attempts to link process and product data. Literature on interaction in SLL is now examined. Negotiation, input and output will be discussed.

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<sup>3</sup>Doughty and Williams further describe focus on form, making a distinction between it and focus on formS. "... focus on form *entails* (authors' italics) a focus on formal elements of language, whereas focus on formS is *limited* (authors' italics) to such a focus, and focus on meaning *excludes* (authors' italics) it. Most important, it should be kept in mind that the fundamental assumption of focus-on-form instruction is that meaning and use must already be evident to the learner at the time that attention is drawn to the linguistic apparatus needed to get the meaning across" (1998, p. 4)

## **2.2 The Role of Interaction in SLL**

Researchers and educators have investigated interaction among students as a means of addressing linguistic problems (Donato, 1988, 1994; Donato & Adair-Hauck, 1992; Donato & Lantolf, 1990; Kowal & Swain, 1994, 1997; McGroarty, 1991, 1993). McGroarty (1991) provided evidence of SLL along with subject mastery through pair and small-group work. Recent research has identified several benefits of cooperative learning (Kowal & Swain, 1994, 1997; McGroarty, 1993; van Lier, 1988). Learners can have access to language through input. They can experience numerous occasions to process and produce the new language as well as interact with other speakers in natural contexts (Kagan & McGroarty, 1993).

Interaction became a major focus of debate and discussion following publication of Hatch's two seminal papers (Hatch, 1978a, 1978b). Hatch examined NS and non-native speaker (NNS) interaction and showed how topics are developed by topic preparation, repairs and various other types of discourse modifications. Her interest was inspired by first language acquisition research according to which syntactic structures develop during interaction. Through scaffolding, NNSs may begin structures which the NS completes, thereby creating models for acquisition.

Long's (1981) interaction hypothesis takes into account both input and learner production in promoting acquisition. Long (1981) has maintained that learners must be active conversational participants who interact and negotiate the type of input they receive in order to make input comprehensible. Changes in the speakers' language are made during negotiation of meaning in the dialogues. The SL learners' responses to each other that make input more comprehensible may occur in various forms: clarification checks, repetitions, confirmation checks,

and output modifications. Therefore frequent opportunities to interact and negotiate meaning in authentic communicative situations are important for SLL (Kagan & McGroarty, 1993).

Negotiation of meaning in SLL contexts has been defined as interaction amongst learners or their teachers where comprehension of the intended message is attained despite possible linguistic errors (Harley, 1992; Long & Porter, 1985). Learners can communicate messages through negotiation but not necessarily with target-like forms. Consequently, negotiation can be mainly about message meaning rather than form, and may contribute little to proficiency regarding form (Pica, 1994).

There is a large body of research (Chaudron, 1983; Long, 1985a, 1985b; Pica, 1991; Pica, Young, & Doughty, 1987) based on the concept of negotiation, which Pica (1994) referred to as "a particular way of modifying interaction" (p. 494). Negotiation "has been used to characterize the modification and restructuring of interaction that occurs when learners and their interlocutors anticipate, perceive, or experience difficulties in message comprehensibility" (p. 494).

Pica (1994) reviewed the role of negotiation in SLL and stated that within negotiation speakers can also attend to linguistic details. She found that in negotiation, speakers can work linguistically to accomplish the necessary comprehensibility: repeating messages, adjusting syntax, changing words, or modifying form and meaning. McGroarty (1993) had similar findings:

Negotiating with other students creates a need for students to refine their language skills as they strive to provide "comprehensible output" (Swain, 1985) for their interlocutors. Talk among students thus allows them to clarify and correct both subject matter concepts and related linguistic forms in a natural context (p. 37).

Pica (1994) also observed that negotiation research has concentrated on language conditions rather than outcomes, a point that was considered in designing the present investigation.

Thus, researchers have given less attention to identifying a direct impact for learner's negotiation on restructuring of their interlanguage grammar than to documenting the contributions of negotiation in bringing about conditions aimed to be helpful for [SLL], namely learners' comprehension of [SL] input, their production of modified output, and their attention to [SL] form. (p. 500)

The present review now turns to research and theory related to input and output in SLL. The contributions of these two conditions of benefit to SLL, learner's comprehension of SL input and production of modified output, will be discussed in relation to attention to SL meaning and form. Input and output will be discussed separately; however, the two coexist during interaction. After discussion of various refinements to these two aspects, it will be argued that the present terms of input and output may give a too narrow perspective on learning. "Output and beyond" in the form of CD is proposed as this broader perspective where both input and output can enhance one another and where the process and product may be considered (Swain, 2000). Input, output, and CD will now be discussed.

## **2.2.1 Components of Interaction in SLL**

### **2.2.1.1 The Role of Input in SLL**

Past theoretical accounts of SLL have claimed that comprehensible input is a necessary condition for learning to occur (Krashen, 1985; Pica, 1994). Input provides exposure to language forms and uses in natural contexts. Both first language and SL learners need large amounts of meaningful and contextualized

input to acquire a language. In fact SL learners exposed to natural language acquire the SL more quickly than those who are exposed to decontextualized exercises focused on form (Lightbown, 1985). However the question remains: What is the relative importance of input in SLL? It is argued that although various kinds of input provide different ways of focusing on form, input alone is not sufficient for SLL, and its importance relative to other factors in SLL is still unknown. A brief description of the input hypothesis will be provided followed by an examination of positive input and negative feedback.

#### 2.2.1.1.1 *The Input Hypothesis*

Much of the debate surrounding the role of input in SLL was stimulated by Krashen's *Input Hypothesis*—that input must be made comprehensible if it is to assist the acquisition process. Krashen (1982) suggested that language acquisition in the classroom occurs when there is availability of optimal and comprehensible input (input just beyond the learner's level of competence ( $i + 1$ )) in a nonthreatening environment (p. 127). Many of Krashen's claims have been criticized (Ellis, 1986; McGroarty, 1988; McLaughlin, 1987), especially his definitions of acquisition and learning. Krashen defined acquisition as taking place unconsciously; learning as occurring consciously. He also viewed comprehensible input as a sufficient "entrance requirement" for access to form (Krashen, 1982, 1985). Yet it has been repeatedly demonstrated that FI learners develop high levels of fluency within this program, but their accuracy in syntax and morphology remains weak despite years of exposure to comprehensible input (Harley, 1989; Harley & Swain, 1984; Swain, 1985).

Despite criticisms, the input hypothesis has been influential in both SLL theory and research. Solid evidence that negotiated input leads to SLL has not

been forthcoming until recently. Ellis, Tanaka, and Yamazaki (1994) in their study on vocabulary claimed to have provided "the first clear evidence that access to modified input promotes acquisition" (p. 481). Similarly, Mackey (1995) reported evidence of the benefits of negotiation for the development of morpho-syntactic structures in her study examining questions. Studies such as those by Chaudron (1983) and Long (1985a) have presented indirect evidence that negotiation aids SL comprehension. More direct and convincing evidence comes from Pica, Young and Doughty (1987) who investigated 12 low-intermediate, preacademic learners following 30 different directions to picture-assembly tasks under two input conditions. The results showed that the modified directions given to students in the form of "negotiated input" was significantly better in aiding comprehension than the non-modified directions given to a matched group. In a related study (Pica, 1991), even those learners allowed only to observe negotiation were able to comprehend the directions as well as those students who engaged in the negotiation. Pica et al. (1987) have provided evidence that greater redundancy, achieved by natural repetition of words and rephrasing of ideas in conversation, can improve comprehension.

The next set of claims about SL learning involve two language-oriented conditions: positive SL input and negative feedback (Pica, 1994). The following section contains a discussion of these types of input because they may be available in CDs.

#### *2.2.1.1.2 Positive SL Input*

According to Pica (1994), positive SL input is grammatically systematic input (p. 502). She stated that all SLL theories assume that learners use SL input as data for learning, and that the debate revolves around the nature and

organization of such data for SLL to occur. Krashen's Input Hypothesis highlights the importance of comprehensible input (Krashen, 1982). In addition,

**Information Processing Models of second language acquisition also emphasize the necessity of input conditions that allow learners to process language with relative ease so that they can build up the store of conceptual and syntactic knowledge needed for fluent communication. (McGroarty, 1993, p. 35)**

#### **2.2.1.1.3 *Negative Feedback***

Stern's language and general language education syllabi support the use of negative feedback or error correction. "An element of judicious error correction is required to complete the cycle of classroom treatment of grammar" (Stern, 1992, p. 151). Negative feedback has received attention by several investigators (Aljaafreh, 1992; Aljaafreh & Lantolf, 1994; Donato, 1994) and findings suggest a useful role in SLL. According to Pica (1994), this information helps improve learners' interlanguage in two ways: by giving information about the comprehensibility of interlanguage and by helping learners notice nontargetlike forms in their interlanguage. Discrepancies that arise in discussions as students try to resolve their problems (see Kowal & Swain, 1994; Swain, 1995; Swain & Lapkin, 1995) can potentially serve as negative feedback. To date, research has not described and examined peer interaction to a great extent at this level of analysis.

#### **2.2.1.1.4 *Input: Focus on Meaning and Form.***

Researchers and educators agree that comprehensible input is an essential component of SLL and thus of the SL curriculum. However, the nature and the type of input on which the students focus and what they do with it are poorly

understood and documented. The quantity, quality and combination of the various inputs for successful SLL continue to be studied.

As Pica and others have pointed out, learners can attend to message meaning without focussing on the grammatical aspects of an utterance. In response to Krashen's input hypothesis (1985), McGroarty has concurred with Swain that in addition to comprehensible input, what is needed for SLL to occur is output (Swain, 1985, 1993, 1995). Swain has proposed that learners need to produce language in order to move from semantic processing related to understanding input to the syntactic processing needed to produce language. Learners must be given the opportunity to organize and restructure their output syntactically. Thus, learners' modification of their output is a way to improve their interlanguage grammar to make it more like that of the target language. Negotiation during collaborative activities can provide not only comprehensible input but also occasions for output. Kagan and McGroarty (1993) stated that it is the "negotiation, then, not solely the interaction, that promotes the comprehensible output needed to achieve full proficiency in a language" (p. 50).

#### 2.2.1.2 The Role of Output in Interaction

Swain (1993; 1995) has suggested that there are three potential roles of output that enhance accuracy in SLL: 1) noticing, 2) hypothesis formation, and 3) metatalk. These roles represent crucial cognitive processes in SLL and thus are important to the development of the SL learner's interlanguage. The following discussion will deal briefly with evidence for the three potential roles of output.

Some investigators have asserted that noticing a form in input is necessary for learning (Schmidt, 1992). Swain proposed that in particular circumstances output may promote noticing (1995) and thus may play a potential role in SLL.



There are several levels of noticing (Swain, 1998). First, learners can notice a linguistic feature due to its saliency or frequency (Gass, 1988). Second, learners may notice the target language form and that it is different from their own interlanguage as proposed by Schmidt and Frota (1986) in the "notice the gap principle." Third, learners may notice a "hole" (Swain, 1998; Doughty & Williams, 1998) in their interlanguage. That is, they can notice that they are unable to produce the meaning they want to express in the target language.

Evidence which indicates that learners do notice problems and try to do something about it has been reported elsewhere (e.g., Faerch & Kasper, 1983). In a recent study, Swain and Lapkin (1995) have presented data to support the "noticing" function of output: immersion students notice gaps in their language knowledge and subsequently engage in thought processes (Cumming, 1990) which may generate new linguistic knowledge or consolidate existing knowledge thus playing a potential role in SLL. Think-aloud protocols of FI students were examined (Swain & Lapkin, 1995) to determine what these students focused on when they noticed a problem when trying to communicate. They identified language-related episodes in which students talked about a linguistic problem. A language-related episode was defined as "any part of a dialogue in which students talk about the language they are producing, question their language use, or other- or self-correct" (Swain & Lapkin 1997, p. 10). Results demonstrated that the students paid attention to grammar about 40% of the time, providing evidence that output can lead to noticing grammar frequently.

A second potential role of output is hypothesis formation. The hypothesis-testing role of output has been explored by researchers who have studied interaction or learner reaction to feedback (Selinker, 1972; Swain, 1993). Some researchers have shown that learners modify their output and test their hypotheses about the target language during interaction with other speakers. For

example, research by Pica, Holliday, Lewis, and Morgenthaler (1989) demonstrated that learners sometimes modify their output in response to such conversational moves as clarification requests or confirmation checks. Swain (1995) argued that output, speaking and writing, is one way of testing a hypothesis about comprehensibility or linguistic well-formedness. Errors can reveal learners' hypotheses about how the target language works. Swain and Lapkin (1995) also examined the potential role of hypothesis formation and testing in SLL. They suggested that hypothesis testing may be the "leading edge" of an individual's interlanguage and that output is the learner's hypothesis, giving insight to educators and researchers as to how the student thinks the language works.

The third potential role of output is metatalk. Learners will reveal hypotheses and reflect upon them under certain task conditions. They use language to reflect upon language, thereby demonstrating an awareness of the output produced. As learners reflect on their own or their peer's target-language use, their output serves a metalinguistic function, enabling them to control and internalize linguistic knowledge (Swain, 1995). The learners may or may not make use of metalinguistic terminology during metatalk but such terminology can appear during collaborative writing tasks (Swain & Lapkin, 1998).

### 2.2.1.3 Summary of the Input and Output Hypotheses

The role of input in SLL has been the focus of much research as compared to that of output. Further, a focus on meaning and form can be a characteristic of input and output. In producing language, opportunities can be provided to allow students to attend to linguistic forms and revise and stretch their interlanguage

grammar. In the next section, I will consider input and output in a sociocultural framework.

### **2.3 Broader Perspectives**

#### **From Input and Output to Collaborative Dialogue**

Coughlan and Duff (1994) stated that "any event that generates communicative language is unique—an activity born from a particular constellation of actors, settings, tasks, motivations and histories" (p. 90). Given this dynamic description of the learning event, Swain (2000) has proposed shifting primary focus from input and output to CD. The concept of CD and its relation to Vygotskian psycholinguistics is briefly outlined, within the framework of Swain's approach.

A major contribution of applying Vygotskian theory to the SL setting has been a shift in how SLL interaction is studied. Whereas in the past, input and output were studied in isolation, sociocultural theory provides an opportunity to move beyond these metaphors. The background related to input and output in the previous sections was provided to link dialogues as pedagogical means of providing optimal conditions for the learner and as a useful tool for research in SLL. The presentation of evidence that CD plays a role in SLL is a central focus of this thesis. I propose to show, following Swain and Lapkin (1998), that CD mediates the construction of linguistic knowledge and enhances SLL accuracy.

According to a Vygotskian perspective, collaboration is the primary basis for language learning, and neither input nor output by themselves are adequate units of analysis; also inadequate is a simple view of interaction as the sum of input and output. The dialogue is therefore an important unit of analysis to

observe the unfolding of SLL (Swain, 2000). Swain (1997) argued, "this shift of focus from output to dialogue entails a major shift in our thinking—from 'role in' second language learning to 'origin of' second language learning" (p. 14). Further, what the metaphors of input and output "do not capture is that through speaking, **KNOWLEDGE IS BEING CO-CONSTRUCTED**" [author's capitals] (p. 18). The students in this investigation were, as individuals, novices, but collectively they were experts in linguistic problem-solving. In CD, one partner's output can become input for oneself as well as for one's partner. Under certain circumstances, learners can engage in noticing and hypothesis testing. The learners reveal their hypotheses and reflect upon them. Their output is essentially a hypothesis about how something should be expressed. As learners reflect on their own target-language use, they perform at a metalinguistic level. They externalize their thought processes and construct linguistic knowledge. This reflection enables them to control and internalize linguistic knowledge. It is this explicit reflection, this noticing and hypothesizing in CD, that represents "output and beyond." The learner's language, this CD, is considered both a product and a process (Wells, 1998).

### **2.3.1 Collaborative Dialogue: Output and Beyond**

Going "beyond output" in a metaphorical sense incorporates the notion of CD as a socially-constructed cognitive tool. As a psychological tool, CD permits the construction of linguistic knowledge (Swain, 2000).

**It is knowledge-building dialogue. In the case of our interests in second language learning, it is dialogue that constructs linguistic knowledge. It is what allows performance to outstrip competence. It is where language use and language learning can co-occur. It is language use mediating language-learning. It is cognitive activity and it is social activity. (p. 97)**

Although I will continue to use "output" referring to its traditional definition, I will now refer to "output and beyond" as "collaborative dialogue (CD)." The concept of CD includes "verbalization," "speaking," "writing," and "utterance" (as in Swain, 2000).

One should not assume that all dialogues result in positive outcomes. There may be no or "arrested" learning. Or, there can be learning but it might not be accurate learning; incorrect hypotheses may develop during interactions about the use of a target linguistic form, resulting in incorrect production (LaPierre, 1994). Fossilization of FI students' erroneous interlanguage is an example of arrested learning. Washburn's (1994) study drew on Vygotsky's account of fossilization in mental development and demonstrated that not all interactions result in SL development and that learning is only possible if the learners, in fact, have a ZPD. Where there is little potential level of development, fossilized learners cannot appropriate the help offered by the expert (Lantolf & Pavlenko, 1995). McCreary (1985) used the Vygotskian concept of regulation to analyze his son's loss of Japanese skills after returning to the United States. Other recent studies have pointed out inaccurate learning of a linguistic form as a negative outcome of interaction. There is evidence regarding occurrences of inaccurate learning of particular linguistic features in the LaPierre (1994) and the Swain and Lapkin (1998) studies.

#### **2.4 Gaps in the Research to Date: Methodological Issues**

This literature review has revealed gaps in knowledge as well as identified some methodological weaknesses in research. Past studies that consider interaction have generally paid little attention to the content of interactions, or if so, have not linked the linguistic learning outcomes to peer dialogues in an

effective way. Experimental studies have presented encouraging findings with regard to the end product having utilized a focus on form approach for overcoming linguistic weaknesses of FI students (Day & Shapson, 1991; Harley, 1989); nonetheless the learning processes of the individuals have neither been adequately conceptualized nor examined in detail.

Some investigators have recognized that learners need activities where accuracy as well as meaning is important. Peer editing (De Guerrero & Villamil, 1994) and the dictogloss (Wajnryb, 1990) have proven to be useful activities to encourage negotiation of form and warrant further attention. The dictogloss, a sort of grammar dictation (Wajnryb, 1990) has successfully elicited talk about specific linguistic features in several recent studies (Kowal, 1997; Kowal & Swain, 1994; LaPierre, 1994). When interaction provides learners with opportunities to attend to SL form and meaning, how students indeed do so is just beginning to be documented (Pica, 1994). A few qualitative studies (Donato, 1994; Kowal, 1997; LaPierre, 1994; Swain & Lapkin, 1998) have succeeded in documenting rich information about the actual substance of grammatical talk but have provided little evidence of how the dialogue is linked to SLL due to various weaknesses in the methodology. Rigorous investigation is needed to establish a strong empirical link between the substance of the interaction and assessment to determine an accurate measurement of learning outcomes.

Promising possibilities include tailor-made tests geared to the individual's personalized learning as documented during dialogues (LaPierre, 1994; Swain & Lapkin, 1998) and examination of learners' written evidence of their metalinguistic knowledge (Kowal, 1997). There have been some improvements in assessment through tailor-made tests based on the student's agenda; however no or only a relatively small number of pretest items were available in the various studies to provide longitudinal evidence of SLL.

Other aspects of reviewed reports include the following. First, although Aljaafreh and Lantolf (1994) and Swain and Lapkin (1998) examined the learning process during peer dialogues and subsequent improvement in written work or on tests of various linguistic features, no or little pre-test data respectively were gathered. Second, some of the predominantly qualitative studies were of relatively short duration and could not show longitudinal growth (Donato, 1994). Third, a variety of linguistic features according to the students' agenda were examined in various studies (Aljaafreh & Lantolf, 1994; Kowal, 1997; Swain & Lapkin, 1998). Such studies did not allow detailed microgenetic and macrogenetic developmental analysis of one specific linguistic feature. Fourth, although there are some experimental studies related to one specific linguistic feature (Day & Shapson, 1991; Harley, 1989; Lyster, 1990), little or no qualitative documentation of the process of learning was reported. The present study aims to provide a detailed description and multiple assessments of the learning process and product of one linguistic feature, the French conditional, in its hypothetical meaning only.

## **2.5 Merging Theory, Research, and Practice**

Within SLL research, investigations of interaction have emerged as fruitful lines of investigation. It has been shown that interaction can contribute to SLL in three ways: it can provide opportunities to make input more comprehensible to learners, assist modification of output (Pica, 1994), as well as encourage students to be involved in CDs. These concepts have been situated in Vygotskian psycholinguistic theory, which can serve as a useful paradigm within which to conduct research, build theory and inform pedagogical practices. Vygotskian-based empirical studies have opened exciting possibilities, but methodological

**problems in linking processes and outcomes indicate that more comprehensive investigation is necessary.**



## **CHAPTER THREE**

### **METHODOLOGY**

This chapter outlines the research methodology including descriptions of the design, teachers, participants, materials, setting, tasks, tests and procedures undertaken in the data collection.

#### **3.1 Design**

This descriptive classroom-based study involves a pretest, posttest, delayed-posttest design, with two samples of eight students, one in a study group and one in a comparison group. Each group was chosen from an intact grade 8 FI class before the intervention. The study group underwent a four week intervention with the entire class. The four dyads in the study group were audiorecorded while completing collaborative tasks. The regular classroom curriculum was presented to the comparison group. Tests were administered to the study and comparison groups at pretest, posttest, and delayed-posttesting sessions. In addition, tests were administered to NSs a week following posttesting in order to collect baseline data.

## 3.2 Experts in the Sociocultural Setting: Human and Print Resources

### 3.2.1 The Teachers

I originally approached two principals in order to find a Grade 7 teacher who would participate in the study. After an interview at the first school, it was apparent that the teacher was reluctant to partake in such a lengthy study and to undertake the demanding commitment of teaching with new materials when her program was already in place. At the second school the Grade 7 teacher's approach to teaching the conditional was not at all compatible with the unit. She was willing to volunteer her class if I taught the unit. I thought it was important for the classroom teacher to do the teaching as I wanted to collect classroom data demonstrating what actually happens in a classroom on a regular basis. A guest teacher would not be a routine occurrence and would not best serve my research purposes. She helpfully suggested that one of the Grade 8 teachers was new to teaching FI Language Arts and might be interested in a unit designed for the conditional. I approached the teacher who wholeheartedly welcomed the new materials and me into his classroom. The other Grade 8 teacher in the same school was approached; he agreed to provide the comparison students from one of his two Grade 8 FI classes.

The teacher implementing the unit was a bilingual anglophone from *Montréal, Québec* who was brought up in a bilingual home. This teacher had 17 years of teaching experience. He had four years of experience in the FI program teaching *histoire/géographie*. The data collection coincided with his first year of doing *français* (FI Language Arts). Included in his assignment was Core French which he had taught for four years. This teacher taught *histoire/géographie, français* and Guidance in English to the class from which the study group was

selected. The teacher of the comparison group had taught for 17 years and had 14 years of experience in the FI program. During the data collection period he taught *histoire/géographie* and *français* to two grade 8 classes. He followed his regular language program which included a unit on the conditional tense. An acquaintance at a school in a town just outside of *Montréal*, made arrangements with a colleague in order for me to collect Grade 8 NS data.

### **3.2.2 The Researcher**

I am a teacher with twelve years of experience in FI in Grades 1 through 6. I organized and collected all the data. I attended all classes in order to set up the audiorecordings, gain information on classroom activities through observation, and provide the necessary learning materials. I prepared the materials for the teacher of the study group and corrected the written work that was handed back to the students. I offered occasional assistance or reminders to the teacher when carrying out new activities, e.g., the procedure of the dictogloss. I circulated in the classroom to make sure the tasks were being carried out and occasionally clarified instructions to the whole class or dyads. Although I tried to maintain my role as researcher at all times, there were times when the teacher was occupied with another dyad or matter and students asked me for clarification of instructions and questions concerning grammar or vocabulary.

As a teacher, and a former Grade 3 FI teacher of several of the students in the class, it was impossible to not offer assistance when asked. I minimized my assistance in these cases, not wanting to interfere. There were however occasions when learners were extremely frustrated with the repeated editing; I thus offered some assistance. After each session, the teacher and I had time to briefly discuss that day's and the next day's activities.

### **3.2.3 Participants**

#### **3.2.3.1 Study Group**

Eight students were selected from within an intact grade 8 FI class consisting of 22 members. The whole class received the same instruction, tasks and written assessments in the classroom. Research analysis focussed on data from 4 dyads, who were audiotaped in the class. After approval from the school board's research committee, letters were sent home in December 1995 requesting permission for participation from the parents of all students (see Appendix A). Of the 22 students, 14 were permitted by their parents to participate in the study; 6 refused; 2 students' parents did not respond. The teacher suggested not including one of the boys whose parents had given permission because his French language skills were weak, and in general he was a below average student with poor work habits. One of the ten girls had transferred in from a different program, a mid-immersion program (intensive French instruction beginning in Grade 4) and therefore was not considered eligible to participate in this study. Thus there were nine girls and three boys from whom to select. I decided to have a homogeneous-by-gender group of eight girls, with the ninth girl to be used as a substitute if needed.

The participants in the study group were informally ranked by the classroom teacher according to their general French-language achievement as determined by classroom assessment procedures. The students were ranked from 1 to 8. Three students were considered to have high achievement levels, and two students were considered to have low achievement levels. It was important that the adolescents be motivated to work with the same person over the intensive four-week period. Therefore three pairs of females were established according to the students' preference and the fourth pair was formed from the remaining two

students. Dyad 1/2 consisted of two strong students and dyad 3/4 two average students. The other two dyads were of mixed abilities. Dyad 5/6 consisted of a strong and a weak student. Dyad 7/8, an average and a weak student. The students' ages ranged from 13 to 14 years old, with birthdays spanning ten months.

The elementary school is located in a neighbourhood of lower-middle to upper-middle socioeconomic status in a large city. The school has a large population. Grades range from junior kindergarten to Grade 8. Almost 50% of the students are in FI. All participants in the study group came from English-speaking families, with the exception of one student whose mother spoke some Estonian at home. None of the participants spoke French at home; however, some had siblings in the FI program. None attended the gifted program, the reading clinic, or the learning centre for special needs. All had some experience travelling to francophone areas. Half of the Grade 8 subjects were delivered in French and the other half in English. The students had been taught the future tense in the first term and the subjunctive mood in the second term prior to the unit. Various verb tenses had been taught in the previous grade.

### 3.2.3.2 Comparison Group

The comparison teacher described his class as being similar to the study group's class in socioeconomic status and of ability levels. In this class, 10 students brought in permission forms. Eight students were selected (forthwith referred to as the comparison group) based upon the availability of data. These students were ranked by the comparison teacher according to their general French-language achievement. The three top students were considered to have strong achievement levels, and two students were considered to have weak

achievement levels similar to the ranking of the students in the study group. However, it is unknown whether the two teachers ranked the students by the same criteria. The eight students were given the identical pretests, posttests, and delayed-posttests from the unit during the same time as the study group. The students were excused from their regular classes and the tests were administered by me in a separate classroom. There were some missing test data for three of the comparison students due to absences for one test at posttesting.

The students in the comparison group participated in their regular classroom instruction. The teacher from this class provided a description of his teaching methodologies during a short interview. There was a focus on grammar. He indicated that rather than doing major units, he believed it was more effective to continually revisit grammatical points. My observations during short classroom visits of extensive oral and written work confirmed an emphasis on grammar and accuracy. Further the approach did not include much peer collaboration but more teacher-student writing conferences than the other class.

The comparison teacher explained that he had taught the conditional as it came up in individuals' writings or speech prior to the pretesting period and he taught the conditional in more detail in whole-class sessions in February, which coincided with the study group's unit. The amount of teaching time devoted to the conditional was unavailable, but from what the teacher described of his February curriculum, which examined other grammatical points, such as the *complément d'objet direct* and *indirect*, the study group likely received more time on the conditional during the intervention period than did this comparison group. However, it is quite possible that the comparison teacher continued to teach the conditional after the posttesting period more than the study group teacher. It is unknown how much time exactly the comparison teacher spent on the conditional during and after the intervention and if it was ultimately more or less than the

study group over the span of the unit or the rest of the year. The comparison group received more homework than the study group to review or follow up on classroom lessons.

### 3.2.3.3 Native Speaker Group

Immediately after the posttesting session in March NS test data were collected from eight girls of mixed socioeconomic status in a francophone community just outside of *Montréal, Québec*. The tests from the unit and the tailor-made tests had never been administered to NSs. The tests were administered for purposes of baseline data and identification of items that were difficult for NSs. The teacher described this class as a stronger group than most years and ranked the students who participated in the study as high or average achievers.

## 3.3 Setting

### 3.3.1 French Immersion Program

Early FI is a SL program offered in many parts of Canada as an alternative to the regular English program. The use of French by students in immersion programs in mainly English-speaking areas of Canada appears to be limited to the classroom with minimal exposure to French outside the classroom (Swain & Lapkin, 1982), thus making the FI classroom an ideal SL laboratory. A substantial amount of the curriculum is delivered through the use of the French language. The students in this study had experienced a combination of bilingual francophone and anglophone teachers implementing an eclectic range of teaching methodologies which could be predominantly characterized by what is called a

communicative, experiential approach (Swain & Carroll, 1987). The FI teachers are encouraged to implement the current L1 teaching methodologies which have been endorsed by their school board. As a teacher with this board and former teacher at this school, I can confidently say that traditional grammar instruction is not characteristic of this SL program and is not particularly apparent in the primary years (Kindergarten to Grade 3). Similarly, in the junior grades (Grades 4-6) there is little evidence of a grammar syllabus and the conditional appears to be difficult to grasp. Personal observations and experience as a primary/junior teacher lead me to say that the conditional tense would have been taught minimally in the primary and junior grades. In Grade 7 some instruction of the conditional was undertaken (personal communication with Grade 7 teacher) with these students.

### **3.3.2 Classroom**

The intervention that the entire class underwent took place in a portable classroom furnished with three rows of tables. Each table seated two students. Tape recorders were placed on the tables of the four dyads before classes began. The teacher often used the blackboard and overhead projector.

## **3.4 External Resources: Materials and Intervention**

Classroom resources consisted of unilingual and bilingual French and English dictionaries and a verb reference book, the *Bescherelle*. Most students had personal copies of various dictionaries or the *Bescherelle* which they brought to class. The curriculum materials were created by Day, Collins, and Rioux (1989) to provide opportunities for students to: "use the conditional in natural,



communicative situations; reinforce their learning with systematic, linguistic games; encourage metalinguistic awareness; and promote cooperative learning" (Day & Shapson, 1991, p. 25). The original unit focussed on the use of the conditional in hypothetical situations and in polite requests. For purposes of this study, it was decided to address only the conditional in hypothetical situations. The activities were designed for small groups but were undertaken in dyads. The unit had been piloted in my Grade 6 FI classroom the year before (Spielman, 1996).

Permission was granted by the first author, Elaine Day, to use the materials in my study. The teacher of the study group was subsequently given a copy of the original unit, entitled *Création d'une colonie spatiale*. The unit included a teacher's guide consisting of an overview of the activities, a descriptive summary of the uses of the conditional (see Appendix B), the goals and objectives of the activities as well as detailed instructions. The teacher was asked to examine the unit in preparation for meetings with me where the unit was reviewed and the logistics of the study discussed. There was considerable accommodation of the unit based upon the teacher's adaptation of the instruction and tasks from the unit, the teacher/researcher's piloting of the materials with her former Grade 6 students (Spielman, 1996) and past research on the value of different tasks. It was intended that the teacher and I have considerable more time to discuss the implementation of the unit. Originally I planned for the unit to span seven weeks, but it had to be shortened to four weeks. The teacher thus received minimal training and feedback from me.

### 3.4.1 Teacher Instruction

The teacher's input is included in each of the activities explained in Appendix C. The following is a general description of the lessons. The teacher's instructions included a brief warm-up activity or review of the conditional. The review included information related to the formation of the conditional, the Si rule and its meaning in hypothetical situations (Appendix B). Chart paper showing examples of the formation of the conditional were posted throughout the intervention. The teacher gave instructions for the activity using examples or eliciting information from the students through questioning. He frequently used the blackboard or overhead projector. The teacher circulated during the collaborative writing tasks responding to students' queries or providing feedback. Overall there was little individualized teacher feedback recorded in the four dyads' dialogues demonstrating the difficulty of providing this in a classroom with 22 students.

### 3.4.2 Instruction Related to the Conditional

A detailed description of the various functions of the conditional from the teaching unit (Day, Collins, & Rioux, 1989) was given to the classroom teacher as background information. A translation is included in Appendix B. The curriculum materials implemented in this study concentrate on one notion of the conditional: description of an imaginary situation. This is a common function used and taught. This function has been described by Hawkins and Towell (1996) as follows:

It (the conditional) refers to events which would take place in the future if certain conditions were met:

*Il m'achèterait des livres à Paris si je lui donnais l'argent.*

He would buy me books in Paris if I gave him the money. (p. 233)

The students were shown how the conditional is formed by adding the inflections of the imperfect tense to the regular or irregular future stem. The formation of various examples of the conditional presented to the students during the initial lesson were left on chart paper throughout the unit and referred to periodically by the teacher during lessons (Appendix B). The future tense had been taught in the previous term. The stem of the conditional is formed using the infinitive for *-er* and *-ir* verbs and dropping the final *-e-* in *-re* verbs. The inflections are the same as those of the imperfect tense. An example of an *-er* verb, *accepter* follows: *J'accepterais; tu accepterais; il/elle accepterait; nous accepterions; vous accepteriez; Ils/elles accepteraient*. The final *-e-* is dropped in the infinitive *descendre: Je descendrais*. The irregular root *ir-* of *aller* (to go) is used to form the conditional: *j'irais, tu irais, il/elle irait, nous irions, vous iriez, ils/elles iraient*.

The Si rule was discussed with the students. That is, a subordinate clause beginning with the conjunction *Si* and including a verb in the imperfect tense is followed by a main verb, the conditional. The use of the conditional to depict a present hypothetical situation was presented. The translation of specific conditionals into English by "would" and the infinitive of the verb was discussed with the students.

### 3.4.3 Intervention

The comparison group received their teacher's regular instruction based upon his 17 years of experience in the FI program. A mini-unit on the conditional was implemented during the same period as the intervention for the study group. All 22 students in the study class were treated equally during the classroom intervention (Table 3.1). All undertook the same tests, including the tailor-made tests which were randomly distributed to the remaining classmates. The only

differences for the study group were that 1) their dialogues were being audiorecorded during classroom tasks; 2) tailor-made tests specific to each of the four pairs were created and 3) the students were asked to choose a partner within the group of eight allowed to participate in the study.

Table 3.1  
Order of Activities and Description of Corresponding Tasks

<b>PERIOD # ACTIVITY</b>	<b>DESCRIPTION OF TASKS</b>
(1) Introduction of Unit -- 05/02/96	<ul style="list-style-type: none"> <li>• Discussion of rules (formation, <i>Si rule</i>) and its use in hypothetical situations</li> <li>• Overview of the unit and activities</li> </ul>
(2) Preparation of Plan for the Space Colony -- 06/02/96	<ul style="list-style-type: none"> <li>• Discussion of rules</li> <li>• Discussion of list of expressions (Appendix F) denoting necessity</li> <li>• Brainstorming and notetaking of essential needs for the survival of humans on a new planet</li> </ul>
(3) Continuation of Plan Preparation -- 07/02/96	<ul style="list-style-type: none"> <li>• Review of rules</li> <li>• Categorizing needs of space colony</li> <li>• Copying of verbs denoting necessity</li> </ul>
(4) Draft of the Imaginary Space Colony in Pairs -- 12/02/96	<ul style="list-style-type: none"> <li>• Writing of draft</li> </ul>
(5/6) Linguistic Game -- 13/02/96	<ul style="list-style-type: none"> <li>• Writing translations of verbs in <i>Jeu Linguistique</i></li> </ul>
Plan of Space Colony -- 13/02/96 (cont'd.)	<ul style="list-style-type: none"> <li>• Continuation of the writing of draft using their notes from previous days.</li> </ul>
(7/8) Plan of Space Colony -- 15/02/96	<ul style="list-style-type: none"> <li>• Continuation and elaboration of written plan</li> </ul>
(9) Dictogloss #1 -- 19/02/96	<ul style="list-style-type: none"> <li>• Review of rules</li> <li>• Writing and editing of paragraph read aloud</li> </ul>
(10) First Revision of Plan and First Revision of Peers' Plan -- 21/02/96	<ul style="list-style-type: none"> <li>• Continuation of editing and revising of their own plan</li> <li>• Editing and revising of another pair's work</li> </ul>

<b>PERIOD #/ ACTIVITY</b>	<b>DESCRIPTION OF TASKS</b>
(11/12) Second Revision of Plan and Second Revision of Peers' Plan -- 23/02/96	<ul style="list-style-type: none"> <li>• Continuation of editing of the two space plans</li> </ul>
Correction of Dictogloss #1	<ul style="list-style-type: none"> <li>• Proofreading and correction of errors in dictogloss</li> </ul>
First Correction of 11 mistakes in <i>Rapport Fictif</i>	<ul style="list-style-type: none"> <li>• Correction of 11 conditional errors in written text based on content of dictogloss #1</li> </ul>
(13) Dictogloss #2 -- 26/02/96	<ul style="list-style-type: none"> <li>• Review of rules</li> <li>• Writing and editing of Dictogloss #2</li> </ul>
(14/15) Correction of Dictogloss #2 -- 28/02/96	<ul style="list-style-type: none"> <li>• Editing</li> </ul>
Second Correction of the <i>Rapport Fictif</i>	<ul style="list-style-type: none"> <li>• Editing</li> </ul>
Revision #3 of the Space Colony Plan	<ul style="list-style-type: none"> <li>• Editing</li> </ul>
Writing of Comic Strips	<ul style="list-style-type: none"> <li>• Review of rule and examples</li> <li>• Writing and proofreading</li> </ul>

Two main writing activities were undertaken for the unit: planning of a space colony and preparation of a written report describing each part of the colony and its importance (Day, Collins, & Rioux, 1989, p. 35). In addition, I extended the newly revised activities to include additional peer editing (De Guerrero & Villamil, 1994; Lantolf, 1994), the writing of a comic strip and two dictoglosses (grammar dictation, Wajnryb, 1990) (see Appendix C). Past studies using the dictogloss informed the present study (Kowal, 1997; Kowal & Swain, 1994; Swain & Lapkin, 1997). The intervention was undertaken during sixteen, 50-minute periods: eight 50- and four 100-minute periods over the four weeks. On average the students were involved in the tasks for four periods per week. They spent approximately 11 hours of study on the entire unit.

The curriculum implemented during the study was based on the original Day et al. (1989) unit but was adapted and supplemented to suit the needs of the teacher, students and researcher. There is a description and a chronological listing of the activities in Table 3.1. The identification of the periods denotes when the activity occurred and does not necessarily mean it took the entire period(s). Some activities were carried out over two or more days. Detailed descriptions of the activities in their entirety are included in Appendix C.

#### 3.4.3.1 Editing and Revision Session

All activities undertaken by the class required writing. The students collaboratively wrote, revised and edited their written work. A brief description of what the students did during revision and editing provides background for the various activities undertaken. The students were deliberately given little and general guidance as to how to work with their partner. The researcher wished to allow the students to undertake their pair work as they normally do. They were simply asked to collaboratively complete a draft and render it as correct as possible before writing their final version. They were reminded to discuss and resolve any problems they encountered in the text with their partner.

The teacher and the researcher observed that occasionally some students silently read the text then handed it over to their partner. For example Student 5 said, "I've made my corrections, now you do yours". The teacher occasionally stopped the entire class during editing sessions and clarified that they should be helping and teaching each other. The students were encouraged to tell their co-participants why they thought changes should or should not be made. In addition, the teacher and/or the researcher at times reminded some dyads of their helping

role when there was no ongoing conversation. For the most part, as the unit progressed all participants were engaged in dialogues and only rarely needed reminders to talk to each other.

### **3.5 Audiorecordings: Evidence of Other-Regulation**

All students in the classroom undertook the writing tasks in dyads. The dialogues of the four dyads only were recorded. A taperecorder was placed on each dyad's table prior to their entry. The students were asked to turn on the machine and leave it on for the duration of the collaborative activities. After each class I transcribed the recordings and created TMT items related to conditionals based on the content of each dyad's dialogues.

#### **3.5.1 Identification of Conditional-Related Exchanges and Episodes**

In order to code the data, conditional-related-exchanges and conditional-related-episodes were identified. A qualitative description of the categories for the analysis of the content of the dialogues is provided in chapter 5. However, the definitions of conditional-related exchanges and conditional-related episodes are now briefly presented. The definition of conditional-related exchanges (CRXs) was derived from that of language-related episodes (LREs) in the studies of Kowal (1997) and Swain and Lapkin (1995, 1998). For purposes of this study a CRX was defined as the entire section of a dialogue in which the conditional was the focus of the talk. A CRX begins at the point in the dialogue where a particular conditional is introduced. It ends once the problems for the specific conditional verb have been resolved or abandoned. This could be a context where the conditional is not appropriate. Within a CRX there may be no significant interruptions in the

discussion of the one specific conditional. A CRX includes one or more conditional-related episodes. A conditional-related episode (CRE) was defined as a segment of a CRX in which talk about the specific conditional is related to one of three categories: formal features, tense selection, or lexical meaning. Thus each CRX may contain one or more CREs, and each CRE is in one of three categories.

### **3.6 Measures of Self-Regulation**

#### **3.6.1 Proficiency Tests**

Testing was conducted following standardized procedures and instructions developed by the Day and Shapson (1989) research team. The first three instruments (see Appendices L, M, and N) were taken from the Day et al. (1989) unit and were developed to assess general written and oral proficiency of the conditional. The instruments consisted of a cloze test, a paragraph writing task and an interview. The students in the study group and the NS group completed the paragraph and cloze tests in their own classroom with no external resources. The eight girls in the comparison group were withdrawn as a group from various regular classes to undertake the two written tests in the computer classroom under my supervision. Students completed the paragraph first. It was collected and the cloze test was subsequently distributed. All students were withdrawn individually from their classes to be interviewed by me in a quiet room. These interviews were audiorecorded.

There were two versions of each test that were distributed randomly in the pretesting so that half the students received Form A and the other half received Form B. During the posttesting the students who completed Form A in the pretest, did Form B in the posttest and then received the original form for the



delayed-posttests. The data for the two forms of each test were combined for the analyses, as acceptable correlations had been obtained between Forms A and B during pilot testing in the Day and Shapson (1989) study (Pearson Correlation Coefficient, .76 for the cloze test and .73 for the paragraph). Ten percent of the paragraphs and cloze tests and twenty percent of the interviews were rescored for interrater and intrarater reliabilities. The second rater was a bilingual francophone. The addition of the scores on each test were rechecked by me. The results revealed that interrater and intrarater reliabilities were high in all cases (Pearson Correlation Coefficient, 0.99) as in the Day and Shapson (1989) study. A brief description of the instruments is followed by their scoring procedures.

#### 3.6.1.1 Cloze Tests

The students were given a French text and asked to fill in the blanks by supplying the correct tense. The infinitive of the required verb was provided below the blank (Appendix L). There were limited prompts of the subordinate clause containing *Si* and the imperfect in the cloze test. In Form A the dialogue is between two children stranded on a desert island discussing what either would do if they were rescued and could return home. In the second version, Form B, two children discuss what either would do if they were elected mayor of Toronto. Students were given as much time as needed to complete the task. Normally they did not take more than fifteen minutes. They were instructed to check over their completed work for errors and make any necessary changes before handing it in.

##### 3.6.1.1.1 Scoring of the Cloze Tests

Only the conditional verbs were scored. The original scoring procedures from the Day and Shapson (1989) study were used. However, in collaboration

with my bilingual francophone rater, I made a few changes (explained below) during training sessions. A detailed description of the adapted scoring procedures originally established in the Day and Shapson (1989) study is included in Appendix O. The cloze test contained 32 blanks of which 27 were required to be in the conditional and the remaining in the *présent*, *imparfait*, or *passé composé*. The maximum number of points was 81 (3 points maximum per conditional). If the verb was in the conditional, it was given 1, 2, or 3 points. If a verb was not in the conditional, no points were allotted

The full 3 points were given to a conditional which was correct or had only a minor error in the root of the verb. This included minor and careless spelling mistakes in the root or a missing reflexive pronoun. Two points were given to conditionals in which there was a spelling error in a homophonous, conditional person or number marking (e.g., *il irais* for *il irait*). In addition, two points were given for an incorrect single or double "r" in the formation of the root of the conditional (e.g., *on pourait* for *pourrait* or *il ferrait* for *il ferait*). One point was given to a verb in which the conditional was incorrectly formed in the root, such as *il pouvrait* or in which the person marking was incorrect and not homophonous with the correct conditional form (e.g., *nous ferait* instead of *nous ferions*).

If a verb was not in the conditional, that is, did not at least have a conditional ending, it was allotted 0 points. All verbs in the future (e.g., *il pourra* for *il pourrait*) including the first person singular inflection (e.g., *je pourrai* for *je pourrais*) were not given any points. The students had been taught the future tense in grade 7 and retaught this tense in the previous term. The oral and written differences in the inflections of the conditional and future tenses were discussed during the course of the unit. Further details about the scoring procedures are provided in Appendix O.

### 3.6.1.2 Paragraphs

The students were asked to choose a comic character (Form A) or a famous person (Form B) that they would like to be and to write a paragraph beginning with *Si j'étais* (If I were) in the subordinate clause. There was one prompt of the *Si* clause in the paragraph test. The students were told they would be given a maximum of 15 minutes to complete this task and should write at least six sentences. If six sentences were not produced, the researcher asked them to do so. The written instructions from the original unit which included conditionals were deleted and given only orally; thus the students were not given a written form of the conditional which they might have referred to during their writing (see Appendix M).

#### 3.6.1.2.1 Scoring of the Paragraphs

The same scoring criteria were used as in the cloze tests, but additional guidelines specific for paragraphs were included (Appendix O). First all verbs that were or should be in the conditional were underlined. Two scores were calculated: percentage and total. The percentage score is the traditional score calculated in studies. For example, Student 1 received 3/30 or 10%. Student 7 received 3/9 or 33.3%. I examined and compared the two paragraphs from the perspective of a teacher and a researcher (Appendix M). Both students had ultimately succeeded at producing one conditional correctly (3 points), however, when the percentage score is examined, Student 7 was 23.3% ahead of Student 1.

As a researcher I tried to keep my questions and goals in mind, that is, to assess the grammatical accuracy of the conditional. I was not assessing number of attempts, length of the paragraph, degree of risk-taking of the student or lexical variety. The open-ended tests, where students produced varying quantities of the

conditional thus posed a problem that the cloze tests did not. I decided to resolve the dilemma by also analyzing the total score separately.

The total score was the total number of points accumulated for accuracy only. The errors and the number of verbs attempted were not considered in this score. For example, Students 1 and 7 each produced one correct conditional as explained above and were allotted a total of 3 points. This additional, total score, arises from the open-ended tests, and was considered so that students who attempted more verbs<sup>4</sup> would not be penalized due to their much lower percentages compared to someone who attempted fewer verbs but succeeded, and got the same total score (see Appendix M for examples).

### 3.6.1.3 Interviews

The oral interviews were designed to elicit the use of the conditional in hypothetical situations (see Appendix N). The two versions of the interview had a warm-up section in which some general questions were asked about the student's age, family members, years in FI, former schools and past or future vacations. It must be noted that there was a conditional in each question following a Si clause, thus providing an accurate example to the interviewee. These prompts were thus more numerous than in the two written tests and as well, spelling cannot be assessed in the interview. For these two reasons, the allotment of points was more generous in the interviews.

In Form A, students were asked to browse through a travel brochure of southern destinations. They were then asked standardized questions about where they would go and what they would do if they won a holiday with their family.

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<sup>4</sup> Previous research has considered only those scores where the numerator (total score) is 5 or higher to overcome this problem (Harley, B., personal communication). This is not feasible in this study as it would result in too much missing data. A suggestion for further research would require that students write more sentences in order to assess the same number of conditionals for every participant.

After talking about their ideal vacation, additional questions were asked about what they and their parents would do during the evening and what the student would do with \$500 spending money. In the second part of the interview the roles were switched and the student was given the opportunity to ask the researcher about her ideal holiday.

The topic of interview Form B was about a hypothetical visit of friends to Toronto. Brochures of various sites in Toronto were available to examine. The questions in the open-ended interview paralleled Form A. Students were then asked what they would do if they were to spend three days with young visitors. After talking freely about the hypothetical visit, they were asked what they and their friends would do in the evening and what they would do if they were given \$100 spending money. In the next portion of the interview, the student asked questions about how the interviewer would spend three days in Toronto with her visitors. Interviews took place in a quiet (for the most part) room where the interviewees were recorded using a microphone placed on the table in front of the student. All the interviews were transcribed. Ten percent of the interviews were listened to by a bilingual francophone to check the accuracy of the transcription of the conditionals. There were few discrepancies.

#### *3.6.1.3.1 Scoring of the Interviews*

First all verbs that were or should be in the conditional were underlined. All obligatory contexts for the conditional were identified from the transcriptions, and verbs used in these contexts were scored according to the general rules for the written tests excluding the criteria which applied only to written language (see Appendix 0). As in the paragraph, the other open-ended test, two scores were allocated.

#### **3.6.1.4 Scoring: Training and Adaptations**

I met with the other rater several times to discuss the scoring procedures and do samples in order to get a common understanding of the criteria before doing the scoring. Some adaptations were collaboratively made before the final scoring of all tests. None of the examples used in the training sessions were included in the random sets used for establishing reliabilities. All tests (pretest, posttest, and delayed-posttests) of the same type from all groups were placed in a random order. First the cloze tests were scored, then the paragraphs and lastly the interviews.

### **3.6.2 Achievement Tests**

#### **3.6.2.1 Tailor-Made Tests**

Lastly, tailor-made tests (TMTs), as developed in the LaPierre (1994) and Swain and Lapkin (1998) studies, were created and administered during post and delayed-posttesting. The written tests were taken independently without intervention from the partner and without the use of external resources. All tests were randomly distributed to other members of the classroom; research analysis is limited to four dyads. The dialogues related to the conditional were transcribed by me immediately following each collaborative writing activity. On the basis of these transcripts, grammaticality judgment test items were developed to assess the students' knowledge of specific conditionals. Thus, each designated pair of students had one personalized test although there were some items which pertained only to temporary partners. The students were unaware of the personalized nature of their test. In addition, all grammatical points discussed were identified but not transcribed in detail and served as distracters on the TMTs. There were 335 TMT items and 244 (73%) were specifically on the conditional.

Three tests for each dyad were designed during the four-week intervention. The first TMT was given during the third week of intervention and the two remaining tests were subsequently administered at one-week intervals. The third TMT coincided with the posttesting session of the unit's tests. A delayed-post TMT for each student was created with items from the three previous tests. This fourth TMT was administered during the delayed-posttesting session of the unit's tests, 11 weeks after posttesting (see Table 3.2 for schedule). Each individual had a different set of items based on the conditionals they talked about. Only Students 7 and 8 always worked together and thus had the same items (number and content).

There were two types of grammaticality judgment items which were both accompanied by illustrations. The first type of item (Figure 3.1, Translations of the sentences are included for the reader only and were not given to the students.) consisted of several sentences featuring the various linguistic hypotheses suggested during the CRXs. The number of sentences in each item depended on the number of hypotheses generated during the dialogues. The number of sentences varied from two to a maximum of eight; most often two to three. Each item contained a sentence with the correct answer even if it was not negotiated during the dialogues.

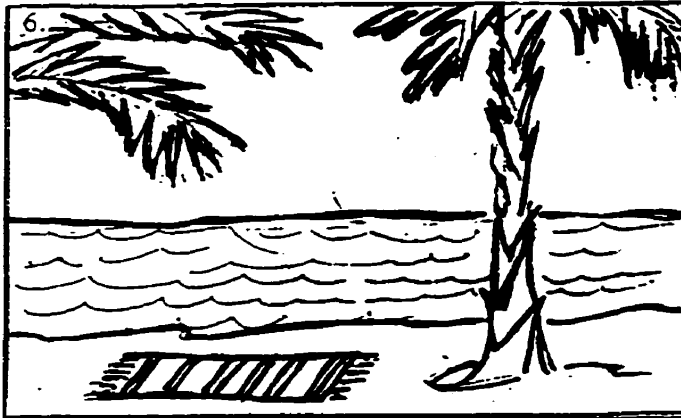
The items involved a certainty scale as used in the Swain and Lapkin study (1998). This type of item captured movement along a continuum of correctness to incorrectness. The students had to evaluate the grammaticality of each sentence in every item by indicating on the certainty scale if the sentence was definitely wrong, probably wrong, probably correct or definitely correct. The student was also given the choice of selecting, "I don't know." The instructions stated that it was possible to have more than one correct answer in each set of sentences. The

Written Instructions:

Pour chaque phrase ci-dessous, indiquez si la phrase est correcte ou incorrecte selon l'image. Indiquez jusqu'à quel point vous êtes certain(e) de votre réponse en cochant la case appropriée. Dans chaque groupe il y a au moins une phrase correcte, mais il est aussi possible d'avoir plusieurs phrases qui sont correctes dans chaque groupe.

Oral instructions given by researcher: Fais des commentaires sur tes choix. Pourquoi, selon toi, la phrase est-elle correcte ou incorrecte?

Student 2



	Certainement correct	Probablement correct	Probablement incorrect	Certainement incorrect	Je ne sais pas
1. Si c'était des vacances, on ira en Floride. (...WE WILL GO)					
2. Si c'était des vacances, on ailliait en Floride. (...WE no translation for verb)					
3. Si c'était des vacances, on irait en Floride. (IF IT WERE THE HOLIDAYS, WE WOULD GO TO FLORIDA)					
4. Si c'était des vacances, on aillierait en Floride. (...WE ? verb has conditional ending for er verb included)					

(Space for student's comments)

TRANSLATIONS ARE INCLUDED FOR THE READER.

Figure 3.1. Example of tailor-made test item on *irait*.

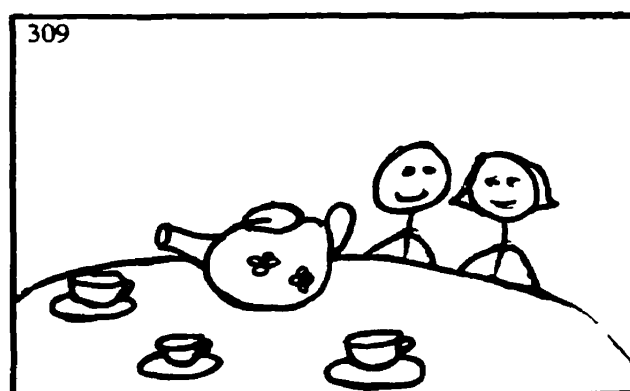


second type of item was multiple choice (Figure 3.2). There were very few of them. The students needed only to choose the sentence with the best answer. In addition, I added a blank after both types of items where students were asked to comment briefly upon their choices. After creating the tests I translated the main idea of the sentences into English so that my sister could draw the illustrations to depict the context of the sentence. The students were allowed to ask me or the teacher for clarification if the items did not make sense to them.

The TMTs assessed learning of specific conditionals each dyad talked about. A distinguishing characteristic of the study is that some conditionals in the TMTs were subsequently matched up with identical conditionals that were done unsuccessfully by the students on the pretests of the unit. In addition, pretest results on particular formal features (e.g., singular, plural) were also matched up with TMT items. This provided longitudinal data (pretest, posttest and delayed-posttests).

**Choisissez la meilleure réponse dans chaque groupe. Cochez la case appropriée à droite de la phrase.**

1. Si on pouvait on boiverait du thé. [ ]
2. Si on pouvait on boirait du thé. [ ]
3. Si on pouvait on buverait du thé. [ ]



**Figure 3.2.** Example of multiple-choice tailor-made test item.

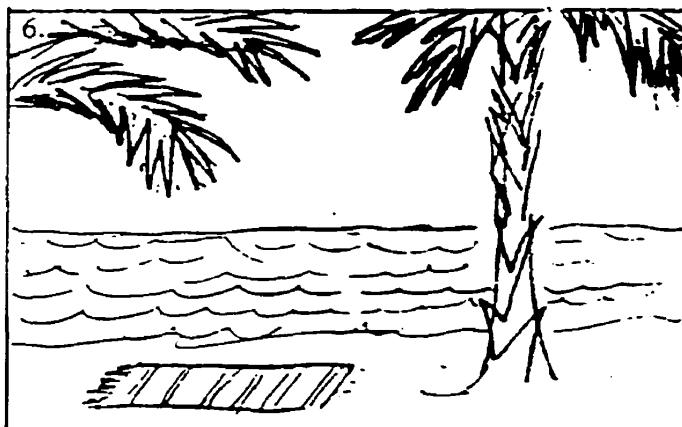
There were 9 different conditionals which were matched up with TMT items. These conditionals were pretested in 17 instances (Appendix P). In addition, there were 87 instances of conditionals with identical formal features discussed by the dyads. The identical features included 14 conditionals with identical roots (e.g. *-ir* in *irait* and *irions*), 40 third person singular (e.g. *-ait* in *serait*), and 33 third person plural inflections (e.g. *-aient* in *seraient*). A conditional or one of the above formal features was sometimes tested in many ways in the various pretest, posttest, delayed-posttests. An example, *nous irions*, will be discussed in chapter 6 in part because of the quantity of test data available at each testing session.

#### 3.6.2.1.1 *Scoring of Tailor-Made Tests*

Two francophone educators completed all the TMTs in order for the researcher to make up an answer sheet. A third francophone was asked to complete the items where there was a discrepancy in the answers between the two francophones. Additionally, the four combination TMTs were completed independently by the eight NS females under the supervision of their teacher at the end of May and returned to me by mail. This was done in order for me to identify any ambiguous or extremely difficult items for NS students of the same age. In addition after I reexamined each TMT, items with more than five sentences appeared to be difficult, even for grade 8 francophones and thus were eliminated for scoring purposes.

The TMTs were scored on two measures: 1) the accurate conditional solution and 2) the accurate solution as well as the errors in all sentences. First a score was obtained allotting one point for the one correct conditional per item as done in previous studies (Figure 3.3), i.e., a point was given when the student accurately identified the sentence with the correct solution whether they indicated

certainty or probability of their choice. In sentence 3, Student 2 scored 1/1 at posttesting for identifying the sentence where the conditional *irait* is correct.



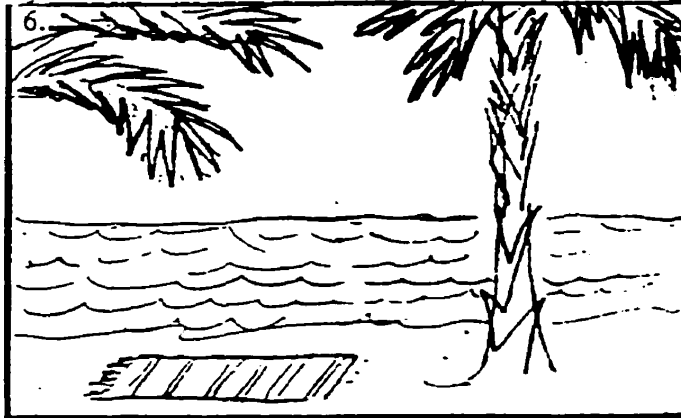
	Certainement correct	Probablement correct	Probablement incorrect	Certainement incorrect	Je ne sais pas
1. Si c'était des vacances, on ira en Floride. (...WE WILL GO) *					
2. Si c'était des vacances, on ailliait en Floride. (...WE no translation for verb)					
3. Si c'était des vacances, on irait en Floride. (IF IT WERE THE HOLIDAYS, WE WOULD GO TO FLORIDA)	POST				
4. Si c'était des vacances, on aillierait en Floride. (...WE ? conditional ending for -er verb included)					

**Student's Posttest score on this item: 1/1**

\* TRANSLATIONS ARE INCLUDED FOR THE READER.

**Figure 3.3.** Example of score related to correct solution of tailor-made test item on *irait*.

The second score took into account all sentences in the item (Figure 3.4). These included the incorrect alternatives suggested by the students. Thus the student was given a point for correctly identifying the correct and each incorrect sentence in the item. This second score was calculated because when I scored the tests in the first, traditional fashion, it was apparent that sometimes



	Certainement correct	Probablement correct	Probablement incorrect	Certainement incorrect	Je ne sais pas
1. Si c'était des vacances, on ira en Floride. (...WE WILL GO) <sup>+</sup>				POST	
2. Si c'était des vacances, on ailliait en Floride. (...WE no translation for verb)				POST	
3. Si c'était des vacances, on irait en Floride. (IF IT WERE THE HOLIDAYS, WE WOULD GO TO FLORIDA)	POST				
4. Si c'était des vacances, on aillierait en Floride. (...WE ? conditional ending for <i>er</i> verb included)		X POST			

**Student's Posttest score on this item: 3/4**

X: incorrect responses are identified with an X, others are correct responses

<sup>+</sup> TRANSLATIONS ARE INCLUDED FOR THE READER.

**Figure 3.4.** Example of second score related to all sentences in tailor-made test item *on irait*.

students were able to choose the correct conditional but they did not necessarily identify the errors as incorrect. This additional score assessed what students do and do not know for one particular item. In the second score, Student 2 received 3/4 for all sentences in the item at posttesting. This second score gave Student 2 additional credit for noticing that *ira* and *ailliait* are errors. I scored and rechecked all the tests and a second rater rescored 10% of the tests which included a variety of post and delayed-posttests and at least one test from each dyad. The percentage agreement in the scoring was 88% and 80% for the first and second scores respectively. There were many more sentences to assess for the second score which may account for the lower reliability as compared to the first score.

In the oral instructions of the TMTs, students were asked to make brief comments about why they thought their response was correct or incorrect in the space provided after each item. A perusal of the comments provided useful information particularly for problematic verbs where the written comments could be interpreted in relation to the student's answers. An example is included in Figure 3.5. Student 2's posttest comments contained mostly accurate but some inaccurate information. For example, she included, "4) *probablement, aillierait?*" in her response. The analysis of these comments was strictly qualitative and is discussed in chapter 5.

**Oral instructions given by researcher: Briefly comment upon your choices**

**Student's Posttest comments:**

- |  |   |
|--|---|
| 1) <i>ira n'est pas juste</i>                  |   |
| 2) <i>ailliait n'est pas juste</i>             |   |
| 3) <i>on irait parce que le sujet est "on"</i> |   |
| 4) <i>probablement, aillierait?</i>            | X |

---

X: only incorrect responses are identified with an X, others are correct

**Figure 3.5.** Example of student's comments in tailor-made test item on *irait*

### 3.7 Procedure

Data were collected spanning a four-month period. The data collection schedule is shown in Table 3.2. Pretesting took place during the last week of January for both the study and comparison groups. The intervention was undertaken by the teacher of the study group during a four-week period in February with the entire class. Only the study group's dialogues were recorded. The students in the comparison group received their regular instruction.

TMTs based on the dialogues were created for each dyad. During the intervention, two of the TMTs were administered one week apart starting in the third week. The intervention was immediately followed by a posttesting session for both study and comparison groups during the week before the March vacation. The third TMT was also administered at that time. A week later, test data from the unit were collected from a NS group in the province of *Québec*.

The delayed-posttesting session took place 11 weeks after posttesting (16 weeks after pretesting) to determine the long-term effects of the intervention. During the same week, a fourth, TMT combining conditional items from the previous three TMTs was also administered. All written tests were undertaken by all students in the class being taught the unit. The quantitative and qualitative analyses of the various tests and dialogues are presented in the following chapters. Chapter 4 examines the quantitative data of the unit tests and the TMTs.

Table 3.2  
Research Time Frame and Events

Type of Test and Groups	Week 0 3 Pretests	Weeks 1-4 Class Intervention	Week 5 4 Posttests	Week 16 4 Delayed-Posttests
Tests from the unit for:  a) study group b) comparison group	1) cloze 2) paragraph 3) interview		† 1) cloze † 2) paragraph † 3) interview	1) cloze 2) paragraph 3) interview
Tailor-made tests for:  a) study group	Matched-up conditionals from the tests of the unit <sup>+</sup> 17 conditionals  87 conditionals with identical features	TMT #1 (week 3)   TMT #2 (week 4)	TMT #3 (week 5)	††Combination TMT (#1, #2, and #3)

† Native speakers participated in three tests once after posttesting.

†† Native speakers participated in combination TMT after delayed-posttesting.

+ Measures are explained in section 3.6

## **CHAPTER FOUR**

### **SELF-REGULATION: TEST DATA RESULTS**

This chapter presents and discusses the quantitative results obtained from the tests. In this study, empirical evidence of self-regulation is identified through successful completion of test items accomplished independently without the use of any external resources. When the student is successful, she can be considered to be self-regulated and at level five of the ZPD (see Table 6.1). Linguistic knowledge of specific conditionals is intramental at that point of time. The findings demonstrate movement of the learners from other-regulation toward higher degrees of self-regulation and internalization of linguistic knowledge related to the conditional during subsequent testing. The specific research questions addressed in this chapter are as follows:

1. Do students within their respective ZPDs demonstrate internalization (self-regulation) of knowledge related to the French conditional following intervention to address its use in hypothetical contexts?
  - a) What internalization occurred, if any, of linguistic knowledge related to specific conditionals?
  - b) What internalization occurred, if any, of linguistic knowledge related to other conditionals?

Three tests from the original unit and additional TMTs were administered. The tests from the unit included two written tests (cloze and paragraph) and an



interview. The two open-ended tests were each given two independent scores: total and percentage. Pretests, posttests, and delayed-posttests were administered to the study and comparison group. In addition, post and delayed-post TMTs were completed by each member in the study group. Statistical analyses made were informed by the Day and Shapson (1989), Harley (1989), Lyster (1993), and Kowal (1997) studies. The results from each individual test are examined in the following order: cloze, paragraph, and interview. The results of the TMTs will then be discussed.

## **4.1 Statistical Analyses of Group Results**

### **4.1.1 Descriptive Analyses**

A summary of the study and comparison groups' means at pre, post, and delayed-posttesting sessions for the five measures is presented in Table 4.1 in the following order: cloze, paragraph (total and percentage), interview (total and percentage). The unadjusted means for the study and comparison groups for each of the five measures at the three testing sessions were plotted to observe trends over time for each group (refer to Figures 4.1 to 4.5). The minimum, median and maximum test scores are presented in Table 4.1.1.

At all testing stages there was a wide range in both groups' ability to use the conditional. The median scores of both the study and comparison groups increased on all measures from pre to posttesting. Using the median scores (Table 4.1.1) the study group performed better than the comparison group on all five measures at posttesting. The median scores of the study group increased on one measure only whereas the median scores for the comparison groups continued

Table 4.1

**Means and Standard Deviations of Test Scores  
for Study, Comparison, and Native Speaker Groups  
at Pretest, Posttest, and Delayed Posttest ( $n = 8$ )**

Test	Group	Pretest		Posttest		Delayed- Posttest	
Cloze (maximum = 81)	Study	18.00	(17.82)	52.00	(20.25) <sup>a</sup>	46.38	(17.69)
	Comparison	36.13	(23.51)	44.50	(20.91)	52.75	(14.93)
	Native Speakers			75.00	(6.85) <sup>c</sup>		
Paragraph (Total)	Study	10.50	(13.87)	21.62	(5.34)	17.38	(4.00)
	Comparison	3.38	(5.18)	10.75	(9.16)	15.88	(9.73)
	Native Speakers			21.00	(5.35)		
Paragraph (%)	Study	39.20	(39.07)	87.54	(9.38)	76.78	(23.31)
	Comparison	23.44	(37.46)	54.23	(44.30)	66.82	(32.62)
	Native Speakers			93.88	(8.95)		
Interview (Total)	Study	35.13	(20.10)	57.75	(12.65)	40.38	(14.52)
	Comparison	17.25	(14.05)	29.00	(19.21) <sup>b</sup>	35.13	(19.29)
	Native Speakers			61.50	(9.49)		
Interview (%)	Study	51.54	(25.87)	73.54	(17.07)	60.82	(17.40)
	Comparison	26.09	(22.62)	42.75	(27.74) <sup>b</sup>	50.76	(24.75)
	Native Speakers			86.00	(7.78)		

**Note:** Standard deviations of group test scores are in parentheses.

<sup>a</sup> Due to missing data  $n = 7$ .

<sup>b</sup> Due to missing data  $n = 5$ .

<sup>c</sup> Native speakers were tested at the same time as the posttest was administered to the study and comparison groups.

Table 4.1.1

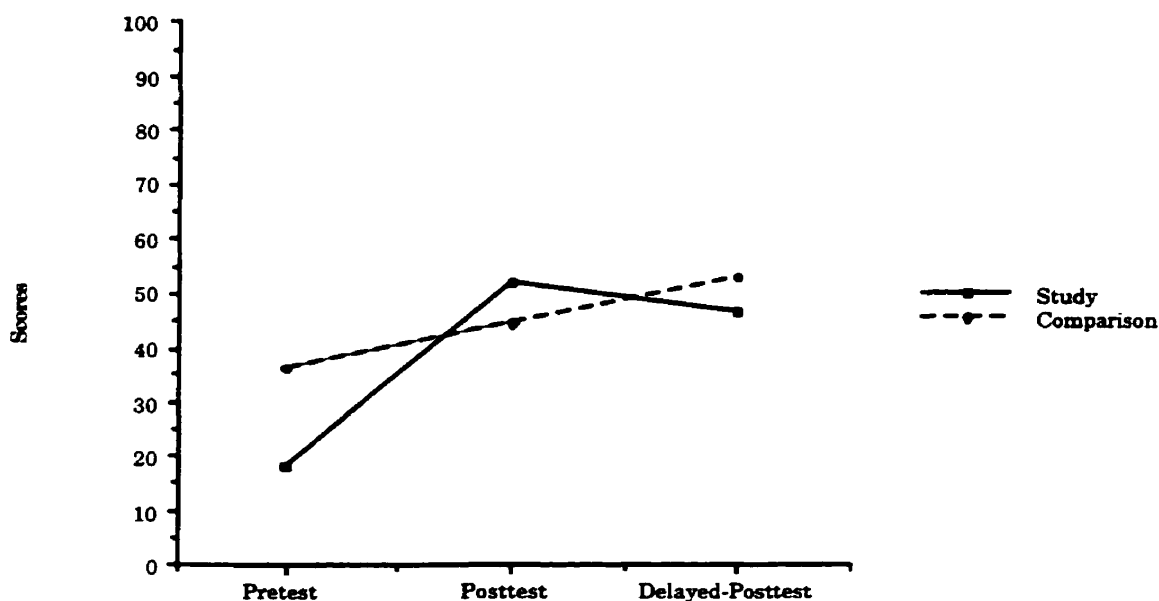
Minimums, Medians, and Maximums of Test Scores for Study, Comparison, and Native Speaker Groups at Pretest, Posttest, and Delayed-Posttest  
(*n* = 8 in each group)

Test	Group	Pretest			Posttest <sup>c</sup>			Delayed-Posttest		
		Minimum	Median	Maximum	Minimum	Median	Maximum	Minimum	Median	Maximum
Cloze (maximum = 81)	Study	1.00	11.50	48.00	25.00 <sup>a</sup>	56.00 <sup>a</sup>	77.00 <sup>a</sup>	11.00	50.00	66.00
	Comparison	8.00	39.00	72.00	6.00	45.50	71.00	28.00	55.50	73.00
	Native Speakers				65.00	78.00	81.00			
Paragraph (Total)	Study	0.00	4.50	35.00	15.00	21.50	30.00	9.00	18.00	22.00
	Comparison	0.00	1.50	15.00	0.00	11.00	23.00	0.00	17.00	27.00
	Native Speakers				12.00	21.00	30.00			
Paragraph (%)	Study	0.00	27.27	100.00	77.78	82.41	100.00	33.33	85.19	100.00
	Comparison	0.00	6.25	100.00	0.00	68.75	100.00	0.00	81.65	90.00
	Native Speakers				80.00	100.00	100.00			
Interview (Total)	Study	0.00	35.00	63.00	45.00	54.50	83.00	18.00	37.50	63.00
	Comparison	0.00	19.50	36.00	0.00 <sup>b</sup>	30.00 <sup>b</sup>	53.00 <sup>b</sup>	0.00	33.50	61.00
	Native Speakers				48.00	60.00	78.00			
Interview (%)	Study	0.00	55.83	91.30	42.86	78.99	91.67	35.29	58.11	91.30
	Comparison	0.00	28.87	66.67	0.00 <sup>b</sup>	43.48 <sup>b</sup>	76.81 <sup>b</sup>	0.00	55.39	76.19
	Native Speakers				75.00	88.50	96.00			

<sup>a</sup> Due to missing data statistics are calculated on seven scores.

<sup>b</sup> Due to missing data statistics are calculated on five scores.

<sup>c</sup> Native speakers were tested at the same time as the posttest was administered to the study and comparison groups.

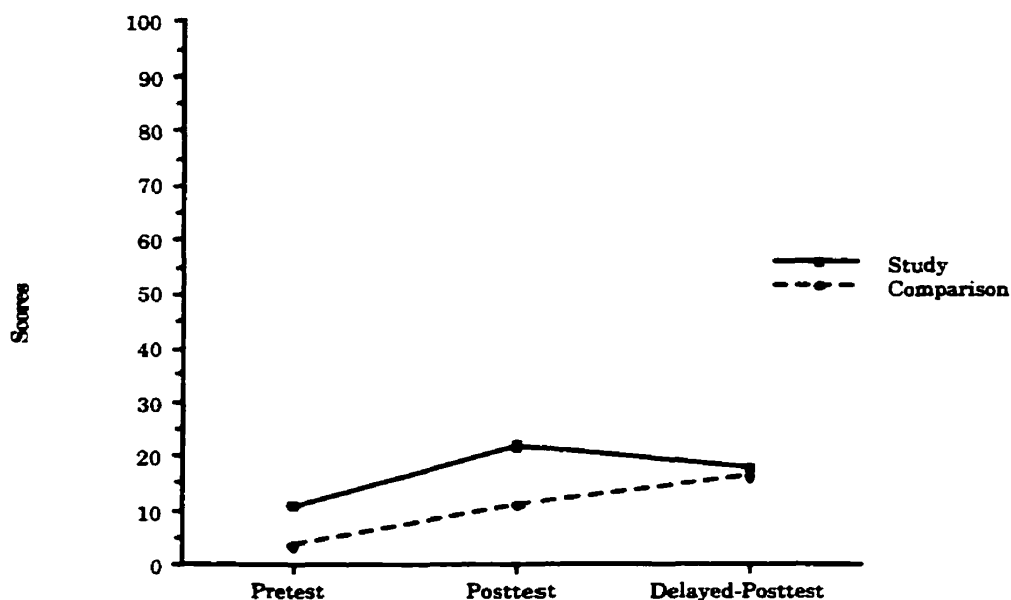


**Figure 4.1.** Study and comparison class mean scores on the cloze pre, post, and delayed-posttests

to increase in all tests during delayed-posttesting. However, using the median scores (Table 4.1.1) the study group performed better than the comparison group on four measures at delayed-posttesting. The NSs demonstrated high degrees of self-regulation. Their mean and median scores were higher than the FI students' on four measures.

#### **4.1.2 Pretests**

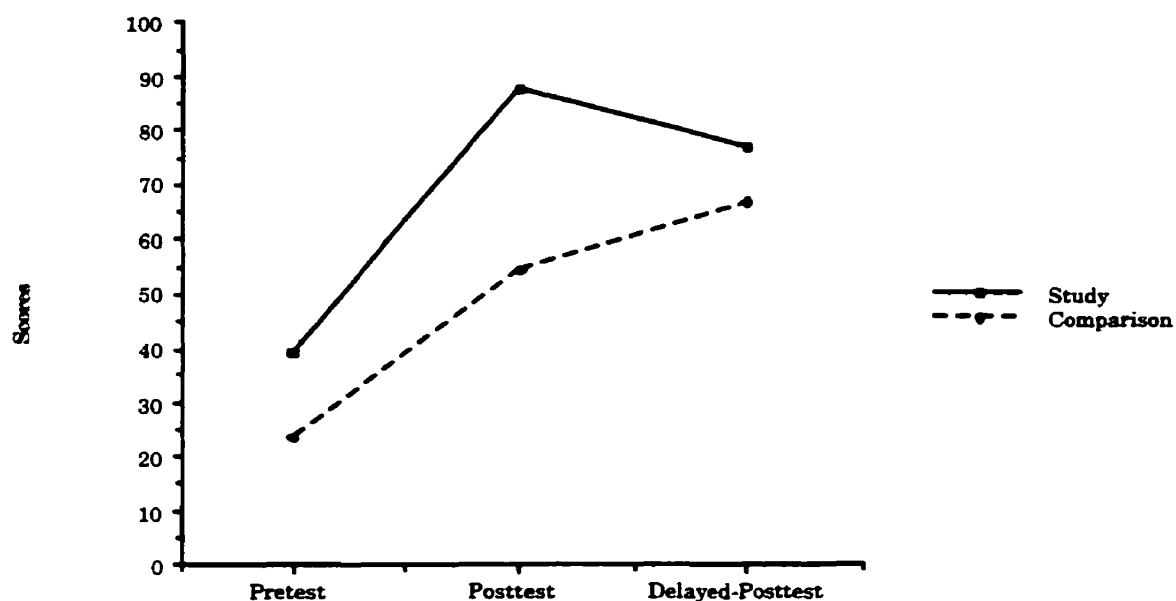
The small sample size ( $n = 16$ ) limits the power of the statistics to detect anything but the strongest effects. Thus although an alpha level of .05 was used to assess statistical significance, effects approaching statistical significance, that is an alpha level of .10, were also examined. "This was done to offset the risk that



**Figure 4.2.** Study and comparison class mean scores on the paragraph (total) pre, post, and delayed-posttests

important, although statistically non-significant, effects would be overlooked (Borg, 1987; Presley & Afflerback, 1995)" (as reported in Fraser 1997, p. 105).

In order to obtain an indication of the relative standing of the two groups at the beginning of the curricular intervention, *t* tests were conducted to examine differences in the pretest scores between the study and comparison groups. Results from the *t* tests (see Table 4.2) showed no significant initial differences between the two groups on any of the five measures at the  $p < 0.05$  level. However, there were significant differences between the two groups on both interview measures at the  $p < 0.10$  level. In addition, there was a significant difference between the two groups on the cloze test at the  $p = 0.10$  level.

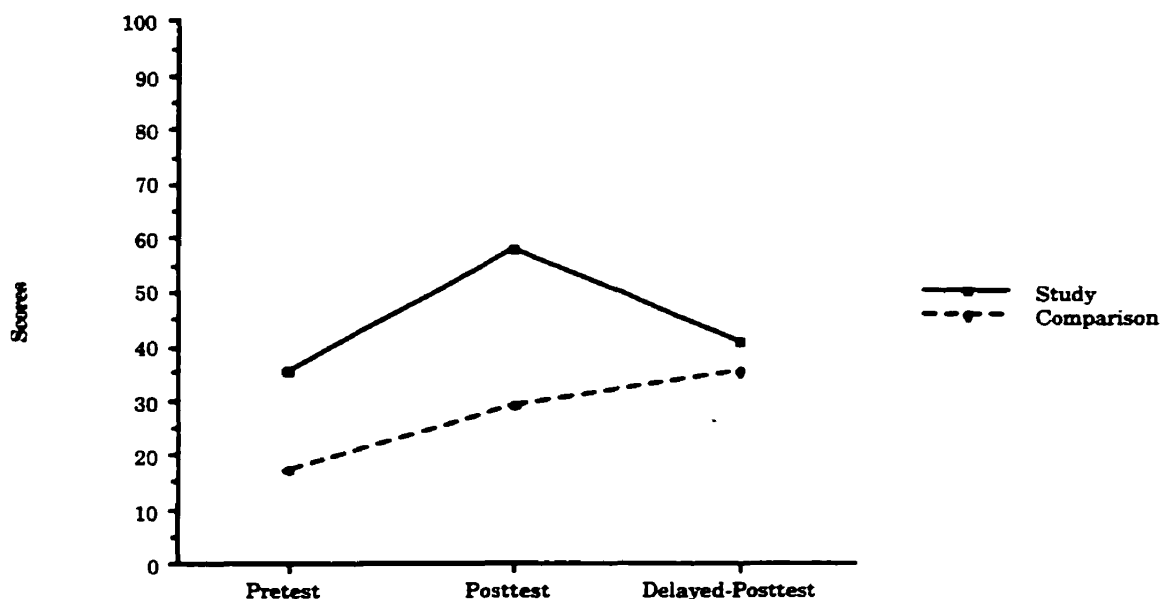


**Figure 4.3.** Study and comparison class mean scores on the paragraph (percentage) pre, post, and delayed-posttests

**Table 4.2**

**Results of Statistical Comparisons between the Pretest Scores of the Study and Comparison Group ( $n = 8$ )**

	Study Group		Comparison Group		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Cloze	18.00	17.82	36.13	23.51	-1.74	.10
Paragraphs						
Total	10.50	13.87	3.38	5.18	1.36	.21
Percentage	39.32	39.07	23.44	37.46	0.83	.42
Interviews						
Total	35.13	20.10	17.25	14.05	2.06	.06
Percentage	51.54	25.87	26.09	22.62	2.10	.06

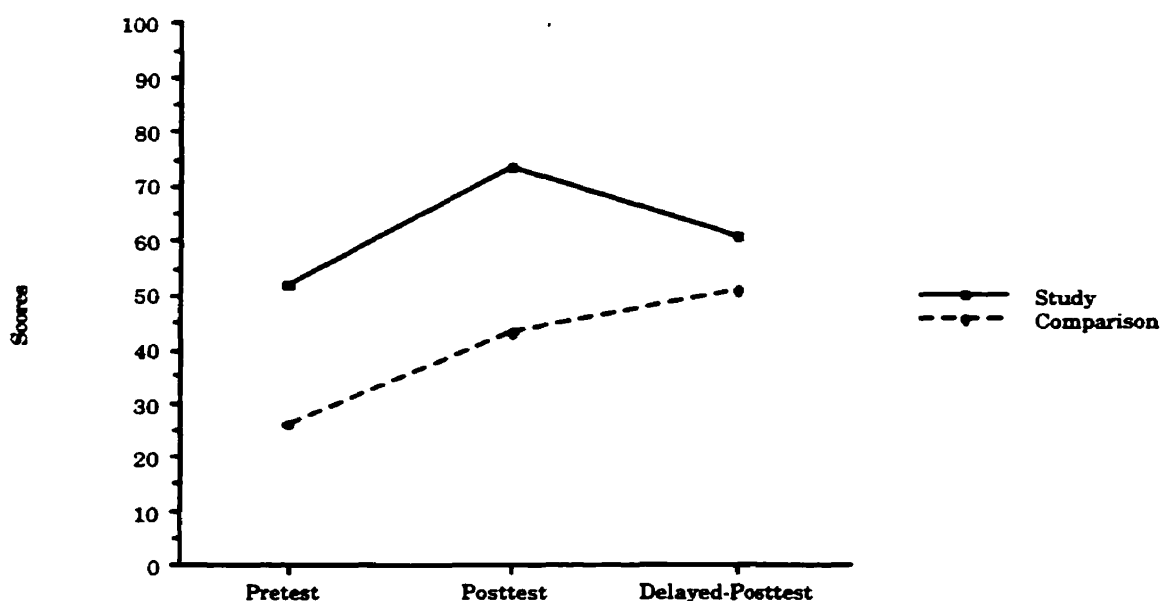


**Figure 4.4.** Study and comparison class mean scores on the interview (total) pre, post, and delayed-posttests

### 4.1.3 Learning within Groups

#### 4.1.3.1 Pretest to Posttest

Paired *t* tests comparing the pretests and posttests within each group were performed to show learning as measured by gains in performance. The results are presented in Table 4.3 and 4.4. There was statistical evidence that learning occurred for the study group between pretesting and posttesting according to all five measures. There was a gain of scores from pre to posttests at the  $p < .05$  level on three measures: cloze, percentage score of the paragraph, and total score of the interview. In addition, there was a gain of scores from pre to posttests for



**Figure 4.5.** Study and comparison class mean scores on the interview (percentage) pre, post, and delayed-posttests

Table 4.3

Learning of Study Group comparing Pretests and Posttests ( $n = 8$ )

	<i>M</i> Difference	<i>SD</i>	<i>t</i>	<i>p</i>
Cloze <sup>a</sup>	34	8.31	4.09	.01
Paragraphs				
Total	11.13	4.99	2.23	.06
Percentage	48.22	13.61	3.54	.01
Interviews				
Total	22.63	8.10	2.79	.03
Percentage	21.99	11.48	1.92	.10

<sup>a</sup>  $n = 7$



Table 4.4

Learning of Comparison Group comparing Pretests and Posttests ( $n = 8$ )

	<i>M</i> Difference	<i>SD</i>	<i>t</i>	<i>p</i>
Cloze	8.38	5.49	1.53	.17
Paragraphs				
Total	7.38	3.76	1.96	.09
Percentage	30.79	19.83	1.55	.17
Interviews <sup>b</sup>				
Total	9.80	6.90	1.42	.23
Percentage	16.34	9.01	1.81	.14

<sup>b</sup>  $n = 5$

the study group on the total score of the paragraph at the  $p < .10$  level and on the percentage score of the interview score at the  $p = .10$  level. There was statistical evidence of learning between pretesting and posttesting for the comparison group on one measure only: the total paragraph score at the  $p < .10$  level.

#### 4.1.3.2 Pretest to Delayed-Posttest

Paired  $t$  tests comparing the pretests and the delayed-posttests within each group were performed to assess learning over the long-term. The results are presented in Table 4.5 and 4.6. The  $t$  tests revealed statistical evidence for the study group on two measures at the  $p < .05$  level between pretesting and delayed-posttesting. There was statistical evidence that the comparison group made gains between pre and delayed-posttesting according to all five measures at the  $p < .05$  level.

Table 4.5

Learning of Study Group Comparing Pretests and Delayed-Posttests ( $n = 8$ )

	<i>M</i> Difference	<i>SD</i>	<i>t</i>	<i>p</i>
Cloze	28.38	7.41	3.83	.01
Paragraphs				
Total	6.88	4.94	1.39	.21
Percentage	37.46	12.72	2.95	.02
Interviews				
Total	5.25	7.72	0.68	.52
Percentage	9.27	8.52	1.09	.31

Table 4.6

Learning of Comparison Group Comparing Pretests and Delayed-Posttests ( $n = 8$ )

	<i>M</i> Difference	<i>SD</i>	<i>t</i>	<i>p</i>
Cloze	16.63	4.47	3.72	.01
Paragraphs				
Total	12.50	3.64	3.43	.01
Percentage	43.38	14.18	3.06	.02
Interviews				
Total	17.88	4.57	3.91	.01
Percentage	24.67	7.61	3.24	.01

**4.1.4 Maintenance of Learning within each Group****4.1.4.1 Posttest to Delayed-Posttest**

In addition, paired  $t$  tests comparing the posttest and delayed-posttest within each group were performed to determine if learning was maintained after the intervention. The  $t$  tests revealed that there was no significant loss of learning on any measure for the study group on the cloze and paragraph measures

between post and delayed-posttesting. There was however a statistically significant loss in the interview measures for the study group. There was a loss of learning for the study group on the total score at the  $p < .05$  level and percentage score at the  $p = .10$  level. The  $t$  tests revealed that there was no significant gain or loss of learning for the comparison group on the cloze and paragraph measures

Table 4.7

Maintenance of Learning of Study Group Comparing Posttests and Delayed-Posttests ( $n = 8$ )

	<i>M</i> Difference	<i>SD</i>	<i>t</i>	<i>p</i>
Cloze <sup>a</sup>	-4.71	18.63	-0.669	.53
Paragraphs				
Total	-4.25	8.50	-1.415	.20
Percentage	-10.76	19.05	-1.60	.15
Interviews				
Total	-17.38	12.60	-3.89	.01
Percentage	-12.72	18.77	-1.92	.10

a  $n = 7$

Table 4.8

Maintenance of Learning of Comparison Group Comparing Posttests and Delayed-Posttests ( $n = 8$ )

	<i>M</i> Difference	<i>SD</i>	<i>t</i>	<i>p</i>
Cloze	8.25	16.18	1.443	.19
Paragraphs				
Total	5.13	8.25	1.756	.12
Percentage	12.59	29.88	1.19	.27
Interviews <sup>b</sup>				
Total	10.40	10.81	2.16	.10
Percentage	13.23	19.11	1.55	.20

b  $n = 5$

as well as the percentage score of the interview between post and delayed-posttesting. There was however a gain of learning for the comparison group on the total interview score at the  $p = .10$  level (see Tables 4.7 and 4.8).

In summary, from both a teacher's and researcher's perspective these quantitative results were positive in that the study group made progress in their learning of the conditional during the intervention and maintained some of the gains long after they were involved in the formal unit. Although there was statistical evidence of gains during posttesting on one measure only for the comparison group, they did however show gains on all measures over the long-term.

#### **4.1.5 Analyses of Covariance**

Analyses of covariance were undertaken to compare the two classes during post and delayed-posttesting sessions for each measure when controlling for pretest scores. Students who were included in the pretesting session and one or both subsequent testing sessions were included.

##### **4.1.5.1 Posttest**

In order to determine whether there was a positive effect of the intervention over the short term, a comparison was made of the scores of the study and comparison groups on the posttest. An analysis of covariance of the immediate posttest results indicated that the study group outperformed the comparison group on two measures at the  $p < .05$  level when results were controlled for pretest scores: the total score of both the paragraph and interview (see Table 4.9). On the remaining three measures, the study group differed significantly from the comparison group on the cloze and paragraph percentage scores at the  $p .10$  level

level and on the interview percentage score at the  $p = .10$  level. Posttest adjusted means are included in Table 4.9.1.

Table 4.9

**Summary of ANCOVAs for Differences between Study and Comparison Groups at Posttest ( $n = 8$  in each group)**

Test	Source	<i>df</i>	<i>F</i>	<i>p</i>
Cloze <sup>a</sup>	Pretest Scores	1	6.96	0.02
	Group	1	3.44	0.09
	Error	12	(291.33)	
Paragraph (Total)	Pretest Scores	1	0.05	0.83
	Group	1	6.53	0.02
	Error	13	(60.34)	
Paragraph (%)	Pretest Scores	1	0.07	0.80
	Group	1	3.64	0.08
	Error	13	(1098.32)	
Interview <sup>b</sup> (Total)	Pretest Scores	1	0.57	0.47
	Group	1	6.65	0.03
	Error	10	(245.52)	
Interview (%)	Pretest Scores	1	0.29	0.61
	Group	1	3.31	0.10
	Error	10	(497.60)	

**Note:** The covariate in each analysis is the pretest scores on the test being analyzed.

a Due to missing data the analyzed Study Group contained seven scores.

b Due to missing data the analyzed Comparison Group contained five scores.

Table 4.9.1

**Summary of Adjusted Means and Standard Errors for Study and Comparison Groups at Posttest ( $n = 8$ )**

<b>Test</b>	<b>Class</b>	<b><i>M</i> (adjusted)</b>	<b><i>SE</i></b>
Cloze	Study <sup>a</sup>	57.57	6.79
	Comparison	39.62	6.31
Paragraph (Total)	Study	21.47	2.84
	Comparison	10.91	2.84
Paragraph (%)	Study	87.06	11.86
	Comparison	54.71	11.86
Interview (Total)	Study	56.51	5.78
	Comparison <sup>b</sup>	30.99	7.48
Interview (%) <sup>b</sup>	Study	72.01	8.39
	Comparison <sup>b</sup>	45.19	10.98

**Note:** Means have been adjusted for the pretest scores on the same test.

<sup>a</sup> Due to missing data  $n = 7$ .

<sup>b</sup> Due to missing data  $n = 5$ .

#### 4.1.5.2 Delayed-Posttest

An ANCOVA was employed in order to determine whether there were any long-term differences between the two groups, using pretest scores as the covariate. The analyses of covariance of the delayed-posttest results showed that there were no significant statistical differences between the study and comparison group on any of the five measures (see Table 4.10).

Table 4.10

**Summary of ANCOVAs for Differences between Study and Comparison Groups at Delayed-Posttest ( $n = 8$ )**

Test	Source	<i>df</i>	<i>F</i>	<i>p</i>
Cloze	Pretest Scores	1	6.97	0.02
	Group	1	0.07	0.79
	Error	13	(187.71)	
Paragraph (Total)	Pretest Scores	1	0.11	0.75
	Group	1	0.07	0.80
	Error	13	(59.11)	
Paragraph (%)	Pretest Scores	1	2.14	0.17
	Group	1	0.16	0.70
	Error	13	(743.10)	
Interview (Total)	Pretest Scores	1	3.42	0.09
	Group	1	0.1	0.76
	Error	13	(248.48)	
Interview (%)	Pretest Scores	1	4.47	0.05
	Group	1	0.01	0.91
	Error	13	(366.90)	

Note: The covariate in each analysis is the pretest score on the test being analyzed.

## 4.2 Tailor-Made Test Results

The results of the tailor-made post and delayed-posttest administered 11 weeks later are presented in Table 4.11. The TMTs were scored in two different ways. The first measure dealt exclusively with the correct solution negotiated in the CRX. This could in fact be an instance of when to use or not use the conditional. One point was allotted for identifying the correct sentence. The four dyads obtained an average of 87% in the posttest and an average of 85% in the

delayed-posttest. In the second measure including the various sentences in each item, the students obtained an average of 84% on the posttest and 81% on the delayed-posttest. The grade eight NSs demonstrated self-regulation on almost all of these items.

Table 4.11

Study Group Tailor-Made Test Scores

		<b>Week #3, 4, or 5</b>	<b>Week #16</b>
		<b>Posttests</b>	<b>Delayed-Posttests</b>
†	1 point per key sentence	87%	85%
††	1 point for each sentence/ item	84%	81%

† for identifying key sentence containing solution (Section 3.6.2.1.1).

†† for identifying solution and errors in each sentence per item.

Individual results are presented in Table 4.12. In the first measure allotting one point per item for identifying the correct sentence, scores ranged from 75% to 97% in the posttest and 63% to 97% in the delayed-posttest. Thirteen of the sixteen scores were 80% or higher. Three students improved from post to delayed-posttesting. In the second measure including all sentences in each item scores ranged from 66% to 92% on the posttest and 64% to 98% in the delayed-posttest. Twelve of the sixteen scores were 80% or higher. Four students improved from post to delayed-posttesting.



Table 4.12

Tailor-Made Test Scores for Individuals

Student #	Week # 3, 4, & 5	Week #16
	Posttests	Delayed-Posttests
	†(1 point per item)	†(1 point per item)
Student 1	91% (29/32)	88% (28/32)
Student 2	97% (29/30)	90% (27/30)
Student 3	88% (21/24)	63% (15/24)
Student 4	80% (20/25)	72% (18/25)
Student 5	92% (34/37)	97% (36/37)
Student 6	88% (21/24)	92% (22/24)
Student 7	86% (31/36)	89% (32/36)
Student 8	75% (27/36)	89% (32/36)
<b>Average Group Score</b>	87%	85%
	††(1 point for each sentence/ item)	††(1 point for each sentence/ item)
Student 1	87% (75/86)	80% (69/86)
Student 2	89% (74/83)	90% (75/83)
Student 3	91% (57/63)	64% (40/63)
Student 4	85% (56/66)	79% (52/66)
Student 5	92% (83/90)	98% (88/90)
Student 6	82% (49/60)	75% (45/60)
Student 7	80% (68/85)	87% (74/85)
Student 8	66% (56/85)	71% (60/85)
<b>Average Group Score</b>	84%	81%

† for identifying key sentence containing solution (Section 3.6.2.1.1).

†† for identifying solution and errors in each sentence per item.

#### 4.2.1 The Unit Tests and Tailor-Made Tests

There were a total of 244 TMT items for the four dyads. For purposes of comparison with the TMT item scores where a maximum of one point was given, it was necessary to similarly allocate one point for each correct conditional in the test item from the unit (rather than the three points maximum described in section 3.6.). For example, a student was given 3/3 for correctly producing *irions* in the cloze test but was only given 1/1 for purposes of comparison with the TMT item.

Of the 244 TMT items there were 17 that matched with identical conditionals (Appendix P) on the pretests and delayed-posttests from the original unit. The reader is reminded that the same test form was not given at the posttest. On these identical, matched conditionals from the TMTs, the students obtained a total score of 0% (0/17) on the pretest and a total score of 59% (10/17) on the corresponding delayed-posttest 16 weeks later.

Of the 244 TMT items there were 87 that matched with identical features on the original unit's pretests and delayed-posttests. The items with identical features were divided into three types: 1) root of identical verb; 2) third person singular; and 3) third person plural. Examples of the three types follow. Student 5 talked about the root in *voudraient*. The corresponding item with the identical feature in the unit's test was *voudrions*. Students talked about the third person singular inflection in a specific conditional such as *marcherait*. The corresponding item with the identical feature in the unit's test was any conditional with an *-ait* ending. Similarly, students talked about the third person plural ending (*-aient*) in a specific conditional and the corresponding item was any conditional with such an ending.

On all 87 items the students improved their total score from 9% (8/87) at pretesting to 48% (42/87) at delayed-posttesting 16 weeks later. The results of the three types are presented in Table 4.13. The students demonstrated more improvement on the items with identical conditionals compared to items with identical features. With regards to identical features the students showed the most progress with identical roots (79%) and the least progress with third person singular conditionals (38%). Individual results are presented in Appendix P. All students improved their scores from pretesting to delayed-posttesting.

Table 4.13

Tailor-Made Test Items and Pre and Delayed-Posttests from the Unit

Unit Tests	Week 0 Pretest	Week 16 Delayed-Posttest
A. 17 Identical Conditionals 17/244	0% (0/17)	59% (10/17)
B. 87 Identical Features 87/244	9% (8/87)	48% (42/87)
B. Identical Features/Type		
1) Identical Roots	0% (0/14)	79% (11/14)
2) Third Person Singular	0% (0/40)	38% (15/40)
3) Third Person Plural	24% (8/33)	48% (16/33)

### 4.3 Summary

This chapter has presented evidence of student self-regulation. First, paired *t* tests comparing the pretests and posttests within each group demonstrated that

the study group made gains on all five measures at posttesting whereas the comparison group made gains on one measure. Second, paired  $t$  tests comparing the pretests and delayed-posttests within each group demonstrated that the study group made gains on two measures whereas the comparison group made gains on all at delayed-posttesting. In addition, paired  $t$  tests were performed comparing posttests and delayed-posttests to determine if learning was maintained. There was no significant loss of learning for the study group on the cloze and paragraph measures and there was a gain on one measure for the comparison group at delayed-posttesting. In addition, the analyses of the ANCOVA performed on the three tests from the original unit showed that there were statistical differences in favour of the study group at posttesting only and not at delayed-posttesting.

These results suggest that the intervention which included a focus on dialogues had some positive effect on the study group's learning and that these students possibly generalized some of their knowledge to different conditionals in the unit's posttests. Second, a distinguishing characteristic of this study was the TMT based on the content of the dyad's dialogues. The students in general obtained high scores on the post TMT and maintained high scores on the delayed-post TMTs. In addition, the TMT items matched up with identical items in the unit's pretests and delayed-posttests provided encouraging results. The findings from the TMTs suggest that the talk where students reflected on specific conditionals may have been a source of language learning.

This chapter presented quantitative results of the three tests from the unit measuring general proficiency of the conditional and the TMTs measuring achievement of specific conditionals talked about during the collaborative dialogues. The next chapter will examine the content of the dialogues audiorecorded during collaborative writing tasks.

## **CHAPTER FIVE**

### **COLLABORATIVE DIALOGUES: OTHER-REGULATION IN THE ZPD**

#### **5.1 Introduction**

In accord with the main focus of the study, this chapter presents the analyses of the dialogues occurring among peers during collaborative tasks. The purpose of collecting these data was to obtain evidence regarding what, when and how learning occurs during other-regulation<sup>5</sup> so as to better understand the process of internalization. Evidence was sought through the content of the dialogues and various hypotheses (product and process) suggested by the students. The data from the dialogues will be related to the tests (production) in the following chapter. The data discussed in this chapter address the following research questions:

What linguistic knowledge do peers co-construct during CDs (other-regulation) related to the conditional?

During other-regulation do peers co-construct accurate linguistic knowledge related to the conditional?

---

<sup>5</sup>"Research in sociocultural theory has revealed certain important properties of the externalized forms of one's inner speech, which have come to be known as private speech, ..." (Anton & DiCamilla, 1998, p. 317). Private speech is for cognitive purposes. However, "speech intended primarily for self can also function to inform or direct a co-participant and thus play a significant role in how the interaction proceeds" (Wells, 1998, p. 349). Some of the talk that goes on in these CDs is probably private speech and therefore self-regulation. Although, DiCamilla and Lantolf (1994) have empirically identified private speech, as discussed in Wells (1998), private speech may simultaneously well serve a social function. Thus for purposes of this thesis all talk occurring in a collaborative frame is considered to be other-regulation. As further discussed in chapter 4, all tasks occurring in an independent setting with no assistance from external resources is considered to be governed by self-regulation.

The present chapter has the following sections. A qualitative description of the coding of the content of the recorded dialogues is given; then quantitative results are presented. First the definitions of conditional-related exchanges and conditional-related episodes are presented. The three categories of conditional-related episodes are next defined: formal features, tense selection and lexical meaning. Second, there is a quantitative description of the content of the dialogues with regard to formal features, tense selection and lexical meaning. Coding procedures and their corresponding reliabilities are included. Third, a quantitative analysis of the peer dialogues examining accurate solutions is undertaken. This is followed by other observations of the dialogues and a summary of the chapter. A description of the conditional will be given initially as background for the three categories.

## 5.2 Description of the Conditional

The conditional is traditionally referred to as a mode (Grevisse, 1990; Ollivier, 1993) but it is now considered by some a tense (Grevisse, 1990; Hawkins & Towell, 1997). The present and past tenses of the conditional mood are now respectively referred to as "conditional and compound conditional (conditional perfect)" (Hawkins & Towell 1997, pp. 233-234, 238-239). Reference grammars use various terminology in differentiating these two tenses: *conditionnel présent*, *conditionnel passé* (Grevisse, 1990; Ollivier, 1993); or *conditionnel*, *conditionnel passé* (Kendris, 1982). The teaching unit in this study used the latter terms (Day, Collins, & Rioux, 1989). The table in the *Bescherelle*, the verb-reference book used by the students during the intervention, lists the verbs under the heading *conditionnel, le présent* and *le passé* (1998). The term conditional, in this investigation refers to the present conditional.

Clark (1985) described the conditional as follows:

The conditional is generally used in main clauses for *tempus irrealis*, whether in the future, present, or past. It can be used for describing supposed facts in general (things one's heard tell) even when they are not dependent on prior conditions, and for purpose where that is dependent on potential facts or conditions. It can be used for the indignant rejection of imputations, for the description of imaginary situations (daydreaming or fiction), and for polite (attenuated) requests. (p. 696)

The unit of study presented to the students dealt exclusively with the hypothetical meaning of the conditional.

### 5.3 Conditional-Related Exchanges

To code the data, conditional-related exchanges (CRXs) and conditional-related-episodes (CREs) were identified. The definition of CRXs was derived from that of language-related episodes (LREs) in the studies of Kowal (1997), Kowal and Swain (1994) and Swain and Lapkin (1995, 1997). The students' dialogue might involve 1) talking about the conditional they were producing, 2) questioning their own or their peer's use of the conditional, or 3) self- or peer-correcting the conditional (Swain & Lapkin, 1997). For purposes of this study, a CRX was defined as the entire portion of dialogue in which the conditional form of one specific verb was the focus of the talk.

A CRX begins at the point in the dialogue where a particular conditional form is introduced. It ends once the problem or problems for the specific conditional verb have been resolved or abandoned. This could be in a context where the conditional is not appropriate. Within a CRX there may be no significant interruptions in the discussion of one specific conditional, although a CRX could include one or more CREs as explained below. Some CRXs were short,

a few words, and others consisted of many sentences; hence the number of CRXs cannot be a basis for inferring the total time spent talking about conditionals. There were also some CRXs leading to new CRXs: that is, talk about a specific conditional could be interrupted by talk about a different conditional; then there might be a continuation of talk about the original conditional; hence three CRXs. Many CRXs were preceded or followed by other language-related episodes (as observed in Kowal, 1997; Swain & Lapkin, 1995).

### **5.3.1 Conditional-Related Episodes**

A conditional-related episode (CRE) was defined as a segment of a CRX in which talk about a specific conditional related to one of three categories: formal features, tense selection or lexical meaning. The first two categories represent a differentiation of form-based (Swain & Lapkin, 1995) or grammatical-based episodes (Kowal, 1997; Kowal & Swain, 1994). It became apparent, as I identified the CREs, that the form/grammatical category was rather broad for purposes of this study which is concerned solely with the conditional. That is, this latter category included any talk about a specific conditional not entailing its specific, lexical meaning. Unlike previous investigations examining various grammatical features, the dialogues under examination pertained not only to a single tense but to a single meaning of a verb tense. The single meaning of the conditional tense considered in this thesis--used when talking about an imaginary situation--provided the opportunity to analyze talk related to the conditional, in more depth. Redefining the form/grammatical category allowed clear differences in the grammatical content of the dialogue to be taken into account. My rationale and procedure in developing the categories is described in Appendix Q.



Each CRX may contain one or more CREs, and each CRE is in one of three categories. The substance of the dialogues varied from being implicit to explicit. This issue will be briefly discussed in section 5.5.1 and some examples will be presented in each category. A detailed description of each category is now given; corresponding examples follow. Transcription notations are found in Appendix T. The reader is reminded that students' errors are reproduced in the transcripts and text.

#### 5.3.1.1 Formal Features

The CREs based upon formal features involved the use of or discussion about a particular formal feature of the conditional: regular or irregular root of a verb, infinitive verb ending, subject-verb agreement, number agreement, or orthography. This sometimes led to a search for the form in the *Bescherelle*. This verb reference book provides the correct form of the conditional but does not assist the student in actually choosing to use the conditional tense or providing the specific meaning of the conditional. In explicit talk, the formal features of the conditional were sometimes contrasted through metatalk and concrete examples. In implicit talk, the students might only provide the correction with no explanation.

Example 5.1 presents an explicit CRE concerned with the formal features of *on vivrait* (one would live). The students wrote *On vivrait sur les légumes et les fruits qui pousseraient ...* (One would live on vegetables and fruits that would grow...) in their initial draft. Two days later the teacher asked the students to revise this draft. Student 3 read the error, *vivrait*, and then suggested and wrote the correct solution (line 01) with her co-participant's approval (line 02). The

students corrected the error by dropping the -e- in *viverait*, and writing *on vivrait* as required for the -re verb *vivre*.

This conditional was noticed again by the dyad five days later. In this joint revision session the students did not ignore this correction. The -e-, although crossed out, was still visible in the draft. Student 3 read *On vivrait* (line 03). Both simultaneously said part of the root, *On viv* before Student 4 asks a question (line 05) in which two words are inaudible. However, it appears that the dyad agrees with what they wrote during the previous dialogue (line 01) as no changes were made.

*Example 5.1 CRE: Formal Features*

- 01 S3: "Nourriture: On viverait" vivre **so it's vivrait wouldn't it?** (writes vivrait)  
 02 S4: **Yah.**

Five days later:

- 03 S4: "Nourriture: On vivrait" On viv  
 04 S3: On viv  
 05 S4: **We already ~~xx~~ didn't we?**  
 06 S3: *viver, oui* (left vivrait)

Orthography discussion was included in the classification of formal features-based CREs but identified and counted separately. Orthographic-based episodes included talk about spelling issues such as accents. In the following example, the students are proofreading another dyad's text where the root of *pouvoir* is spelled incorrectly (*pourait*). They decide to correctly add an additional -r- although they do so with uncertainty (01-04).

*Example 5.2 CRE: Formal Features (Orthographic)*

- 01 S2: ... ( proofreading peers' text) "On pourrait" "pourait" **with 2 -r-'s isn't it?**  
 02 S1: **Uh I don't think so.**  
 03 S2: Non?  
 04 S1: **I don't know. I'll just put another -r-.**

5.3.1.2 Tense Selection

This category of CREs involved the selection of the conditional tense or talk related to the Si rule. The question in such a case for the student was, "Do I use/not use the conditional in the given circumstance?" Students sometimes know what they want to say (meaning) or how to form and conjugate the conditional correctly (formal features) but may not necessarily be able to link the two pieces of information to this category. That is, in tense selection-based episodes students are deciding whether they should select the conditional to get their intended message across accurately. The categorization of tense selection is based on talk in which the conditional was contrasted with other verb tenses and moods in order to decide on its use or nonuse. The present, future, past, conditional, compound conditional and subjunctive were actually used as metalinguistic terminology or actual examples were produced. Talk about or the use of the Si rule might accompany this talk. Comments by Student 7 illustrate talk related to the Si rule:

**Um remember it has to be Si + imparfait + conditionnel. So it's "Si les gens gaspiraient".....**

The verbalizations in tense selection CREs, as in other categories, could be explicit or implicit. In explicit talk, the various verbs were contrasted through metatalk or concrete examples of the tenses or moods such as in Example 5.3

below. In implicit talk, the correction could be simply given with no explanation. Two tense selection-based CREs follow. In Example 5.3, Student 5 and the substitute co-participant (S25) were involved in a task where they were to find and correct errors in a given text which describes an imaginary space colony. They correctly changed the written future of the verb *falloir* (to need), *faudra*, to a conditional *faudrait*, whereupon Student 5 engaged in some metatalk in line 7.

*Example 5.3 CRE: Tense Selection*

- 01 S25: "mais il" (*faudra* is the next written word not read aloud at this point)  
faudrait- **Wait**- "L'oxygène serait en abondance mais il *faudra*"  
02 S5: Mais quoi?  
03 S25: ... C'est il, **I guess**.  
04 S5: Ici. (laugh) **Et il faudrait**,  
05 S25: faudrait il *faudrait*  
06 S25: il *faudrait*  
07 S5: parce que c'est conditionnel c'est conditionnel, pas futur. **Right**  
08 S25: **Right!** ...

In Example 5.4, students wrote a draft of a description of their imaginary space colony in which they suggested three verb tenses as alternatives: the present (*doit*), the future (*devra*), and the conditional (*devrait*). In response to Student 1's suggestion of *devrait* (line 05), Student 4 said, "Yah, *conditionnel*." There appeared to be consensus that they had co-constructed the correct solution as this is what Student 1 wrote in the draft.

*Example 5.4 CRE: Tense selection*

- 01 S1: **Okay something about respecting the environment.**  
02 S4: Sur cette planète on doit respecter l'environnement ...  
03 S1: (Sur) *cette nouvelle planète*  
04 S4: **Mmhm**  
05 S1: on *devra* - *devrait* *devra*? *devrait*  
06 S4: **Yah, conditionnel**  
07 S1: *devrait respecter l'environ-* (*wrote environnement*) ...

### 5.3.1.3 Lexical Meaning

The lexical meaning-based CREs, derived from past studies (Kowal, 1997; Swain & Lapkin, 1995), exclusively involved talk in which students searched for a lexical item. Within the category, two types were identified for use in this study. The first is similar to what Celce-Murcia and Larsen-Freeman (1999) have included as the lexical component of their broader meaning category, which they refer to as "a dictionary definition" (p. 4). In Type 1 students checked the meaning of a particular conditional by, for example, explaining or translating its specific meaning in French. They often translated the conditional from English into French or vice versa. It should not be assumed that the learners always translated correctly or only once. In Type 2 the students chose a specific lexical item amongst various lexical items (which were all conditionals) to get their intended message across. Types 1 and 2 overlapped in some CREs. For either type, however, the dominant characteristic of the talk was consideration of the lexical meaning of the specific conditional the speaker wished to convey. Examples of the two types of lexical meaning-based CREs follow: 1) verification of the meaning of the conditional and 2) lexical choice.

In Example 5.5 below, students read aloud the first draft of the first dictogloss for editing purposes. They were questioning whether what was written in French, "*pourrions vivre*" is rendered in English by "could (would be able to) live" (*pourrions vivre*) or "would live" (*vivrions*). In this case either is acceptable, but the correct translation is, "could live".

*Example 5.5 Lexical Meaning-Based CRE: Checking of Meaning (Translation)*

- 01 S1: "Nous devons trouver un nouveau endroit où nous pourrions vivre."  
 (pause) Si nous allions à une autre planète, nous devr-" **Oh! I xx**  
 [sounds like, shouldn't be] **reading this in French. Okay. We will have**  
**to find a new place where we would where we could live.**
- 02 S2: where we where would could live...

In example 5.6, Students 5 and 6 made a lexical choice from three conditionals generated; *je jetterais* (would throw/cast), *je lancerais* (would throw) and *j'aurais* (would have). Their discussion did not focus on how to form or whether to use the conditional in this context.

*Example 5.6 Lexical Meaning-based CRE: Lexical Choice*

- 01 S6: **Okay. je- si**
- 02 S5 (writing dialogue for comic strip) Si j'avais du temps je
- 03 S6: Je jetterais une parté. How do you say like 'throw a party, I'll (did not say I would) **throw a party** (addressing R. in room, but not beside them).
- 04 S5: Je me lancerais une **party**.
- 05 S6: une fête
- 06 R: lancer (demonstrating action of throwing a ball)?
- 07 S6: jetterais?
- 08 S5: lancerais une
- 09 S6: Je
- 10 S5: J'aur-
- 11 S6: J'aurais une fête.
- 12 S5: **Uh, oh** (frustration with ?)
- 13 S6: **Just write j'aurais une fête.**
- 14 S5: **Okay, Si j'avais**
- 15 S6: du temps
- 16 S5: le temps
- 17 S6: **Okay, Si j'avais le temps je j'aurais un fête avec mes amis.**
- 18 S5: **Okay...**

### 5.3.2 Multiple Exchanges: Further Definitions

As explained above, CRXs included up to three categories of CREs. The CRXs including one, two or three categories of CREs were respectively identified as single-, double-, and triple-CRXs. The preceding examples were single-CRXs consisting of only one CRE. Within a given CRX, the categories of the CREs might be in any given sequence. Examples of a double- and triple-CRX follow.

#### *Example 5.7 Double-CRX: Formal Features and Tense Selection*

- 01 S25: "...Tous les maison auraient l'eau qui coule dans leur maison et ils recevraient autant fruits et legumes qu'il veulent."  
 02 S5: vou- veul- vau-vaudraient **or something** parce que ça c'est xx ça devrait être-  
 03 S25: **Oh yah!**  
 04 S5: qu'ils veud- vaudraient **something like that**  
 05 S25: **Yah something like that.**  
 06 S5: **Vouloir is the verb I think.** (pages being turned in *Bescherelle*, reading infinitives of verbs found at the top of the page) "vouloir, valoir ou vouloir", (which is on) **page 48.** Okay, qu'ils "voudraient" **Oh! that one is easy.** (both laugh)

In Example 5.7, students were involved in talk about the selection and formal features of the conditional tense. The students proofread another dyad's plan of their imaginary space colony where the present tense of *vouloir*, *veulent* is used in the written text (line 01). Student 5 suggested a change from the present to the conditional (line 02) by attempting to produce the conditional stem, using the correct conditional ending, *-raient*, and giving her reason which is partially inaudible. It appears the students reached a consensus that the conditional is the appropriate tense (line 03) to use as this is what they examined in the *Bescherelle*. They hypothesized about how to form the stem of *vouloir*, which has an irregular stem (lines 02, 04, 05), before undertaking a search for the conditional form (line 06) in the *Bescherelle*.

Example 5.8 is a triple-CRX where the students linked the tense selection, lexical meaning and formal features of the conditional of *appartenir*. The students were proofreading another dyad's draft of their imaginary space plan.

*Example 5.8 Triple-CRX: Lexical Meaning, Formal Features, and Tense Selection*

- 01 S5: "BienVenu à (reads à for au) planet imaginaire qui a- (slight hesitation in reading) ppartien"  
 02 S25: "à S4 et S3. En bas nous montr-"  
 03 S5: Est-ce que- Est-ce je pense que ça devrait être um au conditionnel parce que cela n'a appartient pas à elles encore.  
 04 S25: **Oh yah! Okay.**  
 05 S5: x appartient (pages being turned)  
 06 S25: (appar is beginning of word not read) ti enne (pronunciation is sienne), right?  
 07 S5: Probablement mais je dois voir qu'est-ce-que- appart- qu'est-ce que c'est le verbe? appart- ient, appartient. (long pause, looking in *Bescherelle*). 23, **Oh! Okay**, appartenir, appartiendrait/aient\*\*. Est-ce que c'est pluriel ou singulier?  
 08 S25: Pluriel  
 09 S5: appart-, *appartiendraient* "à S4-"  
 10 S25: xx (sounds like, be singular) **because the planet is what-**  
 11 S5: **Oh yah!**  
 12 S25: **wants to um - the planet is singular.**  
 13 S5: **Okay** (crosses out *appartiendraient*), **so appartiendrait, -a-i-t- Okay.** "à S3 et S4."

The characteristic of an episode based upon selection of the conditional is apparent when Student 5 chose the conditional to replace the verb *appartien* in another dyad's draft. Student 5 explicitly said it should be in the conditional (line 03). She subsequently justified her choice by attempting the definition of the specific conditional, *appartenir*, in French, "parce que cela n'a appartient pas à elles encore (the planet doesn't belong to them yet)," in an imaginary context (line 03). Finding *appartenir* in the *Bescherelle* and then asking the partner whether it should be singular or plural indicates a formal features-based CRE (lines 07-13).

The content of the CRXs has been described in relation to the co-construction of linguistic knowledge related to the formal features, tense selection



and lexical meaning of the conditional. A quantitative analysis of the identification and categorization of the CRXs follows.

## **5.4 Identification and Categorization of CRXs and CREs**

### **5.4.1 Percentage Agreement: Identification**

I met with my bilingual francophone coder to discuss the three categories of CREs that she had examined. The coder had some experience working with language-related episodes as a research assistant in the Output Project (Swain & Lapkin, 1998). The rater applied the criteria in relation to a set of transcripts. We discussed our coding. When the rater felt she had a sense of the rationale of the categories, she was asked to identify and categorize CREs in a completely different set of dialogues consisting of just over 20% of the transcripts including various tasks and dyads. She indicated that, from her previous experience, having the students' written work might be helpful in deciphering the dialogues.

At a later date I compared the rater's coding of the transcripts (which included 25% of the total number of CRXs) to the same set of transcripts which I had analyzed. I identified 55 CRXs, and the rater identified 51, of which 48 agreed with my identification. The percentage agreement obtained in the identification of the CRXs without reference to category was 87% (48/55).

#### **5.4.1.1 Resolving Discrepancies: Identification of the CRXs**

Discrepancies arose in 7 CRXs that were identified solely by me and three CRXs identified by the rater. In reexamining the coding, it became apparent there were only a few minor problems affecting the reliability of the CRXs. Particular CRXs might not have been identified if the rater had been working with

the transcripts alone and not referring to the written work. In addition, if the exact beginning or end of the CRX was slightly different from mine, the extra data might include an important piece of information needed to code an additional category.

#### **5.4.2 Percentage Agreements: Categorization**

The rater categorized 44 CRXs. She had questions or comments regarding 4 of the 48 CRXs she identified; as a result she did not categorize the CREs in these cases. Both reliabilities related to the CRXs follow. The percentage reliability obtained in the categorization of the 48 CRXs (including the 4 the rater did not attempt to classify) identified was 73%, i.e., the rater classified 35 of the 48 CRXs in identical categories. The percentage reliability obtained in the 44 CRXs that were categorized was 80%, i.e., the rater classified 35 of the 44 CRXs in identical categories.

##### **5.4.2.1 Resolving Discrepancies: Categorization of CREs**

As for categorization of the CRXs, double-CRXs accounted for 85.7% (6 of the 7 CRXs) of the discrepancies. The rater had identically coded the dialogue in the category of formal features but had not identified the second category of tense selection. In addition, I agreed with the rater regarding 2 CRXs she categorized differently from me. There was a discussion and refinement process, detailed in Appendix R, which continued until we reached close to 100% agreement on these CRXs. The satisfactory interrater reliabilities coupled with our final discussion led me to consider the definitions of the three categories as adequate. Our discrepancies, I believe, were not due to the definitions as such, but rather due, in part, to the complexity, subtlety or density of the dialogues.

### 5.4.3 Group Results

The CRXs were identified. A CRX was labelled as a single-, double-, or triple-CRX. This labelling depended on the number of categories (formal features, tense selection, and lexical meaning) related to the same verb within the CRX. The quantitative results of the identification of the CRXs and categorization of the CREs are now discussed first in relation to the study group and then at the dyad level.

#### 5.4.3.1 Identification of CRXs

There were 266 CRXs identified, of which 263 were categorized in the dialogues, during approximately eleven hours of class time spanning four weeks. There were 3 CRXs which I did not categorize because I deemed them too vague. Table 5.1 shows that the four dyads were involved in 194 single-CRXs, 56 double-CRXs, and 13 triple-CRXs. There were 194 single-CRXs: 80 formal features-based (including 13 orthographic), 71 tense selection-based and 43 lexical meaning-based. Of the 56 double-CRXs identified, 34 included both tense selection and formal features. There was a total of 13 triple-CRXs. Double- and triple-CRXs accounted for 69 of the total number of 263 indicating that students were linking two of the categories, if not three, at least 26% of the time.

#### 5.4.3.2 Categorization of CREs

For statistical purposes of categorization, the CRXs were ignored as such, and their CREs were counted by category. For example, a double-CRX with talk about formal features and tense selection, was counted both in the formal features and tense selection categories. To illustrate this point, the students had

a total of 71 single episodes based upon tense selection, but there were 50 double- and 13 triple-CRXs that included tense selection. As a result, the total number of CREs based upon tense selection for all students is 134. CREs will be used for the frequency analyses (Table 5.2) when referring to categorization.

There were 345 CREs categorized: 78 lexical meaning, 133 formal features, and 134 tense selection (see Table 5.2). The average percentage of the various categories is as follows: 23% lexical meaning, 39% formal features, 39% tense selection or approximately 1: 2: 2. Thus the content of all dialogues was dominated by formal features and tense selection; lexical meaning was subordinate. Dyad differences appear in the frequency and proportion of talk related to lexical meaning, formal features and tense selection.

#### **5.4.4 Dyad Results of the Three Categories of CREs**

##### **5.4.4.1 Frequencies and Percentages of CRXs and CREs**

There were temporary changes in partners due to a few absences. The frequency of CRXs in which each dyad was ultimately involved was calculated by adding the sum of CRXs for the two individuals. For example, Student 3 was involved in 37 single-CRXs and Student 4 in 39 single-CRXs so the total for the dyad was 76. Each dyad was involved in a higher percentage of single-CRXs than double-CRXs and a higher percentage of double-CRXs than triple-CRXs. Dyad 7/8 was involved in the highest percentage of triple-CRXs, and Dyad 5/6 in the highest percentage of double-CRXs.

Table 5.1

**Frequency and Percentages of CRXs**

CRXs	Single-CRXs			Double-CRXs			Triple
<b>Total Frequency 263</b>	<b>194</b>			<b>56</b>			<b>13</b>
<b>Total % (100%) *</b>	<b>74%</b>			<b>21%</b>			<b>5%</b>
Categories	Formal Features	Tense Selection	Lexical Meaning	Formal Features Lexical Meaning	Tense Selection Lexical Meaning	Formal Features Tense Selection	Formal Features Tense Selection Lexical Meaning
frequency	80	71	43	6	16	34	13
percentage*	30%	27%	16%	2%	6%	13%	5%

\*Percentages in this thesis which do not total 100 are due to rounding inaccuracies.

**Table 5.2**

**Frequency and Percentage of CREs by type of CRX**

	Single-CRXs		Double-CRXs		Triple-CRXs	
<b>Total CREs 345</b>	<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>
<b>Total Formal Features: 133 (39%)</b>	<b>80</b>	<b>(23%)</b>	<b>40</b>	<b>(12%)</b>	<b>13</b>	<b>(4%)</b>
<b>Total Tense Selection: 134 (39%)</b>	<b>71</b>	<b>(21%)</b>	<b>50</b>	<b>(14%)</b>	<b>13</b>	<b>(4%)</b>
<b>Total Lexical Meaning: 78 (23%)</b>	<b>43</b>	<b>(12%)</b>	<b>22</b>	<b>(6%)</b>	<b>13</b>	<b>(4%)</b>
<b>345 (100%)</b>	<b>194</b>	<b>(56%)</b>	<b>112</b>	<b>(32%)</b>	<b>39</b>	<b>(11%)</b>

**\*Percentages in this thesis which do not total 100 are due to rounding inaccuracies.**

All dyads, regardless of ability, participated in all three types of exchanges. The average percentage of CREs in which each dyad was involved was calculated by adding the sum of the percentages of the CREs for the two individuals and dividing by 2 (see Table 5.3). All pairs had a higher percentage of talk about formal features or tense selection than lexical meaning. The lowest percentages for three dyads were lexical meaning-based CREs.

Table 5.3

Percentage and Frequency of the Three Categories of CREs by Dyad

Dyad	Formal Features		Tense Selection		Lexical Meaning		Total	
	%	f	%	f	%	f	100%	f
1/2	40%	(30)	31%	(23)	30%	(23)	100%	(76)
3/4	61%	(31)	28%	(14)	11%	(6)	100%	(51)
5/6	42%	(36)	50%	(42)	10%	(8)	100%	(87)
7/8	24%	(27)	42%	(47)	34%	(38)	100%	(112)

The frequencies and percentages of the three categories for each student are presented in Table 5.3.1. Students 3 and 4, two average students, had the highest percentage of talk about formal features. The teacher considered Student 5 strong and her co-participant Student 6 weak. This student obtained low scores at pretesting and was absent for some classes. These students participated in the highest percentage of talk about tense selection. In addition, Student 6 obtained scores among the highest percentages of episodes in the formal features category.

Table 5.3.1

Three Categories of CREs by Individual Student

Student	Three Categories of CREs by Percentage and Frequency						Total	
	Formal Features		Tense Selection		Lexical Meaning		100% <sup>a</sup>	f
	%	f	%	f	%	f		
1	38	29	32	24	30	23	76	
2	41	31	29	22	30	23	76	
3	63	31	27	13	10	5	49	
4	59	30	29	15	12	6	51	
5	43	45	49	51	10	9	105	
6	41	27	50	33	10	6	66	
7	24	27	42	47	34	38	112	
8	24	27	42	47	34	38	112	

<sup>a</sup> In this study any percentages which do not total 100 are due to rounding inaccuracies.



Lastly, the highest percentage of CREs related to lexical meaning was obtained by Student 7 and Student 8. Student 7, an average student, and Student 8, a weak student, obtained low pretest scores. Student 7 showed considerable improvement at posttesting. This dyad was involved in the third highest percentage of talk in the tense selection episodes and the lowest percentage of episodes in the formal features episodes.

#### **5.4.5 Accuracy of the Solutions Co-Constructed in the CRXs**

SL practitioners and researchers have questioned the accuracy of input exchanged in small groups. Do students co-construct accurate knowledge related to the conditional during CDs? The proportions of correct and incorrect linguistic solutions that dyads provided each other are investigated to address this research question.

In these peer dialogues, there were more (and many) instances of the co-construction of accurate rather than inaccurate linguistic knowledge. Sometimes in one episode there was a combination of both correct and incorrect explanations or examples given. Data related to correct and incorrect solutions are now presented.

##### **5.4.5.1 Correct Solutions and CRXs**

Two direct sources of data, the CRXs and the related TMTs indicate the degree of accuracy of the co-constructed knowledge and its possible associated benefits. In the dialogues, I noted whether a correct or incorrect solution was reached (see LaPierre, 1994) during the CRX. For purposes of this study, the solution was identified as the last verb written during the particular CRX. Failing

that, the last verb said in the CRX, regardless of agreement or disagreement was coded as the solution. Of 266 CRXs, 213 correct solutions (80%) were found as opposed to 53 (20%) incorrect solutions. The quantitative data indicate that the students in this study clearly did provide accurate solutions to each other during their collaborative work. Of the 53 incorrect solutions reached in the CRXs, a few were discussed at a later date by the same dyad. Some of these incorrect solutions were changed to correct solutions in subsequent related CRXs. Providing additional opportunities to reexamine written work gave these students the possibility to notice or correct an error and thus improve linguistic accuracy.

#### 5.4.5.2 Correct Solutions and Tailor-Made Test Items

The second source of evidence of the possible linkages between the CRXs and the internalization of linguistic knowledge comes from an analysis of the results of the TMTs in relation to the CRXs. As noted above, I identified whether a correct or incorrect solution had been reached in the CRXs. In addition, I identified whether a solution was ultimately found for the verbs which were talked about more than once during the course of the intervention. I recorded the dyad's final decision. There was a total of 244 TMT items based on 266 CRXs of all four dyads. The students ultimately decided upon a correct solution 84% (205/244) of the time during the corresponding 266 CRXs. They decided upon an incorrect solution 13% (32/244) of the time or did not resolve the problem in 3% (7/244) of the instances (see column 1 of Table 5.4).

There are three findings of relevance when the CRXs are compared to the results of the TMTs. The students were asked to identify the correct answer (amongst a set of sentences) in each item. One point was calculated for each key correct sentence in the 244 items (whether they had come up with the solution or

not in the CRX). First, of the 205 items where a correct solution was reached during the dialogues, the students scored above 90% in both testing sessions: (93%, 190/205 in their post and 91%, 186/205 in their delayed-post TMTs. (See row 2 in Table 5.4.)

Second, the learners changed their incorrect negotiated solution to a correct answer 50% or more of the time in the TMTs. The students scored 50% correct (16/32) in the posttest on the 32 items in which an incorrect solution was negotiated during the CRXs (See row 2 in Table 5.4). The students adhered less often to their incorrect solutions in the delayed-post TMTs, scoring 56% (18/32) (See row 3 in Table 5.4). Third, in the small number of items where the final solution was not resolved in the CRXs, the students scored 86% (6/7) in both post and delayed-posttests thereby changing their unresolved CRXs to correct answers (see row 4 of Table 5.4).

**Table 5.4**  
**Solutions Co-Constructed in Collaborative Dialogues and Corresponding Responses in 244 Tailor-Made Test Items**

Solutions in Collaborative Dialogues	Week #3, 4, or 5 TM Posttests	Week #16 TM Delayed-Posttests
Correct Solutions 84% (205/244)	Correct Responses in Tests 92.7% (190/205)	90.7% (186/205)
Incorrect Solutions 13% (32/244)	50% (16/32)	56.2% (18/32)
Unresolved 3% (7/244)	85.7% (6/7)	85.7% (6/7)

A possible interpretation for the relative success of the specific items whose solutions were incorrectly negotiated or unresolved in the CRXs is that the learners had generalized and applied some of their newly internalized linguistic knowledge from the many CRXs where correct solutions and linguistic knowledge were co-constructed related to the conditional. In addition, the numerous (205) correct solutions negotiated in the dialogues suggest that the conditional was high in the learners' ZPDs and partially internalized. Comparisons of the findings for these three types of categories must be interpreted with some caution due to the large difference in frequencies in the three groupings (i.e., only 7 unresolved as opposed to 205 correct solutions). However, based on these data, students adhered to their correct or incorrect solutions from the negotiations in 87% (206/237) of the total answers in the posttest and 84% (200/237) in the delayed-posttest.

#### 5.4.5.3 Correct Linguistic Knowledge in the Tailor-Made Tests

A third source of evidence related to the possible associated benefits of accurate co-constructed knowledge is obtained from comments written by the students in the space provided after each TMT item (see Figure 3.2). Some of the talk which took place during other-regulation manifested itself in these comments. A perusal of the data showed many instances of accurate input. These responses gave some indication of metalinguistic knowledge and suggest that the students may have consolidated and internalized knowledge and subsequently applied it as a result of the dialogues.

## 5.5 Dialogues: Additional Observations

### 5.5.1 Explicit Versus Implicit Peer Talk

As briefly mentioned in the section describing the CREs, talk amongst peers could be generally described as being explicit or implicit. Students' comments in one CRX could include varying quantities and qualities of implicit and explicit comments (Table 5.5). The most explicit talk consisted of metalinguistic terminology related to the formation and rules of the conditional and translations of specific examples of verbs. Examples have been given (Examples 5.1 and 5.4) to illustrate these characteristics.

Table 5.5

#### Characteristics of the Students' Talk

<b>Implicit Comments</b>	<b>Explicit Comments</b>
Lacking Metalinguistic Terminology	Use of Metalinguistic Terminology
Lacking Examples of Conditionals	Use of Examples of Conditionals
Lacking Translations	Translations
Vague Comments	Precise Comments
General Comments	Specific Comments
e.g., sounds right, looks right, makes more sense	e.g., <i>-aient</i> is plural
Ambiguous	Clear Explanations/Examples

In more implicit examples students engaged in different types of responses. They omitted the metalinguistic talk or the example, opting to provide just one

piece of information as in: "It's *serait* and not *est*." They sometimes only provided the correct formal features. Sometimes one student made a comment while the other made a change to the existing written formal features.

With regard to specific choices made by the dyad, responses varied. The students made comments such as "Looks good/right," "sounds right," "makes more sense," "looks better than before," if they thought their choice was right. If they thought their decision was wrong or they were unsure they said, "I don't know about that," "doesn't sound right," "doesn't look right," or "there's something wrong in that sentence." If the conditional was not identified in their CRX, these comments became more vague as indicated by the fact that I, the transcriber, sometimes did not know exactly to what the speaker was referring. The same might be occurring to the co-participant listening to the CRX. For example, is the student referring to the verb or the general idea of the sentence when she says, "It makes more sense."

In the most extreme cases there were no comments. Perhaps the situation evoked no need for the student to articulate her thoughts; changes were simply written. To illustrate the point, particular students read an incorrect verb followed by a pause in the dialogue. Judging by the sounds of writing in the recording and/or the written work, the students subsequently made changes. These instances were identified as "no dialogue" and were not included in the CRXs.

### **5.5.2 Qualitative Observations on Expression and Behaviour**

The students used different tones of voice when sharing knowledge with their partner. Their verbalizations were assertive, exclamatory and questioning and might reveal their certainty or doubt. Certainty could be revealed with intonation that expressed "Eureka!" The students expressed uncertainty: "I'm

not sure" and "I don't think so" were frequently heard. Doubt or uncertainty was expressed not only through words but through repeated reading, a questioning intonation or a hesitation before reading a sentence or a verb. Similarly, a word could have a different meaning with a different intonation. There is a difference between, "Okay. Okay! and Okay?" and "*irions* and *irions*?" At times, they asked for their co-participant's opinion or help. "Are you going to help?" or "What do you think?" are some examples. Audiotaping did not allow investigators to see facial expressions and body language leaving gaps in the evidence of these behaviours.

### **5.5.3 Experts in the ZPD: Print and Human Resources**

According to a Vygotskian perspective, an expert is needed to offer assistance to the novice learner. Resources in the learning environment included print materials and people. Observations and transcripts showed that students often referred to secondary resources such as dictionaries and the *Bescherelle*. Not all problems could be resolved with the *Bescherelle*. Students could look up the correct form of the conditional but not determine its appropriate use in a specific context. These transcripts and my observations suggested that grammar notebooks where the students had written rules about the conditional during the introductory classes, as well as the wall charts of verbs, were not used by these eight students as resources.

Peers relied upon each other during the CDs as they co-constructed linguistic knowledge. Whether in agreement with each other or not, they did not always reconfirm their solution with a resource. The point in time the participants chose to consult a resource varied. Sometimes, displaying varying degrees of intensity of frustration, a resource was consulted when they could not resolve their linguistic problems together. Other times, they took advantage of an

opportunity, such as the presence of another peer or the teacher. To some, the teacher was the ultimate expert: "He's right. He's the teacher" (Student 6). There was even a reference by one student to what the former Grade 7 teacher had said the year before, though it was inaccurate.

## 5.6 Summary

Through dialogues a rich description emerged of the linguistic knowledge that peers, even two novices in relation to the conditional, provided each other. All learners in this study did, under the conditions described, co-construct linguistic knowledge for each other during their collaborative work. The content of the dialogues indicated that all students of varying abilities participated in episodes from all three categories. Student 5, a strong student was among those involved in the most talk about the selection of the conditional tense and the least talk about lexical meaning. Dyad 7/8, an average and weak student, were involved in more talk about lexical meaning and less talk about formal features than other dyads.

The length of the CRXs varied from a few words or sentences to longer periods of sustained conversation. The data indicated that the majority of the talk was based on the formal features or the tense selection of the conditional. Although the students talked about formal features or tense selection more than lexical meaning, their talk was also strongly connected to the message they wished to convey. Despite the high number of single-CRXs, students linked two or three of the categories 26% of the time as indicated by the frequency of double- and triple-CRXs.

Most of the solutions and linguistic knowledge talked about were accurate thus providing positive input and negative feedback related to the conditional.



What was discussed, however, was occasionally inaccurate, confusing, or conflicting. The students were successful at completing most of the TMT items based upon the content of their CRXs in posttests and maintained this success in the delayed-posttests. Talk about the conditional among peers could be described as being explicit or implicit. In explicit talk, there was extensive use of metalinguistic knowledge related to the formation and rules of the conditional as well as examples or translations of specific verbs. In implicit talk, students omitted pieces of the explicit metalinguistic talk, providing more vague or general comments. The students used different tones in their voices in sharing information with their co-participant. Their verbalizations were assertive, exclamatory, or questioning and had to be interpreted with the corresponding tone which could reveal their certainty or doubt. The observations and transcripts revealed that during dialogues, students referred to other experts such as their *Bescherelle*, dictionaries, other peers, and the teacher rather than wall charts of verbs or their grammar notebooks.

This chapter has presented the results of the quantitative analyses related to the content of the dialogues amongst peers. The interactional data show what kinds of linguistic knowledge peers co-construct and provide each other when engaged in writing tasks. The next chapter presents a microgenetic and macrogenetic analysis of one double-CRX and one triple-CRX in order to describe the development of linguistic knowledge related to one conditional over the four-week intervention period.

## **CHAPTER SIX**

### **COLLABORATIVE DIALOGUES: MOVEMENT TOWARD SELF-REGULATION WITHIN THE ZPD**

This chapter will focus on dialogues and provide a description of the internalization of linguistic knowledge related to *nous irions*. These data are analyzed microgenetically, that is, the development of *irions* is seen as it unfolds over a period of seconds, minutes and hours. There is an examination of how students rely upon each other to co-construct linguistic knowledge, within the process of internalization. This process is understood within a sociocultural theory of mind, and the following research questions, in relation to one conditional, are addressed.

During CDs (other-regulation) what linguistic knowledge do peers co-construct with respect to the French conditional?

During other-regulation, do peers co-construct accurate linguistic knowledge related to the French conditional?

The qualitative analyses of the relevant conditional will take into consideration the actual use of *irions* and all talk about *nous irions* manifested during two CRXs. The students' spoken and written utterances will be simultaneously examined as process and product: as "saying" and as "what is said" (Swain, 2000; Wells, 1998) to examine the role of CD in SLL. Two CRXs related to *nous irions* will be analyzed in order to provide insights

into how, what and when learning has or has not occurred. The CRXs, considered in conjunction with the tests in the next chapter, demonstrate movement of each student along a regulatory scale from other-regulation, according to the evidence from the pretests and CRXs where a solution is not reached, towards self-regulation, according to the evidence from the CRXs and the tests where a solution is reached.

First, the five levels of transition from other-regulation to self-regulation in the ZPD are described. The levels of transition in the ZPD provide not only a description, but a tool for assessment of learning. Two CRXs are contrasted: the double-CRX in which a solution is not co-constructed and the subsequent triple-CRX where students succeeded in correcting this error. An assessment of the internalization of linguistic knowledge, both accurate and inaccurate, is analyzed in relation to the ZPD.

### **6.1 Five Levels of Transition in the ZPD: Other- to Self-Regulation**

The five levels of transition in the ZPD<sup>6</sup> were adapted from a previous study (Aljaafreh, 1992; Aljaafreh & Lantolf, 1994) and modified for peer interaction. This assessment was applied separately to linguistic knowledge in three categories: formal features, tense selection and lexical meaning. In the lowest level of other-regulation, there is no development of specific linguistic knowledge; the learner's attention is still dominated by the objects in the environment (De Guerrero & Villamil, 1994). In this form of other-regulation, development of a specific conditional is incomplete and linguistic knowledge is intermental. In self-regulation, development of an aspect of the conditional is complete and automated, and linguistic knowledge is intramental (Aljaafreh, 1992; Aljaafreh &

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<sup>6</sup> The analysis of progression through use of the five levels of transition (adapted from Aljaafreh, 1992; Aljaafreh & Lantolf, 1994) through the ZPD is exploratory in this study.

Lantolf, 1994) at that particular point in time. A learner lacking self-regulation will demonstrate therefore, in respect to the present evidence considered, other-regulation (see footnote #5, p. 83). The levels were operationalized according to varying degrees of three criteria: 1) having/not having assistance, 2) recognizing the relevant conditional or noticing an error, and/or 3) producing the relevant conditional or correcting the error. The five levels are briefly described below. Table 6.1 is provided as a summary.

### **6.1.1 Level One**

The learner does not notice the relevant linguistic feature or notice the error even with assistance from her peer. The learner has no awareness that there is a problem or apparently does not have sufficient knowledge to respond to the peer's help (accurate or not). There is no evidence, in the given moment, of development. For purposes of this study, we say this is the lowest level of other-regulation based on students, alone or together, failing to reach an accurate solution according to evidence from the pretests or CRXs. Noticing or producing the specific conditional is not within the learner's ZPD.

### **6.1.2 Level Two**

In level two, as compared to level one, noticing is present and there are the beginnings of other-regulation. The learner, with accurate or inaccurate peer assistance, notices the relevant linguistic feature or error and queries it but cannot produce the conditional or correct the error. Noticing of the specific conditional may be in the learner's ZPD at a low level. In general, there is evidence of some development although the learner is apparently other-regulated.

### **6.1.3 Level Three**

The learner notices an error and/or produces the relevant correct linguistic feature with peer assistance. The learner goes beyond mere recognition and shows some signs of reacting to or sharing knowledge. This collaboration may lead to the co-construction of linguistic knowledge. The conditional is within the learner's ZPD, and its specific linguistic knowledge is intermental. The learner appears to be other-regulated.

### **6.1.4 Level Four**

The learner notices an error and/or produces the relevant linguistic feature with minimal (or no obvious) peer assistance. Knowledge is not yet fully intramental; noticing or production is still variable. As above, this collaboration can lead to the sharing or co-construction of linguistic knowledge. The specific conditional is in the learner's ZPD at a high level, i.e., imminently to be incorporated into the learner's intramental knowledge and skills. The learner shows signs of being partially self-regulated.

### **6.1.5 Level Five**

The learner notices or produces the relevant conditional or corrects an error with no peer assistance. The specific conditional is automated, and noticing and/or production is consistent. That is, the student produces the linguistic feature (or explains the correction or the error) or notices errors and corrects them without

Table 6.1 Five Levels of Transition in the ZPD

Distinguishing Characteristics	1 Other-Regulated	2 Other-Regulated	3 Other-Regulated	4 Partially Self-Regulated	5 Self-Regulated
noticing of conditional or error with or without intervention	no (with/without intervention)	yes (with intervention)	yes (with intervention)	yes (minimal or without intervention)	yes (without intervention)
production of conditional/correction of error with or without intervention	no (with/without intervention)	no (with intervention)	yes (with intervention)	yes (minimal or without intervention)	yes (without intervention)
linguistic knowledge in ZPD	knowledge not within the learner's ZPD	knowledge may be in ZPD at a low level	knowledge established in ZPD	knowledge high in ZPD and production is variable	knowledge high in ZPD and production is automatized
development	no development	some development	knowledge is intermental	incomplete development	knowledge is complete and intramental

(adapted from Aljaafreh, 1992; Aljaafreh &amp; Lantolf, 1994)

intervention in the dialogues. Such performance indicates adequate, specific knowledge with respect to all or one of the following: formal features, tense selection, and lexical meaning. The learner appears self-regulated at a high level. Knowledge is intramental. For purposes of this study, self-regulation is empirically identified through successful completion of test items (requiring noticing or production) without assistance from any external resource.

On the basis of this method of assessment, I now analyze two CRXs where students are functioning within their ZPDs at levels one and three of other-regulation. I argue that in the present case, for Students 1 and 2 there is evidence of some movement toward self-regulation of linguistic knowledge.

## **6.2 Background of CRXs, Learners, and Tasks**

Some background remarks are now made about choice of dialogues and a description of the participants before presenting the analysis. These two CRXs were chosen for four main reasons. First the use of *irions* overcame methodological weaknesses of other studies in that a pretest item was available of the specific conditional and the two students under investigation were not successful in completing this item. In addition, more than one test item on *irions* was available at both posttesting and delayed-posttesting. Second, *irions* was talked about twice by one student in this particular dyad during both a double- and a triple-CRX. The triple-CRX was an interaction in which students' sensitivity to the links between the three categories was greatly heightened and a deepened understanding of the verb was reached. Lastly this dyad was deemed representative of the group upon examination of the dyad's statistics related to the categories of CREs (Table 5.3).

Students 1 and 2 were considered to be above average students according to their teacher. They were good friends who worked together for the four-week unit other than one temporary absence. Student 1 was involved in 45 CRXs before the triple-episode and Student 2, in 39 CRXs before these two CRXs in week four of the intervention. Students 1 and 2 were involved in a total of 58 CRXs throughout the four-week unit. During the planning of the imaginary space colony in the second week of the intervention, Students 1 and 2 co-constructed the correct solution *on irait*, the third person singular of the conditional *aller* (translated as "we would go") and completed the TMT item correctly (Figure 3.1, Tailor-made test item *irait*). Their success at the singular form in both the CRX and test item did not lead to an immediate solution for the first person plural *nous irions* in the subsequent dialogues.

### 6.3 Other Regulation: Level One

The participants showed signs of lacking high degrees of self-regulation prior to the unit; they were weak in their three pretests. During the first task of planning the space colony, the students expressed some frustration with the conditional.

- Student 2: **I hate the conditional. The conditional is like x.**  
 Teacher: ..... (giving instructions)  
 Student 1: **It's stupid. The future is better and easier too. ...**  
 Student 2: **Right now we're doing notes, so we don't have to do it [in the conditional] but later on x put it in the conditional.**  
 Student 1: **Okay. On ferait une maison du bois. Okay, ils seront se seraient seraient xxx [sounds like conjugating the verb *être* of the conditional tense] ils seraient ils seraient larges. ....**  
 Student 1: **French sucks**



### 6.3.1 Lack of Producing *Nous Irions*

According to the evidence of pretest results, it appears that Students 1 and 2 were predominantly other-regulated with regard to the conditional on the three pretests of the unit (cloze, paragraph and interview). Their scores ranged from 1% to 67%. In addition, both students did not produce *nous irions* accurately on the cloze pretest prior to the four-week unit (see Sections 7.3.2.1.1 and 7.4.2.1.1) and did not notice or correct their written error. Student 2 produced the imperfect, *allions*, and Student 1 produced the future, *irions*, in a hypothetical context requiring the conditional.

Students 1 and 2 were paired up with temporary partners to complete the first draft of the dictogloss (Appendix I) due to absences. Student 1 was paired up with Student 4, in order to write the draft of the dictogloss during regular class time. Students 1 and 4 did not talk about *irions* or *allions*. Student 2 and Student 3 (her temporary co-participant, not a close friend), wrote the first draft of the dictogloss (Appendix J) two days later to make up for the missed class. These students were asked to complete a first draft together so that they would be familiar with the original text of the dictogloss and be able to participate in the revision in the next class.

Students 2 and 3 undertook their first draft in an unused office, where I duplicated the teacher's instructions (Appendix H) and reading of the passage. Unexpectedly they were interrupted and soon after stated they had completed the draft. The expert resources in the classroom were not available (regular co-participant, teacher, other peers, and print resources). They opted to return to their original dyads in the afternoon for the editing session.

The dictogloss containing several conditionals was read aloud (Appendix I). Students were asked to re-create it. The relevant sentence of the passage and the

students' sentence from the first draft containing the error is below in Example 6.1. With respect to the conditional, the primary solution in this draft was for the learners to realize that the conditional does not closely follow *Si* in a subordinate clause containing the imperfect, but rather occurs in the main clause following the *Si* clause. A full understanding of the conditional includes the knowledge of both when to use and when not to use the conditional. The translation of the corresponding double-CRX is found in Appendix U. As noted previously the transcript notations are found in Appendix T.

*Example 6.1 Relevant Sentence from the Dictogloss and Students' Corresponding Sentence Containing Error in First Draft*

*...Si nous allions à une autre planète, il faudrait respecter notre environnement.....*  
(Translation of Correct Sentence: If we went to another planet it would be necessary to respect our environment).

*Si nous irions à une autre planète nous devrions respecter notre environnement.*  
(Translation: If we would go to another planet we would have to/should respect our environment).

*Example 6.2 Double CRX, Si Nous Irions*

- 01 S2: **Yah.** Si on vais -à une autre planète on devrait respecter notre environnement
- 02 S3: **Okay.**
- 03 S2: (finishes writing, but has written *Si nous aillons* instead of oral suggestion *Si on vais*) **Okay ....** (go on to talk about other verbs)
- 04 S2: **Okay we're done.**
- 05 S3: **xx turn it back on.**
- 06 S2: "Nous devrions trouver un nouveau endroit ou nous pourrions vivre. Si nous-" (*aillons* is next written word not read)
- 07 S3: "Si nous"
- 08 S2: **See (or *Si*) that I don't know about.**
- 09 S3: "Si nous" iraient\*\*?
- 10 S2: **Maybe.** Si nous irions (Unexpected interruption. Researcher and Nurse are speaking.)
- 11 S3: **Um** si nous iraient\*\* "à une autre planète nous devions" (misreads devrions) **I think it's** iraient\*\*

- 12 S2: or irions  
 13 S3: xx  
 14 S2: yah isn't it Okay  
 15 S3: Or irions  
 16 S2: irions (aillions changed to irions in written text)  
 17 S3: "à une autre planète, nous devions (misreads devrions) respecter"

### 6.3.2 Lack of Noticing and Correcting the Tense Selection Error of *Si Nous Irions*

In the writing of this first draft (Appendix J) during the double-CRX, Students 2 and 3 are apparently in level one of the ZPD of the transition chart. Although they used the conditional correctly in the main clause (*faudrait*), they did not notice or correct the tense selection error of *Si nous irions*. The sentence included the correct form of the conditional, *irions*, but the usage is incorrect according to the Si rule which requires that the imperfect in the subordinate clause be followed by the conditional in the main clause (line 14).<sup>7</sup>

In Example 6.1, the reader is reminded of the task at hand, re-creation of a text which was previously read aloud. At this stage, initial writing of the text, the students may have been more focussed on getting the message across and the task completed rather than grammatical precision or error correction. They did not leave an impression of certainty or agreement with their final solution.

### 6.3.3 Hypothesis Formation in the ZPD

In Example 6.1, the dyad engaged in hypothesis testing, yet their efforts did not lead to the co-construction of the accurate solution of the required imperfect.

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<sup>7</sup> This is an error that I have witnessed in the classroom and that was produced in some of the cloze and oral tests. A bilingual Francophone educated in French in *Québec* informed me that as a child she remembers teachers reminding NS students not to use the conditional after *Si*. Even NSs may overgeneralize the Si rule. It is hypothesized that French immersion students have difficulty with the Si rule in their native English. Pretesting of this knowledge in English may have provided useful insights as to the sources of difficulty in learning the French conditional. In addition, the students may be overgeneralizing the use of the conditional.

This double-CRX included two formations of the conditional contrasted with attempts at various verb tenses (Table 6.2). Students 2 and 3 suggested five alternatives for *Si nous allions* of the text read aloud which fell under the Si rule. All attempts are deemed to involve hypotheses. These are listed in chronological order as follows: suggest *on vais*, write, read and question *nous aillions*, question *nous iraient*, propose *nous irions*, *nous iraient*, *irions*, and *irons* and eventually choose *Si nous irions*.

An analysis of the students' hypotheses is as follows. Student 2 initially used the present tense following *Si* with the incorrect person marking, *on vais* (line 01). The present tense is acceptable with *Si* when it is followed by the future. However the dictogloss modelled and required *Si* and the imperfect. It is unknown what Students 2 and 3 approved with their "Yah" and "Okay" in lines 01 and 02, because Student 2 wrote something totally different. She changed her incorrect

Table 6.2  
Correct (✓) and Incorrect Hypotheses in Two Conditional-Related Exchanges

Three Categories of CREs	Double-CRX 6.2 (Students 2/3)	Triple-CRX 6.4 (Students 1/2)
Formal Features	<i>nous iraient*</i> <i>nous irions</i> ✓	<i>nous all-iraient*</i> <i>nous irions</i> ✓
Tense Selection	<i>Si on vais</i>	
a) Contrasting tenses	<i>Si nous aillions</i> <i>Si nous irons</i> <i>Si nous irions</i>	<i>Si nous aillions</i> <i>Si nous irons</i> <i>Si nous irions</i> (identifies error) ✓ <i>Si nous allions</i> ✓
b) <u>Si rule</u>	NO ATTEMPTS	YES (lines 11, 12) ✓
Lexical Meaning	NO ATTEMPTS	"if we would go" (line 11) ✓

oral choice of the present singular, *Si on vais*, to a plural and used a nonexistent verb form, *nous aillons* (line 03). This is not an attempt at a conditional because it does not have a conditional ending or root.<sup>8</sup> The students completed the first draft of the dictogloss and said, "I think we're done." At this point the dyad did not notice that what they produced in the draft was incorrect. They were immediately reminded to check it over and did so. They read the text aloud to each other in the next segment of the dialogue. Student 2 read, "*Si nous*," and then stopped reading. *Aillons* (a non-existent verb form) is the written hypothesis which she did not read aloud. Student 2 expressed her uncertainty, suggesting that she has noticed something related to *aillons*. It is not certain whether she is speaking English, See, or French, *Si*, in line (08). It is not absolutely clear whether "that I don't know about" refers to the word for "If" in French, "*Si that I don't know about*" or whether she is saying, "*See that I don't know about*" in relation to the verb.

Students 2 and 3 subsequently generated several alternatives in their dialogue, never selecting the required imperfect (*Si nous allions*, If we went) to correct the error. Although Student 3 suggested the future, *irons*, as her last alternative (15), Student 2 did not respond to this comment and decided to write *irions* (16). Student 3 did not verbally object to her partner's decision. Both students' last hypotheses were incorrect although they did not appear to be fully certain. The two students left *Si nous irions* in the first draft. Dialogue 6.1 is further examined in relation to the third level of transition in the ZPD.

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<sup>8</sup> It is worth noting that students were taught the present subjunctive prior to this unit. There may be confusion with the present subjunctive where there is an -i- in the spelling in other agreements, e.g., *j'aïlle*, *ils aillent* but not for the first person plural subjunctive, *nous allions*, which is the same spelling as the imperfect, *nous allions*.

## 6.4 Other Regulation: Level Three

### 6.4.1 Noticing and Hypothesis Formation of the Formal Features of *Nous Irions*

Although the dialogic interaction in the dyad did not lead to correction of the error related to the tense selection after *Si*, the students showed signs of characteristics in level three of the ZPD where there is co-construction of accurate output related to the formal features of *nous irions*. The learners suggested two hypotheses in the formation of the conditional with the first person plural. Student 2 suggested *iraient\*\**<sup>9</sup> and immediately corrected the person and related verb ending to *nous irions* (line 10). They could have simply ignored or abandoned the error, *nous iraient* and continued with the task. Uncertainty and questioning as well as hypothesis formation suggest that they have noticed something: "Maybe (referring to *nous iraient\*\**<sup>10</sup>) (line 10), Um and I think it's *iraient\*\** (line 10), or *irions*" (line 12). This co-construction of *nous irions* thus demonstrated some movement toward self-regulation of linguistic knowledge related to *aller*.

### 6.4.2 Metatalk

Despite the classroom instruction and the collaborative effort, attempts to correct the *Si nous irions* error failed in Example 6.2. The double-CRX does not contain any metalinguistic talk about the formal features, tense selection, or lexical meaning of the conditional or the alternatives. There is no reflection on the required specifics, but rather general and vague comments or questioning tones in

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<sup>9</sup> Due to lack of a written form in the draft of these oral alternatives, it is unknown what person marking the student is using. The oral alternatives conceivably could be homophones such as *iraient*, *irait*, or even *irais*. All such person markings are formally inaccurate for the first person plural conditional, *nous*.

<sup>10</sup> Due to lack of a written form in the draft of these oral alternatives, it is unknown what person marking the student is using as noted in footnote # 9.

response to the linguistic hypotheses generated. At this point, there is no evidence that the students can correct the error. It is suggested that possibly this results from a lack of any of the following: 1) noticing the error, 2) identifying what was needed, 3) discussing the meaning, 4) co-constructing the *Si* rule, 5) doing a search in the *Bescherelle*, 6) using metalinguistic terminology. The two novices apparently made no or minimal movement toward self-regulation related to the error. Positive input and negative feedback will be illustrated in Example 6.4 which resulted in the co-construction of a correct solution.

### 6.5 Other Regulation: Level Three

In the following class, Student 2 demonstrated some movement toward self-regulation with her friend, Student 1; during the triple-CRX they noticed and corrected the error collaboratively, demonstrating level three criteria of other-regulation in the ZPD. The task and the ensuing dialogue will be presented before the description of the internalization of linguistic knowledge.

The sentence containing the error *Si nous irions* of this first draft written by Students 2 and 3 (Example 6.3) was proofread in the afternoon by Students 1 and 2, the regular dyad. This was the first encounter with the draft for Student 1, and the second for Student 2. They were asked by the teacher to look at the number of verb mistakes at the top of the page. There were five verb mistakes, not underlined or highlighted in any way. The following dialogue illustrates the students co-constructing linguistic knowledge.

Example 6.4 Triple CRX, *Nous Irions*

- 01 S1: "Si nous-" (stops reading, *irions* is the next word, *aillons* is crossed out but still visible) nous irons, "irions"?
- 02 S2: **Yah that one I didn't know about. Student 3 did that.**
- 03 S1: Si nous aller. I know where aller is. Why am I asking this stupid question?
- 04 S2: **p. 6 or something.**
- 05 S1: **No it's not.**
- 06 S2: **Like not page 6, but ^verb^ number 6**
- 07 S1: **It's like**
- 08 S2: **No, 6 is like -er- verbs.**
- 09 S1: avoir, être,
- 10 S2: aller is only 32 (verb # in *Bescherelle*) or 22 or **something.**
- 11 S1: **I know** (looking through *Bescherelle*, pages turning) **Irions that's right.** "Si nous irions" à une autre planète nous devrions respecter notre "we would have to- Okay if we would go- non, si nous all- iraient/irait\*\* it wouldn't be irions "Si nous" ir- (crossing out word) irons, **It wouldn't be irions because if we would go- si-**
- 12 S2: **Right! So it's imperfect.**
- 13 S1: imparfait, imparfait, alliez, Si nous *allions*
- 14 S2: **Hey, that's what I had. Student 3 changed it.**
- 15 S1: **Well she's just ... okay**
- 16 S2: **Oh, I had -i- (in *aillons* on rough copy) but I don't know**
- 17 S1: "Si nous allions à une autre planète nous devrions respecter notre environnement" **Let's read this out in English. ....**
- 18 S1: (reading text) "Nous devons trouver un nouveau endroit où nous pourrions vivre." (pause) Si nous allions à une autre planète, nous devr- **"Oh! I xx (shouldn't be?) reading this in French. Okay. We will have to find a new place where we would where we could live.**
- 19 S2: **where we where would could live**
- 20 S1: **If we**
- 21 S2: **Go!**
- 22 S1: **Yah if we go to another planet we would have to respect our environment.**

I will now analyze the linguistic knowledge co-constructed. The students co-constructed linguistic knowledge regarding the 1) formal features, 2) tense selection, and 3) lexical meaning of *nous irions*. In Example 6.4, the students struggled to correctly use the imperfect in the *Si* clause preceding the use of the conditional. This time they actually looked up *aller* in the *Bescherelle*, identifying *irions* as the conditional tense and the correct form of the conditional for *nous*.



They translated *Si nous irions* into English, "If we would go." They subsequently co-constructed the Si rule leading to the primary solution for the error: the conditional should not follow *Si*. They showed evidence of movement toward self-regulation in the ZPD. The process of the internalization of this linguistic knowledge is now described in relation to the third level of transition in the ZPD and three functions of output: noticing, hypothesis-formation and metatalk.

#### **6.5.1 Noticing of the Formal Features, Tense Selection and Lexical Meaning of the Conditional and the *Si Nous Irions* Error**

The students were apparently functioning at level three during this CRX. In this editing activity, *irions* combined incorrectly with *si* has prompted the SL learners to recognize, consciously, some of their linguistic problems. The written error, *Si nous irions*, led them to notice what they did not know, or perhaps knew only partially (lines 01-02); this noticing of a "hole" (Doughty and Williams 1998, p. 228), related to the error *si nous irions*, apparently triggered cognitive processes that have been implicated in SLL (Swain & Lapkin, 1995). Such processes were manifested in students' questioning tones, comments and hypothesis testing (lines 01 and 02). Student 1, with Student 2, noticed gaps in their linguistic knowledge about the formal features and tense selection of the conditional, *nous irions*. In line 01 (translation is in Appendix U), Student 1, who was not the one involved in the writing of this draft, noticed something amiss with *Si nous irions* and Student 2 concurred (line 02).<sup>11</sup> Student 1 searched for the verb *aller* in the *Bescherelle*. She found *irions* under the conditional heading and commented, "*Irions*, that's right." As a consequence of the linguistically mediated interaction during revising, one student turned to their *Bescherelle*, an "expert" or tool in their sociocultural setting, to find assistance. The student focussed her attention on the conditional

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<sup>11</sup> One notes that Student 2 suggested *irions* first and wrote *irions* when she was with Student 3 in the previous CRX but claims here that it was her temporary partner that did so (line 02).

and did not look up the required imperfect of *aller*. This search provided positive input related to the formal features for both students.

### 6.5.2 Hypothesis Formation Within the ZPD

At the beginning of the CRX, there were no immediate signs of self-regulation from either student related to the *Si nous irions* error. They did not notice, correct or make any explanations related to the error. The co-participants searched for and generated linguistic knowledge that was new for them. Their hypothesis testing led to noticing and resolving a linguistic problem. They immediately tested their hypotheses by generating and assessing alternatives for the error *Si nous irions*. Numerous accurate and inaccurate alternatives were suggested in place of the error *Si nous irions*, including another conditional with a different subject-verb agreement and several alternatives for the verb *aller*. The hypotheses of Students 1 and 2 are listed in chronological order as follows: 1) see *aillons* which was previously crossed out by original dyad, 2) propose "*irions*," 3) question *irions*, 4) propose "*si nous irions*" and comment "that's right" after looking it up in the *Bescherelle*, 5) translate "if we would go," 6) suggest *si nous all-iraient/irait\*\**, 7) co-construct *Si* rule, 8) propose imperfect to correct conditional error, and 9) re-read correction but translate the imperfect incorrectly (Table 6.2).

The dyad tested their hypotheses (of which many were identical to those of Students 2 and 3) against their internalized knowledge and their resources. Student 1 immediately tested out a hypothesis suggesting another tense, the future *irions*, before she even finished reading out the sentence with the error. Then she repeated the conditional, *irions*, with a questioning tone (line 01). It appears that Student 1's comment caused some reflection on the part of Student

2, as she responded with, "Yah that one I didn't know about. Student 3 did that" (line 02).

At any rate, subsequent to some hypothesizing, Students 1 and 2 noticed and agreed that something was wrong. Student 1 used the infinitive, "*Si nous aller*" (translated as: If we to go) and proceeded to look it up in the dictionary (line 11). They assessed and mulled over the two alternatives generated, but, obviously not satisfied or prepared to make a decision with the written and oral alternative, they resorted to looking *aller* up in the *Bescherelle* rather early in the search. Student 1's discovery that *irions* was indeed the conditional began their problem-solving related to the tense selection error.

Student 1's comments after finding the verb *irions* in the *Bescherelle* give some insight into what she may have noticed or what troubled her in the first place. Her comment, "*Irions, that's right,*" appears to indicate that she was not aware that *irions* was 1) the correct form of the conditional of *aller* or 2) that *irions* was the actual conditional tense. The *Bescherelle* identifies the tense and correct form of the conditional, but it does not provide the much needed information as to whether it can or cannot be used after *Si* or its lexical meaning. The students were apparently not satisfied with leaving *Si nous irions*, as the exchange did not end there. Student 1's translation of "If we would go- no" (line 11) led to the suggestion of another alternative and the proposing of the *Si* rule.

Immediately after the translation Student 1 began to explain in English "that it wouldn't be *irions* because" and then translated the error "if we would go" for a second time and repeated *Si*. This led Student 1 to notice the error. Student 1's attempt at the rule was cut off by Student 2 who continued the *Si* rule for her. The English translation led to remembering the rule and the co-construction of the correction, an imperfect. It appears to be new knowledge from the tone in Student 2's voice which came across as Eureka, "Right! So it's imperfect" (line 12) as she

finished off her partner's sentence. At the end of Example 6.4, Student 1 repeated the correction and then attempted unsuccessfully to check the meaning of the imperfect in English (lines 17-22).<sup>12</sup> They again turned to the *Bescherelle* and proceeded to look up the imperfect.

According to the output hypothesis, producing language is one way of testing a hypothesis about comprehensibility or linguistic well-formedness (Swain, 1995, 1998). This output, in the form of writing and speaking, invoked talk which led the learners to confirm that what had been written was indeed the conditional tense and an accurate form. The co-construction of the Si rule and the translation helped determine that the conditional was **not** what was needed at this point and should be replaced by the imperfect. Student 1 deleted *irions*, wrote *allions* (line 13) and then reread the correction *Si nous allions* (line 17). Such successful hypothesis testing indicates these students have achieved level three of other-regulation.

### 6.5.3 Metatalk: Reflection Within the ZPD

As learners reflected on their own target-language use, their output (language) served a metalinguistic function, enabling them to control and internalize existing and new linguistic knowledge (Swain, 1995). The learners not only revealed their hypotheses regarding the formal features, tense selection and lexical meaning of *irions*, but also briefly reflected upon them. They used language during the collaborative peer editing session to achieve linguistic accuracy.

Reflection in this triple-CRX is qualitatively different from the reflection in the preceding double-CRX where students co-constructed the correct form of the

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<sup>12</sup> It is worth noting the incorrect translations of the imperfect *allions* by both students. They translate it into the present tense, "If we go" (lines 21-23). This adds to the repertoire of inaccurate output they have co-constructed. It is unknown if FI students know the Si rule any better in their native language, English.

conditional but used it inappropriately. In this triple-CRX the students 1) noticed the error, 2) translated the meaning, 3) identified what was needed, 4) co-constructed the Si rule, 5) did a search in the *Bescherelle*, and 6) used some metalinguistic terminology. These steps were not present in the double-CRX. Students 1 and 2 moved toward self-regulation where they evidenced a deepened understanding of *irions*. They identified the *Si nous irions* error and co-constructed linguistic knowledge, which serves as positive input and negative feedback.

The students' reflection is manifested in many ways. They used language to reveal their hypotheses and to confirm that *irions* is incorrect with *Si*. They used language to question the use of a conditional while reading *Si nous irions*. They used language to reflect upon their choice, "*Irions* that's right" (Example 6.4, line 11). They used English, their first language, to reflect again upon their choice by translating, "Okay if we would go- no(n), ..." The translation led to an assessment of *Si nous irions* which in turn led Student 1 explicitly to state the rule through a concrete example: "It wouldn't be *irions* because if we would go *si-*," and then Student 2 completed her sentence, "Right! So it's imperfect."

The problem identified by the students is that *irions*, the conditional, cannot follow *si* which requires the imperfect. The students jointly and explicitly stated the Si rule (metalanguage) and came to an explicit understanding of what that implies with regard to the formal features and lexical meaning of *irions*: *irions*, although a correct verb form, is an incorrect tense choice given that it immediately follows *Si*. It can be argued that the dialogue gave them an opportunity to apply and begin to internalize the Si rule. These episodes depicting when to use (positive input) and not use the conditional (negative feedback) produced a context where the students' sensitivity of the links between lexical meaning, formal features, and tense selection of *Si nous irions* was greatly

heightened. Together, the students worked through and solved the problem; they reached an understanding of how the rule works.

The students' construction of new linguistic knowledge was mediated by objects and persons: the *Bescherelle*, their peer and teacher. As well, the students' construction of linguistic knowledge was mediated by language, the various hypotheses in the written and oral work, the teacher's instructions about the rule, the hypotheses produced, and the explicit hypothesizing about the alternatives generated. The construction of more adequate knowledge evidenced in the triple-CRX demonstrates cognitive activity manifesting itself and originating in the dialogue. There is evidence through the dialogue that the students have added to their own knowledge and their partner's. From the pretests, evidence suggests that the individual students performed as novices in relation to *irions*, but evidence in the dialogues suggests that the students collectively were performing more like an expert. The individual students demonstrated expertise in some of the post and delayed-posttests. Reflection and the co-construction of linguistic knowledge documented during and the subsequent improvement in written work and tests provide invaluable information about the role such CD plays in SLL.

## 6.6 Summary

Based on these CRXs I have assessed and described the evidence for the beginnings of the process of internalization of linguistic knowledge related to *irions* by two novices showing movement toward self-regulation. These students demonstrated that they were not self-regulated at pretesting in relation to *nous irions*. They subsequently gave each other information on the formal features, tense selection, and lexical meaning of the conditional, *nous irions*, when engaged in

regulation in the dialogues where they noticed and corrected the error, collaboratively relying upon various experts in this particular sociocultural learning context. They ultimately arrived at the correct solution and had correct explanations. Their learning was social, manifesting itself in the dialogue where language is used in a complex problem-solving task. The learning assessed and described in relation to the five levels of the ZPD parallels the functions of output. The students noticed errors and engaged in hypothesis testing and metatalk. In the next chapter, evidence from the tests is considered along with that of the dialogues in order to assess students' movement from other-regulation toward self-regulation.

## **CHAPTER SEVEN**

### **MOVEMENT IN THE ZPD FROM OTHER-REGULATION TO SELF-REGULATION: TEST RESULTS OF ONE DYAD**

#### **7.1 Introduction**

This chapter presents an in-depth, qualitative analysis to describe and assess the internalization of linguistic knowledge of the conditional. There is a presentation of movement away from other-regulation during the dialogues toward self-regulation. When students successfully construct an accurate solution without reliance upon external resources, they can be considered to be self-regulated and at level five of transition in the ZPD (Table 6.1). Evidence is provided of self-regulation where the student takes full responsibility for co-constructing and applying linguistic knowledge during short and long-term testing of the conditional. All test results for the same dyad discussed in the previous chapter will be examined in order to provide a detailed description of two SL learners' movement away from other-regulation toward self-regulation.

The specific research questions of this chapter are as follows:

1. Do students within their respective ZPDs demonstrate internalization (self-regulation) of linguistic knowledge of the French conditional following intervention to address its use in hypothetical contexts?



- a) What internalization occurred, if any, of linguistic knowledge related to specific conditionals?
- b) What internalization occurred, if any, of linguistic knowledge related to other conditionals?

This chapter has separate sections analyzing the results for Students 1 and 2. The sections are parallel and have the following progression. First, the student's knowledge of *nous irions* is assessed through two types of tests: the unit and tailor-made tests. I link what the students said about *irions* and possibly internalized during the CRXs to evidence of learning according to test items related to *irions*. I discuss two TMT items to link the outcomes with specific linguistic knowledge co-constructed by the students during the CRXs. The TMT items are discussed independently of one another and in relation to the cloze test item. Second, the dyad's co-construction of specific linguistic knowledge in the 58 CRXs is assessed through the remaining TMT items. Third, the students' application of linguistic knowledge will be assessed through the three tests for the unit. Examination of the pre, post and delayed-posttests will provide evidence of movement toward self-regulation of linguistic knowledge over the 16-week testing period.

## **7.2 Assessment of Learning: Tests and Self-Regulation in the ZPD**

This dyad was chosen mainly for methodological reasons (explained in more detail in chapter 6) related to the availability of pretest data for *irions*, the conditional, discussed in two multiple-CRXs. Findings for Student 2 will be presented first and in more detail because she was involved in two CRXs related to *nous irions* whereas Student 1 participated only in the triple-CRX.

## 7.3 Student 2

### 7.3.1 Other-Regulation: Level 1

#### 7.3.1.1 Cloze Test Item and Three Tests of the Unit

In the three pretests undertaken independently, Student 2 made many errors. Scores ranged from 15% to 67% (see Table 7.1). Although these scores demonstrate that she had some knowledge of the conditional she lacked a high degree of self-regulation and is thus considered predominantly other-regulated at pretesting. In addition, Student 2 was unsuccessful at providing the conditional of *aller, irions*, in the cloze pretest item which follows. She wrote the imperfect, *allions*.

*Example 7.1 Cloze Pretest Item for aller: nous irions*

... *Si nous pouvions capter l'énergie solaire, nous n' aurions plus  
(avoir)  
besoin d'apporter nos parapluies. Nous n' irions plus en Californie en hiver.  
(aller)*

According to the two CRXs related to *nous irions* (see previous chapter) Student 2 moved from level one to level three. The movement from low degrees of self-regulation during pretesting as compared to higher degrees of self-regulation for the conditional in subsequent testing is now examined in detail. The *irions*

Table 7.1

**Student 2's Movement Away from Other-Regulation Toward Higher Degrees of Self-Regulation**

<b>Unit's 3 General Proficiency Tests</b>	<b>Pre</b>		<b>Post</b>		<b>Delayed-Posttest</b>	
	<b>Total Score</b>	<b>%</b>	<b>Total Score</b>	<b>%</b>	<b>Total Score</b>	<b>%</b>
1) Cloze	12	(12/81) 15%	25	(25/81) 31%	52	(52/81) 64%
2) Paragraph	6	(6/9) 67%	15	(15/18) 83%	21	(21/36) 58%
3) Interview	36	(36/60) 60%	45	(45/105) 43%	51	(51/78) 65%
<b>TMTs</b>						
Key Conditional Sentence †			(29/30)	97%	(27/30)	90%
Comments			(24/30)	80%	(26/30)	87%
All Sentences ††			(74/83)	89%	(75/83)	90%
<b>3 Irions Items</b>						
Unit's Test						
a) 1 Cloze Item /3	0/3		0/3		0/3	
Tailor-made Test Items /1						
b) <i>Si</i> + imperfect, <i>irions</i> in main clause			1/1		1/1	
c) <i>Si nous irions</i> +			1/1		0/1	

† Key Conditional Sentence contains the correct solution for the verb discussed (see Section 3.6.2.1.1)

†† For identifying solution and errors in each sentence per item.

+ For purposes of this item, the student was required to identify the error. That is, that the conditional does not follow *Si*.

items in the cloze test and the TMTs are followed by results from all the other TMTs and the unit tests.

### **7.3.2 Movement in the ZPD Toward Self-Regulation**

#### **7.3.2.1 Three *Nous Irions* Items: Cloze and Tailor-Made Test Items**

Student 2 successfully completed some *irions* TMT items during post and delayed-posttests (see Table 7.1), demonstrating some movement toward self-regulation and improved accuracy. There were 3 test items for *irions* on the post and delayed-posttests: the cloze and two TMT items (Figures 7.1, 7.2a and 7.2b). Student 2 completed two of the three items correctly on the posttest and one of the three items on the delayed-posttest. In the TMTs, comments were also given as described in chapter 5. She wrote one correct response out of the two possible, for both post and delayed-posttests.

##### **7.3.2.1.1 Cloze Test Item: Pre, Post, and Delayed-Posttests**

In the cloze test (Appendix L) students were asked to fill in the blanks by putting the verbs, provided in the infinitive, in the correct tense. There was one item that required *irions* (Example 7.1.). Student 2 was unsuccessful at providing the conditional *irions* at the three testing sessions. She incorrectly used the imperfect (*allions*) in place of the required conditional in the pretest and the posttest and wrote a nonexistent verb form, *aillions*, in the delayed-posttest (Table 7.1).

In the draft, Student 2 incorrectly wrote *aillions* (without the *ions* ending written in the above test) and then the conditional (*irions*) for the imperfect required after *Si*. The above errors on the pretest and the draft give us insight as

to some of the misconceptions Student 2 held with regard to the verb *aller*. For example, she used the imperfect where the conditional was required and vice versa. If this cloze test item were exclusively used to assess improvement of *irions* Student 2 would be judged as making no progress. The dialogues and TMTs however indicate some progress.

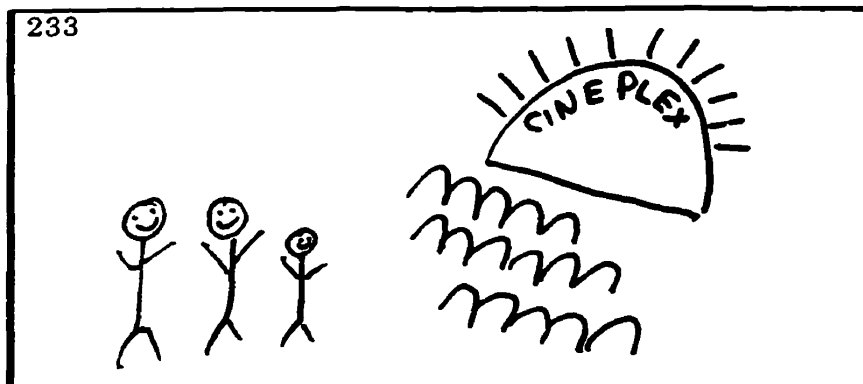
#### 7.3.2.1.2 *Tailor-Made Test Items: Post and Delayed-Posttests*

In the dialogues (Example 6.2 and 6.4), there was accurate co-construction of linguistic knowledge related to the formal features, tense selection and lexical meaning of *nous irions*. On the corresponding TMT items, Student 2 demonstrated some self-regulation. There were two separate items for *irions*. Each will be discussed separately. A description of the test item is followed by the results.

##### 7.3.2.1.2.1. Tailor-Made Test Item: *Si + Imperfect, Nous Irions*

During the triple-CRX there was some talk about the formal features related to *nous irions* leading to a search in the *Bescherelle*. This showed that *irions* was the correct form of the conditional (and eventually led to the required imperfect in the *Si* clause). This TMT item consisted of a set of four sentences and two scores were allotted (Section 3.6.2.1.1). Each sentence began with an identical subordinate *Si* clause containing the imperfect followed by a verb in the main clause. First, the student had to identify the conditional amongst several erroneous verbs in the main clause. Student 2 successfully identified key sentence #3, the only instance of the correct conditional form *irions* (see Figure 7.1). Second she noticed the three errors in the remaining sentences. In addition, she provided accurate comments.<sup>13</sup> The abundance of correct answers and comments on both post and delayed-posttests reveals that there was some

Pour chaque phrase ci-dessous, indiquez si la phrase est correcte ou incorrecte selon l'image. Indiquez jusqu'à quel point vous êtes certain de votre réponse en cochant la case appropriée. Dans chaque groupe il y a au moins une phrase correcte, mais il est aussi possible d'avoir plusieurs phrases qui sont correctes dans chaque groupe.



	Certainement correct	Probablement correct	Probablement incorrect	Certainement incorrect	Je ne sais pas
1. Si nous rencontrions nos amis nous irons au cinéma.				post DPT	
2. Si nous rencontrions nos amis nous allons au cinéma.				post DPT	
3. Si nous rencontrions nos amis nous irions au cinéma.	POST 1/1 DPT 1/1				
4. Si nous rencontrions nos amis nous aillons au cinéma.				post DPT	

Posttest Score for all Sentences: 4/4

Student's Posttest Comment: conditionel

Delayed-posttest Score for all Sentences: 4/4

Student's Delayed-posttest Comment: rencontrions - irions<sup>13</sup>

Figure 7.1. Tailor-made posttest item *Si* + imperfect, *nous irions* for Student 2.

<sup>13</sup>This is an implicit comment but it was qualitatively evaluated in conjunction with the student's correct responses. The *ions* could also refer to "rencontrions". However if this were the case the student would most likely have chosen all sentences to be correct or incorrect.

movement toward self-regulation and that knowledge related to the formal features (and possibly the tense selection) of *irions* was intramental at these two points of testing (see Figure 7.1).

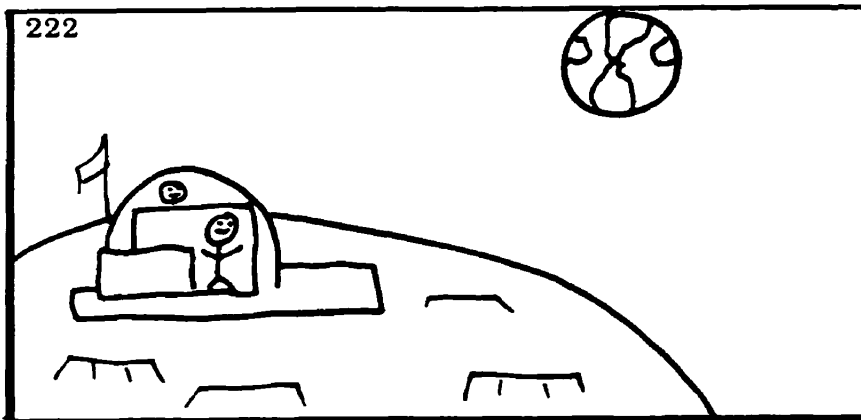
#### 7.3.2.1.2.2 Tailor-Made Test Item: *Si Nous Irions*

The second item was based on negative feedback provided in the CRX. The fact that two items had to be created illustrates the difficulty sometimes of matching TMT items with specific content in the CRXs. A qualitative analysis of sentence #2 which contains *irions* used incorrectly in the subordinate clause follows. Posttest results (Figure 7.2a) followed by delayed-posttest results will be discussed (Figure 7.2b).<sup>14</sup>

On the posttest, Student 2 successfully identified key sentence #2 containing *Si nous irions* as incorrect. She chose *probablement incorrect* rather than *certainement incorrect* revealing some doubt (see Figure 7.2a). The student showed some movement toward self-regulation by independently noticing the error of *Si nous irions*, thus fulfilling the minimum requirement of level five, self-regulation. In the delayed-posttest 11 weeks later, Student 2 was not as successful. Misconceptions related to *aller* are apparent in the errors. The student demonstrated self-regulation at posttesting but not at delayed-posttesting with regards to specific knowledge related to the error *si nous irions*. She did not notice the error nor apply the relevant Si rule which had been taught during the unit and co-constructed correctly during the corresponding CRX.

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<sup>14</sup> This item was deleted from the statistical analyses (Section 3.3.) as items containing more than five sentences were deemed difficult. This sentence essentially tests the imperfect. However, for purposes of this study, the student was required to identify the conditional error of *Si nous irions* (the primary solution negotiated in the CRX) amongst seven sentences containing various erroneous verbs as well as the required imperfect. It is interesting to note that not all NSs correctly completed each sentence in this item.



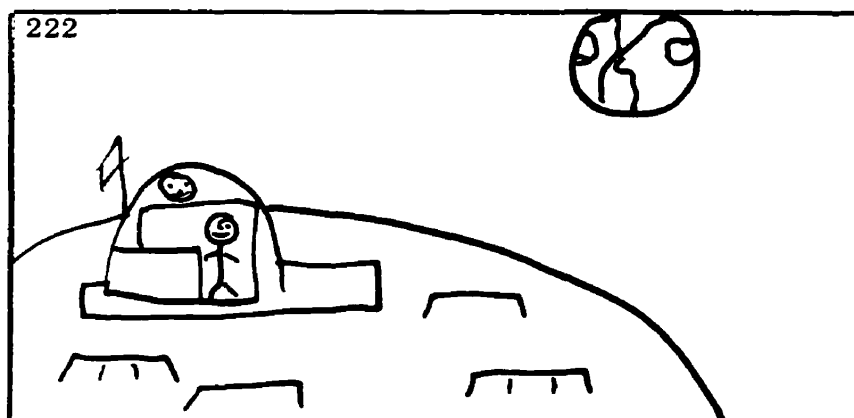
	Certainement correct	Probablement correct	Probablement incorrect	Certainement incorrect	Je ne sais pas
1. Si nous aillions dans l'espace on ferait une colonie.				post	
2. Si nous irions dans l'espace on ferait une colonie.			POST		
3. Si nous irez dans l'espace on ferait une colonie.			post		
4. Si nous irons dans l'espace on ferait une colonie.		post X			
5. Si nous iraient dans l'espace on ferait une colonie.			post		
6. Si nous allions dans l'espace on ferait une colonie.			post X		
7. Si nous aillions dans l'espace on ferait une colonie.			post		

**Student's Posttest comment:** I don't know - It sounds right X

X = incorrect response. This comment is interpreted in relation to sentence #4, the only sentence identified as being correct.

**Figure 7.2a.** Tailor-made posttest item *Si nous irions* for Student 2.





	Certainement correct	Probablement correct	Probablement incorrect	Certainement incorrect	Je ne sais pas
1. Si nous aillions dans l'espace on ferait une colonie.			DPT		
2. Si nous irions dans l'espace on ferait une colonie.		DPT X		(crossed out in DPT)	
3. Si nous irez dans l'espace on ferait une colonie.		DPT X			
4. Si nous irons dans l'espace on ferait une colonie.		DPT X			
5. Si nous iraient dans l'espace on ferait une colonie.				DPT	
6. Si nous allions dans l'espace on ferait une colonie.		DPT			
7. Si nous aillons dans l'espace on ferait une colonie.		DPT X			

X = incorrect response

**Delayed-posttest (DPT) comment:** I don't know X

**Figure 7.2b.** Tailor-made delayed-posttest item *Si nous irions* for Student 2.

### 7.3.3 Summary of Student 2's Internalization of Linguistic Knowledge Related to *Nous Irions*

Student 2 was unable to complete the *irions* cloze test item at pretesting and subsequently talked about *irions* in two CRXs. She wrote *Si nous irions* in the draft but did not notice the error until the triple-CRX (Example 6.4). Student 2 was unsuccessful at completing the cloze test item at all three testing sessions. However, she showed evidence of self-regulation during post and delayed-posttesting on some *irions* TMT items.

On the TMTs, the two *irions* items provide evidence that Student 2 was able to identify the two key sentences during posttesting as well as give correct comments for one of the items. The various incorrect hypotheses made during the CRXs in the other sentences revealed a misconception concerning *aller* and identified it as a source of trouble.

During delayed-posttesting, the correct answers and comments reveal that the student was self-regulated in the correct usage of *irions* in the context of *Si* followed by the imperfect, but not the incorrect usage of *Si nous irions*. The learner was apparently no longer able to recognize the error of *Si nous irions*. Linguistic growth in respect to the verb *aller* and in particular *irions* is certainly not linear for Student 2 (see Table 7.1). She applied new knowledge, which had been co-constructed in the two CRXs to two of the three test items related to *nous irions*. Student 2 was involved in the four-week intervention which included 58 CRXs. The issue arises whether she applied this knowledge to other specific conditionals occurring in subsequent testing. The results of the corresponding TMT items are now examined.

### **7.3.4 Application of Linguistic Knowledge to Identical Conditionals**

#### **7.3.4.1 Tailor-Made Tests**

Student 2 demonstrated high degrees of self-regulation on all TMT items immediately after the CRXs and at delayed-posttesting. Her scores were over 90% for the individual key sentences on the posttest (97%; 29/30) and (90%; 27/30) on the delayed-posttest. She provided many accurate comments for each item on the posttest and the delayed-posttest. On all sentences, in each item requiring students to identify both correct and incorrect uses of the conditionals, Student 2 increased her posttest score of 89% (74/83) by one point, to 90% (75/83), on the delayed-posttest as seen in Table 7.1. The tests from the unit are now examined to determine whether the learner possibly generalized what she learned during the intervention to the unit's three tests.

### **7.3.5 Generalization of Linguistic Knowledge to Other Conditionals**

#### **7.3.5.1 Unit Tests**

Student 2's growth increased in ten of the twelve measures at post and delayed-posttesting. All total scores increased and two percentage scores decreased (see Table 7.1). According to the subsequent post and delayed-posttests there was more evidence of performing at level five than at pretesting. The data for Student 1 are now presented following the previous order of discussion: *nous irions*, all TMT items, and the unit tests.

## 7.4 Student 1

### 7.4.1 Other-Regulation: Level One

Student 1 made more progress on both cloze and TMT items for *irions* than Student 2. In all tests completed immediately following the intervention, she showed improvement. The student successfully completed all *irions* items and many other conditional items on all three tests demonstrating growth toward higher levels of accuracy (see Table 7.2). Some of this learning was maintained during delayed-posttesting.

#### 7.4.1.1 Cloze Test Item and the Three Tests of the Unit

According to evidence from the pretests of the unit, Student 1 was not performing at level five. In the written pretests, the learner did not produce many of the required conditionals and did not notice related errors nor correct them. She used the future, *irons*, in the cloze pretest item requiring *irions*. Student 1 obtained 1/81 (1%) on the cloze test, 3/30 (10%) on the paragraph and 45/78 (58%) on the interview. Weak performance on the three pretests is evidence for lack of self-regulation concerning the conditional (see Table 7.2).

Table 7.2

**Student 1's Movement from Other-Regulation Toward Higher Degrees of Self-Regulation**

Unit's 3 General Proficiency Tests	Pre		Post		Delayed-Posttest	
	Total Score	%	Total Score	%	Total Score	%
1) Cloze	1	(1/81) 1%	56	(56/81) 69%	58	(58/81) 71%
2) Paragraph	3	(3/30) 10%	28	(28/36) 77%	9	(9/27) 33%
3) Interview	45	(45/78) 58%	48	(48/75) 64%	18	(18/51) 35%
<b>Tailor-Made Tests</b>				%		%
† Key Conditional Sentence			(29/32)	91%	(28/32)	88%
†† All Sentences			(75/86)	87%	(69/86)	80%
<b>3 Irions Items</b>						
Unit's Test						
a) 1 Cloze Item /3	0/3		3/3		0/3	
Tailor-made Test Items /1						
b) <i>Si</i> + imperfect, <i>irions</i> /1			1/1		1/1	
c) <i>Si nous irions</i> /1			1/1		0/1	

† Key Conditional Sentence contains the correct solution for the verb discussed (see Section 3.6.2.1.1)

†† For identifying solution and errors in each sentence per item.

## 7.4.2 Movement in the ZPD Toward Self-Regulation

### 7.4.2.1 Three *Nous Irions* Items: Cloze and Tailor-Made Test Items

The 3 test items for *irions* on the post and delayed-posttests will be examined: the cloze and two TMT items. Student 1 successfully completed the three items on the posttests and one of the three items on the delayed-posttests (see Table 7.2). She provided correct comments on one of the items on the posttest and correct comments on two of the items on the delayed-posttest, thus demonstrating some movement toward self-regulation and improved accuracy (see Table 7.2).

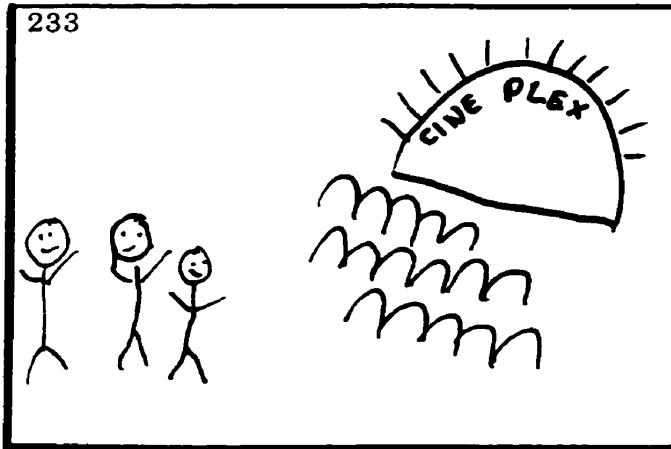
#### 7.4.2.1.1 Cloze Test Item: *Pre, Post, and Delayed-Posttests*

Student 1 completed the cloze item correctly at posttesting. On the cloze posttest item *irions*, she changed her incorrect future tense of *irons* on the pretest to *irions* but reverted to the future during delayed-posttesting. Again, if the one item was used for assessment of *irions*, Student 1 would appear to have only made progress on the posttest immediately following the intervention. The TMTs showed some maintenance of learning in the delayed-posttesting as well.

#### 7.4.2.1.2 Tailor-Made Test Items: *Post and Delayed-Posttests*

##### 7.4.2.1.2.1 Tailor-Made Test Item: *Si + Imperfect, Nous Irions*

Student 1 successfully provided both correct answers and comments on the post and delayed-posttests for all items for all four sentences (Figure 7.3). The learner showed evidence of self-regulation in the first TMT item where she correctly identified the conditional in the main clause.



	Certainement correct	Probablement correct	Probablement incorrect	Certainement incorrect	Je ne sais pas
1. Si nous rencontrions nos amis nous irons au cinéma.				post DPT	
2. Si nous rencontrions nos amis nous allions au cinéma.				post DPT	
3. Si nous rencontrions nos amis nous irions au cinéma.	POST 1/1 DPT 1/1				
4. Si nous rencontrions nos amis nous aillions au cinéma.				post DPT	

**Posttest Score for all sentences: 4/4**

**Student's Posttest comment:** Si = conditionel nous = ions<sup>15</sup>

**Delayed-posttest (DPT) for all sentences: 4/4**

**Student's Delayed-posttest (DPT) comment:** condit = ir

**Figure 7.3.** Tailor-made test item *nous irions* for Student 1.

<sup>15</sup> This is an implicit comment but it was qualitatively evaluated in conjunction with the student's correct responses. The *ions* could also refer to "rencontrions". However if this were the case the student would most likely have chosen all sentences to be correct or incorrect.

She recognized sentence #3 where the correct form of the conditional is used following the imperfect and gave accurate comments.

7.4.2.1.2.2 Tailor-Made Test Item: *Si Nous Irions*

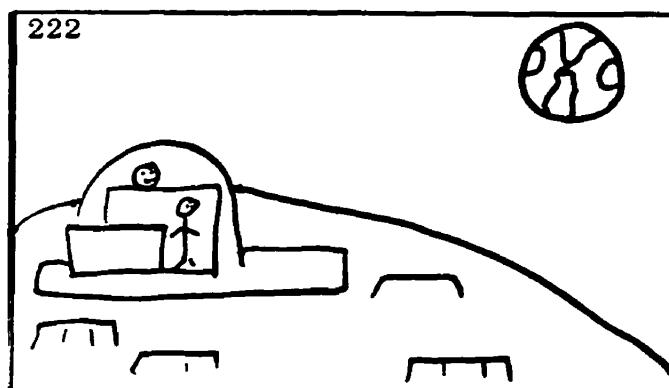
On this item, Student 1 correctly identified the error of *Si nous irions* at posttesting only. She, like Student 2, chose *probablement correct* rather than *certainement correct*, revealing some doubt. In the delayed-posttest 11 weeks later, Student 1 was not as successful. She incorrectly chose *certainement correct* for sentence #2 *Si nous irions*.

At posttesting, Student 1 provided explicit information: a translation and reference to the *Si* rule. Her response in the TMT reflected the content of the dialogues (Example 6.4). The explanation (as written by the student), of why not to use *Si nous irions* follows:

*C'est Ir. ... and the translation is*  
(sentence # in TMT item) 4. If we went in space we would construct a colonie  
not 2. If we would go in space we would construct a colonie  
also it's after *Si*.

In identifying and elaborately explaining the error, she showed evidence of self-regulation for this item. However some doubt was expressed in the answer *probablement correct*, and part of her lengthy comments contained some misinformation regarding one of the alternatives (sentence #4), where the future is written in place of the imperfect. Not only did she think the future was correct, she translated the future as the imperfect.





	Certainement correct	Probablement correct	Probablement incorrect	Certainement incorrect	Je ne sais pas
1. Si nous aillions dans l'espace on ferait une colonie.				post DPT	
2. Si nous irions dans l'espace on ferait une colonie.	(crossed out in post) DPT X		POST		
3. Si nous irez dans l'espace on ferait une colonie.				post DPT	
4. Si nous irons dans l'espace on ferait une colonie.	post X DPT X	(crossed out in post)		(crossed out in post)	
5. Si nous iraient dans l'espace on ferait une colonie.				post DPT	
6. Si nous allions dans l'espace on ferait une colonie.				post X DPT X	
7. Si nous aillons dans l'espace on ferait une colonie.				post DPT	

**Student's Posttest reason:** C'est ir ... and the translation is 4. If we went in space we would construct a colonie not 2. If we would go in space we would construct a colonie. also, it's after Si.

**Student's Delayed-posttest (DPT) reason:** aller = ir

Figure 7.4. Tailor-made test item *Si nous irions* for Student 1.

Student 1 showed deterioration on the delayed-posttest item of some linguistic knowledge co-constructed during this CRX. Development of *irions* and *aller* was not linear after the intervention.

#### **7.4.3 Summary of Student 1's Internalization of Linguistic Knowledge Related to *Nous Irions***

According to the transition chart (Table 6.1), there is evidence that some knowledge about *irions* was internalized at posttesting and delayed-posttesting. There was no evidence of self-regulation for Student 1 during pretesting for *irions*. However, during posttesting all three items were completed correctly and during delayed-posttesting only one item was done so (see Table 7.2). When the *irions* items are considered, Student 1 successfully completed the three test items during posttesting and gave correct comments on one of the two TMT items. Student 1 actively participated in the co-construction of the correct solution for *Si nous irions* during the CRX in Example 6.3 and this knowledge is revealed in her comments. During delayed-posttesting only one item, where recognition of the form of *nous irions* is required, was correct, but she gave two correct comments. According to the evidence provided in this study, learning may not be in evidence on some test items, such as the cloze test requiring production, but may be manifested in others, such as the TMT item where only recognition is required. Test results for the TMTs and the three tests from the unit are now examined for Student 1.

#### **7.4.4 Application of Linguistic Knowledge to Identical Conditionals**

##### **7.4.4.1 Tailor-Made Tests**

The results of the TMTs are now examined to ascertain how Student 1 applied the co-constructed knowledge to the same conditionals. According to the TMT items, Student 1 maintained her learning 11 weeks after the intervention. She obtained 91% (29/32) on the posttest and 88% (28/32) on the delayed-posttest for specific conditionals talked about during the CRXs. In addition, on sentences requiring students to identify both correct and incorrect uses of the verbs she scored 87% (75/86) during posttesting and 80% (69/86) during delayed-posttesting (see Table 7.2). A perusal of the written responses showed that there were more accurate than inaccurate comments following each item. Student 1 scored a higher percentage on the TMTs than on the unit tests, as did Student 2.

##### **7.4.5 Application of Linguistic Knowledge to Conditionals in the Unit Tests**

Student 1's growth in knowledge dramatically increased immediately after intervention and decreased slightly at delayed-posttesting. According to the results of the three pretests measuring general proficiency, she showed minimal evidence of self-regulation, particularly in the written tests. However, evidence of movement further along in the ZPD at both post and delayed-posttesting sessions as compared to pretesting was shown (Table 7.2).

##### **7.4.6 Summary of Test Results for Students 1 and 2**

The purpose of this chapter was not only to present all test results of one pair of students, but to give an in-depth analysis of one verb form and its related linguistic knowledge assessed in all tests. Test results for Students 1 and 2

showing evidence of improvement from pretest to posttest and/or delayed-posttest scores have been presented.

At pretesting, Students 1 and 2 lacked high degrees of self-regulation demonstrating low levels of proficiency with regard to the conditional in the unit's three tests: cloze, paragraph, and interview. In the two CRXs, the learners tested their hypotheses and modified their output. Not only did they correctly change the error of *Si nous irions* in their writing, but they sometimes recognized errors and produced *irions* and metalinguistic knowledge related to it in their post and delayed-posttests.

All scores improved at posttesting for both students except for the percentage interview score for Student 2. Many of the total and percentage scores improved from pretesting to posttesting and from pretesting to delayed-posttesting, moving the students further along toward self-regulation. From post to delayed-posttesting, there was more improvement for Student 2 on the twelve measures. Ten of the twelve scores increased whereas eight of the twelve scores increased for Student 1. Overall, there is evidence of movement toward self-regulation in these students, at both post and delayed-posttesting relative to pretesting. In relation to the TMT items based on the CRXs, the students maintained high scores from post to delayed-posttesting sessions on all measures.

Test results for *irions* of Students 1 and 2 showed evidence of movement from other-regulation at pretesting to some self-regulation at posttesting and less evidence at delayed-posttesting for the three items related to *irions*. The qualitative analysis of the triple-CRX in the previous chapter showed that Student 1 contributed frequently and actively to the co-construction of linguistic knowledge related to the aspects of the conditional *irions*. She was the one to first notice the error of *Si nous irions* (Example 6.3, line 01) and initiated the

co-construction of the rule (line 11) and the search in the *Bescherelle* (line 03). This knowledge was revealed in her explicit written comments related to *irions*.

The present investigation includes the pre, post, and delayed-posttest design and incorporates a method of assessment through an analysis of the content of the CRXs and the creation of TMTs; I also went a step further in analyzing the evidence of learning. The exclusive examination of the conditional, allowed for pretesting. In the CRXs concerning *irions*, a pretest item was linked with both the unit and the corresponding TMT items. The qualitative and quantitative approach to the discussion of the test data, linked to the content of the dialogue about *irions*, adds to the empirical evidence of both short-term and long-term learning. The findings from the tests and dialogues will be discussed and interpreted in relation to a sociocultural framework in the final chapter.

## **CHAPTER EIGHT**

### **DISCUSSION**

#### **8.1 Introduction**

I shall now discuss and interpret the data from the tests and dialogues. I have illustrated how SL learners, even novices with respect to the conditional, co-construct and apply their linguistic knowledge. The goal of this chapter is to reach a deeper, contextualized understanding of the basic, social learning process. A summary of the findings is given followed by a discussion of the findings in relation to past research, specific limitations, and research needed to clarify or extend the current findings. Implications for theory, research, and practice are then examined before presenting the general limitations of the study, suggestions for further research, and concluding remarks. The study aims to show movement from other-regulation toward higher degrees of self-regulation of the conditional following an instructional intervention. The research questions are reproduced for ease of reference and are discussed in the following order:

1. Do students within their respective ZPDs demonstrate internalization (self-regulation) of knowledge related to the French conditional following intervention to address its use in hypothetical contexts?
  - a) What internalization occurred, if any, of linguistic knowledge related to specific conditionals?
  - b) What internalization occurred, if any, of linguistic knowledge related to other conditionals?
2. During CDs (other-regulation) what linguistic knowledge related to the conditional do peers co-construct ?
3. During other-regulation, do peers co-construct accurate linguistic knowledge?

## **8.2 Self-Regulation**

### **8.2.1 Internalization of Linguistic Knowledge**

According to Vygotsky's (1981) general law of cultural development, knowledge appears between people (interpsychological) before it is within the person (intrapsychological). Successful completion of test items undertaken independently demonstrated self-regulation in the production of the conditional. All students in the study and comparison group made some errors at pretesting and thus lacked complete self-regulation of the ability to produce the conditional according to the fifth level of the ZPD (Figure 6.1). The test results for the study and comparison groups are now discussed; then there will follow an examination of the results from the TMTs and the dialogues of the study group.

### 8.2.1.1 Proficiency Test Results of the Study and Comparison Groups

This investigation found that the intervention the study group underwent had a more positive effect on the accuracy of the learner's conditional than did the comparison group's intervention at posttesting but not at delayed-posttesting. According to the statistical analyses of the results from the ANCOVA, there were significant differences between the study and comparison groups on all five measures of the tests of the original unit at posttesting but not at delayed-posttesting.

To determine learning  $t$  tests comparing pretests and subsequent tests within each group were performed. According to the  $t$  tests, the study group demonstrated learning on all five measures immediately after the intervention whereas the comparison group demonstrated no learning. At delayed-posttesting the study group demonstrated learning on two measures whereas the comparison group demonstrated learning on all five measures.

In addition,  $t$  tests comparing posttests and delayed-posttests demonstrated that the study group maintained gains following intervention on three measures. There was some loss of learning from post to delayed-posttesting on both interview scores. The students in the comparison group on the other hand did not suffer any decline in scores and showed statistical gains from post to delayed-posttesting on one measure.

This study is consistent with posttest differences between the study and comparison group as in the "treatment" studies in the cloze measures (Day & Shapson, 1989; Harley, 1989) and open-ended writing tasks (Day & Shapson, 1989; Lyster, 1994). In addition, my study group was statistically superior to the comparison group on the oral test at posttesting as was Lyster's (1994) experimental group on the formal oral test relative to his comparison group.



The findings of no delayed-posttest differences on any measures is consistent with the Harley study (1989). The experimental groups in the Day and Shapson (1989) and Lyster (1994) continued to show statistical differences in relation to the comparison group 11 weeks later on the cloze and paragraph tests (Day & Shapson, 1991) and on written production and multiple-choice tests as well as on the formal oral test 4 weeks later (Lyster, 1994).

The lack of delayed-posttesting statistical differences between groups in this study may be interpreted in relation to the differences in the students' initial scores, the small sample size, information provided by the comparison and study group teachers, and the TMTs. The actual scores of the study group in both the paragraph and interview tests (Table 4.1) were considerably higher than the comparison group's at pretesting, perhaps allowing less room for improvement. That is, a ceiling effect may have been reached during the intervention for the study group. The sample size was small and statistical analyses may have demonstrated only the strongest effects.

Importantly, the intervention may not have been long and intensive enough to produce lasting differences in the dependent variables. A related point is that the comparison teacher was an excellent and experienced teacher who continually emphasized grammatical accuracy in his pedagogy. The situation of a comparison group undergoing a similar rather than different treatment than the study group has been described also by Day and Shapson (1989), Harley (1989), Lyster (1993) and Kowal (1997).

Although the tests show statistically significant differences for the study group as compared to the comparison group only in the unit's posttests, an analysis of other data from the study group provides evidence supporting a rich account of the learning process. The TMTs and corresponding dialogues yield

detailed information about growth in student's written and oral use of the conditional.

## **8.2.2 Internalization of Linguistic Knowledge Co-Constructed in the ZPD**

### **8.2.2.1 Study Group's Tailor-Made Test Results**

The results showed that all students made and maintained some gains in linguistic knowledge co-constructed in the CRXs as measured by the scores of the TMTs in conjunction with tests from the unit. First, progress was clearly indicated in the following comparisons with pretest items: 1) pretest conditionals were matched up with their corresponding delayed-posttests from the unit, 2) pretest conditionals were matched up with their corresponding TM post and delayed-posttests and 3) identical linguistic formal features in the unit's pretests were matched up with the unit's post and delayed-posttests. In addition, the nearly identical scores at post and delayed-posttesting sessions in the TMTs clearly demonstrated internalization of specific linguistic knowledge verbalized during other-regulation.

There were some discrepancies in the results from the unit and the TMTs which raise several issues. The nearly identical TMT results from post to delayed-posttesting and the more positive results in the scores of these TMTs compared to the unit tests suggest that 1) the students applied specific knowledge co-constructed to the identical conditionals more easily than they generalized this knowledge to new verbs in the tests from the unit; 2) the specific conditionals talked about were further along in the student's ZPD than the other conditionals on the tests from the unit and 3) the TMTs required only recognition. The excellent results from the TMT items suggest that for these particular students it

was easier to notice a verb rather than produce it in the unit's tests. The issues related to these findings are further discussed below.

#### 8.2.2.2 The Conditional: A Linguistic Feature Within the Students' ZPD

The positive results from both types of tests demonstrate that the conditional was indeed within the study group's ZPD, and that progress on this difficult grammatical feature was made. TMTs by design contain linguistic features in the students' ZPD: linguistic items generated by the learners in the CDs. A learner has only to notice something for a researcher to argue that a feature is in the learner's ZPD; level two, at least, according to the criteria of this study (Table 6.1). The TMTs, a recognition test rather than the production tasks required in the unit tests, are a cognitively different and perhaps less demanding type of task. Indeed, noticing a linguistic feature arguably requires a different type of cognitive functioning than that needed for production tasks which entail additional syntactic processing.

### 8.3 Strengths of the Evidence of Self-Regulation

The results from the study group are compatible with Kowal's (1997) encouraging findings of individuals' learning after the intervention and maintenance of learning at delayed-posttesting. The learning shown in the post TMT items converges with LaPierre's findings (1994) and those of Swain and Lapkin (1998). Although the evidence for learning and maintenance of learning was mixed, there is reason to believe the present results offer a more accurate and nuanced picture of the effects of the intervention. This assertion is based on the present study's improvements in design and method related to specific verbs talked about. Some studies administered no pretests (Aljaafreh, 1992; Donato,

1994), others only one pretest. Only one study of which I am aware matched pretest items with those linguistic aspects talked about in dialogues and the quantity of these was minimal (Swain & Lapkin, 1998). Many studies only measured short-term but not long-term learning, and none included multiple tests at each testing period for specific verbs. Some investigations did not include comparison testing and only one study (Swain and Lapkin, 1998), to my knowledge, included piloting of the tests with NSs of the same age group.

This study combines three established tests measuring general proficiency of the conditional with three, weekly TMTs measuring specific conditionals discussed during the four-week intervention. There were three pretests, four posttests, and four delayed-posttests. In addition, several pretest items were matched up with identical TMT items providing multiple, longitudinal assessment of specific conditionals. Finally, specific learning outcomes were linked to corresponding dialogues.

#### **8.4 Other-Regulation in the ZPD**

In this study evidence of self-regulation is demonstrated when students successfully completed test items on their own. They demonstrated other-regulation in their dialogues as they collaborated while undertaking various writing tasks. The learners co-constructed linguistic knowledge and applied this knowledge both in their written work and tests. Language use in the CDs is both a product and process of learning (Wells, 1998). The linguistic product of the CDs will first be reviewed, then I will discuss the cognitive processes of students engaged in co-constructing their linguistic knowledge.

#### **8.4.1 Collaborative Dialogues: The Co-Construction of Linguistic Knowledge in the Learners' ZPD**

In collaborative writing tasks, the students talked about the formal features, tense selection, and lexical meaning of the conditional. Most of the talk was based upon the formal features or tense selection of the conditional. The students concentrated on grammar only (formal features and/or tense selection) in over two-thirds of the CRXs. Their dialogues, however, were also connected to the meaning (translations and lexical choice) of the conditional in hypothetical situations elicited by various activities in the unit. They talked about the lexical meaning, combined with the formal features or tense selection, in 13% of the CRXs and the lexical meaning only, in 16% of the CRXs. Lexical meaning-based CREs focussed mainly on translations, specific meanings of the conditionals they required for their texts.

The present findings are more specific than other studies in that the focus is on only one verb tense rather than various grammatical features (Donato, 1994; Kowal, 1997; LaPierre, 1994; Swain & Lapkin, 1998); it included various classroom tasks including the dictogloss rather than one single type of task. The students talked about form and meaning, as predicted in part by the output hypothesis (Swain, 1995) and found in past studies (Kowal, 1997; LaPierre, 1994; Swain & Lapkin, 1998). In order to compare findings to other studies, it is necessary to collapse the formal features and tense selection to become a *grammatical* category. When this is done percentages were similar to those found in the Kowal (1997) findings related to the dictogloss, regarded as a task promoting a link between form and meaning. These results are encouraging and suggest that overall the present writing tasks (which included two dictoglosses) undertaken in this study, were fruitful in promoting grammatical talk (Kowal, 1997).

The previous grammatical/form category (Kowal, 1997; Swain & Lapkin, 1995) has been differentiated in the present study shedding light on the complexity of learning the conditional. In double-CRXs, one piece of the cycle is omitted. In the single formal features or lexical meaning-based CRXs, the decision to use the conditional has already been made. A student may know how to form a conditional and know its meaning in French or English but not necessarily know when to use it appropriately. The addition of the tense selection category allows one to isolate a specific aspect of grammatical learning. Work in this category, is, I believe, cognitively demanding, requiring students to apply the *Si rule* consciously or subconsciously to determine its use or avoidance. The previously used form/grammatical category has become more refined, separating its broader definition into the formal features and tense selection. The lexical meaning category relates only to the specific meaning of the conditional chosen.

The double- and triple-CRXs accounted for over one quarter of the total CRXs. Connection of two or three categories was considered to be important because of past research findings which suggest such links may increase a student's awareness of the syntactic and semantic aspects of the language (Swain, 1995). The qualitative analysis undertaken demonstrated the complexity of the learning of one conditional form, *nous irions*. There was not a consistent order for the application of the three categories. The same category could be repeated in the same CRX. It was as though there were three parts to the puzzle; the students needed to put the pieces together and take them apart again to make sure of the accuracy of what they had co-constructed. These double- and triple-CRXs and the lack of consistent sequence of the categories have not been identified as such in the literature.

#### **8.4.2 The Co-Construction of Accurate Linguistic Knowledge in the ZPD**

During CDs students were able to provide their partners with positive input and negative feedback. The solutions reached were correct in an overwhelming majority of the dialogues as found in other studies (Donato, 1994; LaPierre, 1994; Swain and Lapkin, 1998). This finding is interpreted in a Vygotskian psycholinguistic framework; the fact that students were noticing specific linguistic features suggests that they were working within their ZPD. The maintenance of consistently high scores on the TMTs suggests the majority of talk was about linguistic features or conditionals that were in the learner's ZPD. The students appeared ready and able to share their knowledge with their peers; they consolidated existing knowledge, constructed and applied new knowledge. As evidenced in the CRXs, new knowledge was co-constructed through hypothesis formation and testing. Although the learners provided each other with the correct solution in the majority of cases, they did not necessarily apply the newly constructed knowledge immediately in their written work, a week later during posttesting, or 11 weeks later at delayed-posttesting.

The linguistic information they co-constructed was not always accurate. Shared information might be confusing, vague, implicit or general rather than specific. Inaccurate solutions in some CRXs may well be for linguistic features or verbs that are not in their ZPD. Although the information was occasionally inaccurate, it might possibly have been of some benefit. There were some improvements in subsequent tests related to these CRXs; students adhered to their inaccurate solutions only half the time and were even more successful in the unresolved cases. It is possible that students engaged in some reflection over time. In addition, the abundance of accurate knowledge co-constructed related to the conditional may have rectified the effects of the inaccurate input.

### **8.4.3 Collective Experts in the ZPD**

When learners co-construct linguistic knowledge and decide upon a correct solution, collaboratively they become experts. When pretest scores on the conditional are used to ascertain initial expertise, combined dyad scores did not demonstrate high degrees of expertise. Yet, all students in the study group demonstrated some movement toward greater degrees of self-regulation in their post and delayed-posttests compared to their pretests. From the two CRXs discussed in chapter 6, it is evident that the novices were able to co-construct linguistic knowledge and produce it accurately in subsequent writing and some tests.

### **8.4.4 Strengths of the Evidence of Other-Regulation**

This study is similar to past descriptive research in providing a detailed analysis of the dialogues (Donato, 1994; Kowal, 1997; Swain & Lapkin, 1998); it diverges from past experimental research focusing on the effects of focus on form instruction (Day & Shapson, 1991; Harley, 1989; Lyster, 1993). In these investigations with large samples, the substance of dialogues were, of necessity, not examined in detail. The CRXs of the present study however have provided evidence linking specific and general learning outcomes from pretests through to posttests and delayed-posttests. In producing language, opportunities were provided to allow students to revise their interlanguage grammar during the dialogues. These revisions manifest themselves as a product in the immediate writings and subsequent tests.



## **8.5 Theoretical and Research Implications**

This section presents a brief interpretation of the findings' implications for sociocultural theory and the output hypothesis. The Vygotskian sociocultural framework has provided a useful way to understand the learning process of SL learners; its concept of the ZPD was of special utility. The dialogue proved to be a useful research tool to shed light on my research questions.

Sociocultural theory postulates that learning is social and that knowledge is co-constructed amongst individuals before it becomes an internally used resource. The theory predicts that learning will occur as a result of interaction where there is an expert, a person, object, or other tool, that provides knowledge to assist the learner in her performance. The learners in this study talked about the formal features, tense selection, and lexical meaning of the conditional. Through CD, the students restructured their linguistic knowledge. They demonstrated higher degrees of self-regulation in subsequent tests as compared to pretesting.

### **8.5.1 Collaborative Dialogue: Cognitive Activity**

The students co-constructed linguistic knowledge during collaborative writing tasks. Through language, they engaged in sophisticated problem solving. They used language to produce and reflect upon language when they were engaged in cognitive processes such as noticing and hypothesis formation in the dialogues. They co-constructed linguistic knowledge and rules and applied this knowledge to identical and new conditionals in both their dialogues and tests. They used English and French to solve linguistic problems or translate the meaning of specific verbs. Language used in the CDs was both a product and process of learning. The CDs

are now examined within a specific discussion of the cognitive processes the students engaged in during their communication.

#### 8.5.1.1 The Output Hypothesis and the ZPD

The output hypothesis can describe the process of learning, where in accord with the latter, students noticed problems or linguistic features, formulated hypotheses and tested them and created linguistic knowledge. The SLL components of input and output are evidenced in the productive tasks of writing and speaking. The cognitive activities whose presence one infers in the dialogues are now described in relation to the levels of transition in the ZPD. The functions of output will be integrated in the discussion.

##### *8.5.1.1.1 Noticing of Linguistic Features in the Students' ZPD*

The data from the CDs helped identify under what conditions output leads to noticing. Students noticed correct and erroneous conditionals in their dialogues and tests. They talked about various conditionals while undertaking their collaborative writing. They noticed problems with up to three aspects of the conditional: the formal features, tense selection, and lexical meaning.

The TMTs were based upon what was in the students' respective ZPDs: linguistic features they noticed and chose to talk about and resolved successfully in most cases. The maintenance of high scores of the post and delayed-post TMTs may suggest that learners did indeed notice verbs that were in their ZPD, especially linguistic features that were high in their ZPD. That is, development was evidently in progress; the students were demonstrating movement towards self-regulation.

Peers may in fact more easily locate each other's ZPDs than can a teacher. They may understand the difficulties their partners are experiencing because they are close to their peer's ZPD. There are however, instances in the CRXs when the students seemed to notice that something was beyond their individual or collaborative abilities. In these cases, they explicitly said, "I don't know" or expressed frustration, or simply abandoned the problem.

#### *8.5.1.1.2 Hypothesis Formation and Testing in the Students' ZPD*

The students engaged in hypothesis formation and testing when they noticed a linguistic feature within their ZPD. The alternatives on the TMT items, based on what the dyad said, are examples of hypotheses formed and tested. They co-constructed knowledge, both accurate and inaccurate, with each other, and in so doing consolidated existing, partial, or new knowledge. They applied this new knowledge to identical conditionals in the TMTs and other conditionals in the unit tests.

#### *8.5.1.1.3 Metatalk: Reflection in the ZPD*

The students talked about the conditional. In CRXs where a solution was reached, the students noticed a linguistic problem and resolved it. Once they noticed the trouble-source, they paid attention to it in the input, so that when they were confronted with the input again on the TMTs (post or delayed-posttests), they had an opportunity to reflect upon this knowledge again. With the benefit of newly acquired knowledge or consolidated existing knowledge, they found the correct solution independently, attaining level five during testing.

Even when an incorrect solution was reached or the problem was not resolved in a CRX, the students more often correctly completed the corresponding

TMT items. I would argue that the students probably engaged in some reflection after the CRX.

The students' answers were correct over half the time in the items where no solution or an inaccurate one was reached in the dialogues. However it must be pointed out that there was a limited number of incorrect solutions as opposed to the overwhelming number of correct solutions co-constructed. This percentage, I believe, is evidence that noticing and hypothesis testing, even if unresolved at the time, stimulate cognitive processes leading to SLL. Supporting the argument is the fact that there was a focus on the conditional throughout the intervention, providing an opportunity to build on knowledge. I would argue that the students have had the opportunity to reflect on what was said in the dialogues and this along with the overall effects of the intervention allowed them to identify the correct solutions.

## **8.6 Pedagogical Implications**

There are limitations in generalizing the findings to other contexts and further research is necessary in several areas to bridge the gap between my findings and practical implications. Nonetheless several suggestions are now offered.

The content of the focus on form instruction manifested itself in the dialogues where the students talked about the conditional. The students repeatedly took the pieces of the puzzle apart: formal features, tense selection, and lexical meaning. They then put them together, one-by-one. They chose the order according to their needs, in an attempt to get their message across accurately and precisely. One of the first applications of these findings is that teachers make students aware of these three aspects of verbs by encouraging

them to make the important links. Teachers might say, "Triple-check your work: lexical meaning, tense selection and formal features." Celce-Murcia and Larsen-Freeman (1999) have created such grammatical exercises for ESL students.

The interactional data reveal that the learning of a single verb tense is complex. Seemingly rather straightforward rules are not so, according to the dialogues in this study, because applying them in new or even familiar contexts requires complex cognitive processes.

Students focussed more often on one aspect at a time as demonstrated in the numerous single-CRXs. As a teacher, one must assess background knowledge and try to appreciate the complex cognitive processes that a student undertakes before she can apply a rule consistently. To focus on more than one aspect of a verb at a time and make the links between the formal features, tense selection, and meaning of a verb may require assistance or extra time. If new knowledge is to be applied or if there is more than one error related to one conditional, students benefit from repeated chances at revision and editing with the same and different partners as well as repeated instruction.

Responses to distracters on the TMTs based upon the dyad's dialogues strongly suggest that the teacher's goals are not always those of the learners'. Learners bring their own goals and histories to the tasks; thus teachers should be flexible in their teaching to accommodate other goals of the learners. This may require attentive listening on the part of the teacher.

The discrepancies between the production tests and recognition TMTs suggest that teachers need to be aware of the differences between these types of tests. The production tests may measure a different kind of cognitive activity; the recognition tests may be more sensitive to the students' next level of development. Teachers must consider multiple test items to identify strengths and weaknesses.

Future TMTs could assess, in addition to written verbs, the student's ability to orally produce conditionals.

In relation to identifying misconceptions, it is important for teachers to gain information on students' prior knowledge and proficiency in other tenses, especially those related to the linguistic feature to be taught. The more numerous errors in the various sentences of the TMT items compared to the key sentence suggest that teaching of one verb tense should not be in isolation from other verb tenses. To alleviate the confusion with the future and the conditional, the instruction could emphasize contrasting the two verb tenses in general, and specifically in the cases where *Si* and the present tense is followed by the future tense versus *Si* and the imperfect followed by the conditional in the main clause.

## 8.7 General Limitations

There were inevitable trade-offs that accompanied the research decision to conduct a classroom-based study and to deal with problems as they arose during data collection. The limitations in four major areas will be briefly described: design, external validity, measures, and statistical analyses.

Although it was possible to conclude that, for this sample, the combination of components of the intervention (focus on form instruction, dialogues, use of resources) was associated with certain outcomes, one cannot necessarily determine which particular component primarily led to those outcomes. Information from the comparison teacher revealed an emphasis on grammar and accuracy. Extensive triangulation of data from the teachers, students, and researcher might have helped describe in more detail what actually went on in relation to the conditional in the comparison group and, as importantly, when. The lack of TMT data from the comparison group, due to time constraints, has left

gaps in the investigator's knowledge related to differences between the tests and groups.

The small sample size entails compromise in the external validity of the findings. The findings of this study relate to eight, grade 8 FI females in their real-life learning situation in their classroom environment at a particular school in a single city. The small sample size necessitated by the extensive audiorecordings and testing makes it impossible to generalize these findings to other students at this level or other age groups, populations, SLL contexts, linguistic features and tasks.

Despite the strengths in the methodology there are limitations related to the test data. What might be useful is more recognition tasks similar to TMTs to ascertain a refined initial developmental level: noticing ability at pretesting. Ideally there would be a large number of identical pretest items relating to specific conditionals talked about.

For the TMT several suggestions for improvement may be offered. Time constraints and pressures were the major obstacle in creating the TMTs. One might add multiple items for one conditional; create three items for a triple-CRX to assess the student's knowledge of the formal features, tense selection, and lexical meaning. In addition, the TMTs contained only recognition items; the addition of production items might be useful to shed further light on the learning process. Pretesting and intervention in the future might focus on specific features of the conditional such as the singular versus plural endings to limit the scope of the study and yield evidence of generalization to different conditionals.

The comments in the space provided after each item revealed some of the students' metalinguistic knowledge. In the explanations, the degree of sophistication and effort of the explanations varied. Administration of the TMTs

to the comparison group might clarify the higher scores and maintenance of learning on these tests as compared to the unit tests.

There are statistical limitations. The small sample size may have limited the power of the statistics to detect anything but the strongest effects and in addition there was only one comparison group. These issues, combined with the comparison group teacher's emphasis on grammar and accuracy and the study group teacher's lack of experience in the FI program may have reduced the statistical differences.

### **8.8 Future Directions**

The findings raise several questions that warrant further investigation. This study does not resolve the issue of the individual benefits of focus on form instruction, CDs, and heterogeneous and homogeneous groupings. This study examines the linguistic content of peer interaction. In future studies, further qualitative analyses of the content of the dialogue would be of benefit to refine the descriptions of the type of knowledge being co-constructed.

This study points to the need to continue to examine the quality of the content of peer interaction in respect to accuracy, clarity, quantity, optimal length, and explicitness of the talk related to the CREs. Because the triple-CRX appeared to give the students a deepened understanding, several lines of investigation are indicated. It would be rewarding to further study the benefits of the multiple-exchanges versus the single-exchanges as well as other issues with different samples: males, larger classes, different age groups, other linguistic features, and across SL contexts. Similarly, it would be of use to continue the investigation of whether the three categories are applicable to other verb tenses or grammatical features.



The students in this study made some use of metalinguistic terminology; they did not, however, use the terminology associated with regular or irregular roots or infinitive endings. In a future study even more explicit instruction could be included in relation to the formal features, tense selection, and the lexical meaning of the conditional. Students would be directly encouraged to use metalinguistic terminology for the components of the conditional. Lastly, conditionals not completed successfully in the cloze pretests could have been easily incorporated in subsequent dictoglosses. This would increase the number of matched pretest and TMT items.

Together these SL learners were generally able to work in each other's ZPD. Yet, learning appears to be complex and uneven. As Vygotsky stated, the "development of learning does not happen in a linear, incremental fashion" (1978, p. 73). The search for evidence of learning is equally, if not more complex. The transcripts of the dialogues and the test results demonstrate the unevenness of learning.

According to Vygotsky (1978) "we often learn more about how a cognitive system operates when we observe it under conditions of failure and breakdown than when we observe the system functioning smoothly" (cited in Aljaafreh & Lantolf, 1994, p. 478). The students did not always learn in this study nor did they always co-construct accurate knowledge. A future study might undertake a detailed analysis of dialogues related to negative test results to provide insight as to how and why the learning process breaks down.

The consistently high scores of the TMTs at both post and delayed-posttesting might lead one to say that the linguistic features discussed in the dialogues were in the students' ZPD. The high scores of specific verbs talked about might suggest that the learning in the CRXs was not necessarily new learning, but perhaps more often consolidation of existing/not so new knowledge. Hence it is

important in any study not to just ask if the students learned but to investigate several more issues: How does one ascertain when something is learned? How is learning related to what is noticed and how is it measured? What exactly is learned? Multiple assessments are needed to capture the different and sometimes subtle aspects of development as seen in the various levels of the ZPD: noticing, hypothesis testing, correcting, explaining and applying the rule of a particular linguistic feature, and producing the verb.

The students carried on as they would normally do so in group work. They spoke in either French or English during the dialogues of the collaborative activities. It was interesting to observe the language in which SLL students opt to speak. As Brooks and Donato (1994) state, "metatalk in either language is not to be ignored" (p. 274); it warrants further investigation. In addition, their reliance upon English as a psychological tool to learn, particularly in the numerous translations, suggests investigating the possibilities of including some grammatical instruction to contrast the English and French conditional as well as pretesting their proficiency in the English conditional.

## **8.9 Concluding Remarks**

Classroom-based research is an effective way to bridge the gap between theory and practice. The importance of this study is in the fact that the Vygotskian analysis of the test data was supplemented with quantitative and qualitative analyses of the product and process of learning captured during the CDs. This descriptive study focussed, in a detailed fashion, on the learning captured in the dialogues while directly relating such processes to the output produced over the short- as well as the long-term. Whereas many past studies have given a still photo of language learning through products (tests and writings),

**this study has illustrated methods which give a close-up and panoramic motion picture of SLI in progress.**

**It is hoped that the investigation has shed some light on students' learning of a problematic verb tense in the French language. Our enriched understanding based on what was said suggests that researchers, teachers, and students can benefit immensely from listening to the talk of language learners as they engage in CD.**

## References

- Adair-Hauck, R. B., & Donato, R. (1994). Foreign language explanations within the zone of proximal development. *Canadian Modern Language Review*, 50, 532-557.
- Adair-Hauck, R. B., Donato, R., & Cumo, P. (1994). Using a whole language approach to teach grammar. In J. Schrum & E. Glisan (Eds.), *Teacher's Handbook Contextualized language instruction* (pp. 90-111). Boston: Heinle and Heinle.
- Aljaafreh, A. (1992). *Negative feedback in second language learning and the zone of proximal development*. Unpublished doctoral dissertation, University of Delaware, Newark, DE.
- Aljaafreh, A., & Lantolf, J. P. (1994). Negative feedback as regulation and second language learning in the zone of proximal development. *The Modern Language Journal*, 8, 465-483.
- Allwright, D., & Bailey, K. M. (1991). *Focus on the language classroom*. Cambridge, UK: Cambridge University Press.
- Anton, M., & DiCamilla, F. (1998). Socio-cognitive function of L1 collaborative interaction in the L2 classroom. *The Canadian Modern Language Review*, 54, 314-342.
- Arievitch, I., & van der Veer, R. (1995). Furthering the internalization debate: Gal'perin's contribution. *Human Development*, 38, 113-126.
- Bereiter, C. (1994). Implications of postmodernism for science, or, science as progressive discourse. *Educational Psychologist*, 29, 3-12.
- Brooks, F. B., & Donato, R. (1994). A Vygotskyan approach to understanding learner discourse in the foreign language classroom. *Hispania*, 77, 262-274.
- Carroll, S., & Swain, M. (1993). Explicit and implicit negative feedback: An empirical study of the learning of linguistic generalizations. *Studies in Second Language Acquisition*, 15, 357-386.
- Celce-Murcia, M. (1991). Grammar pedagogy in second and foreign language teaching. *TESOL Quarterly*, 25, 459-479.
- Celce-Murcia, M., & Larsen-Freeman, D. (1999). *The grammar book*. Boston: Heinle and Heinle.
- Chaudron, C. (1983). Simplification of input: Topic reinstatements and their effect on L2 learners' recognition and recall. *TESOL Quarterly*, 17, 437-458.

- Clark, E. (1985). Acquisition of romance, with special reference to French. In D. J. Slobin (Ed.), *The crosslinguistic study of language acquisition* (Vol. 1, pp. 687-782). Hillsdale, NJ: Erlbaum.
- Cole, M. (1985). The zone of proximal development: Where culture and cognition create each other. In J. V. Wertsch (Ed.), *Culture, communication and cognition: Vygotskian perspectives* (pp. 146-161). New York: Cambridge University Press.
- Corder, S. P. (1981). *Error analysis and interlanguage*. Oxford, UK: Oxford University Press.
- Coughlan, P., & Duff, P. (1994). Same task, different activities: Analysis of a SLA task from an activity theory perspective. In J. P. Lantolf & G. Appel (Eds.), *Vygotskian approaches to second language research* (pp. 173-193). Norwood, NJ: Ablex.
- Cumming, A. (1990). Metalinguistic and ideational thinking in second language composing. *Written Communication*, 7, 482-511.
- Day, E., Collins, M., & Rioux, F. (1989). *Création d'une colonie spatiale: Une unité de français pour les élèves de septième année d'immersion précoce* (BC French Study). Burnaby, BC: Simon Fraser University.
- Day, E., & Shapson, S. (1989). *An experimental study for improving the grammar of French immersion children (Final Report)*. Burnaby, BC: Simon Fraser University, Faculty of Education.
- Day, E., & Shapson, S. (1991). Integrating formal and functional approaches to language teaching in French immersion: An experimental study. *Language Learning*, 4, 25-58.
- Day, E., & Shapson, S. (1996). *Studies in immersion education*. Clevedon, UK: Multilingual Matters.
- De Guerrero, M. C. M., & Villamil, O. S. (1994). Social-cognitive dimensions of interaction in L2 peer revision. *The Modern Language Journal*, 78, 484-496.
- DiCamilla, F. J., & Lantolf, J. P. (1994). The linguistic analysis of private writing. *Language Sciences*, 16, 347-369.
- Donato, R. (1988). *A psycholinguistic rationale for collective activity in second language learning*. Unpublished doctoral dissertation, University of Delaware, Newark, DE.
- Donato, R. (1994). Collective scaffolding in second language learning. In J. P. Lantolf & G. Appel (Eds.), *Vygotskian approaches to second language research* (pp. 33-56). Norwood, NJ: Ablex.

- Donato, R., & Adair-Hauck, B. (1992). Discourse perspectives on formal instruction. *Language Awareness, 1*, 73-89.
- Donato, R., & Lantolf, J. P. (1990). The dialogic origins of L2 monitoring. *Pragmatics and Language Learning, 1*, 83-98.
- Doughty, C. (1991). Second language instruction does make a difference: Evidence from an empirical study of relativization. *Studies in Second Language Acquisition, 13*, 431-469.
- Doughty, C. (1994, October). *Finely tuned feedback as focus on form*. Paper presented at the meeting of the Second Language Research Forum, Montreal, QC.
- Doughty, C., & Williams, J. (Eds.). (1998). *Focus on form in classroom second language acquisition*. Cambridge, UK: Cambridge University Press.
- Early, M. (1989). Using key visuals to aid ESL students' comprehension. *Reading-Canada-Lecture, 7*, 202-212.
- Ellis, R. (1986). *Understanding second language acquisition*. Oxford, UK: Oxford University Press.
- Ellis, R., Tanaka, Y., & Yamazaki, A. (1994). Classroom interaction, comprehension, and the acquisition of L2 word meanings. *Language Learning, 44*, 449-491.
- Faerch, C., & Kasper, G. (1983). *Strategies in interlanguage communication*. London: Longman.
- Faltis, C. (1990). Spanish for native speakers: Freirian and Vygotskian perspectives. *Foreign Language Annals, 23*, 117-126.
- Fraser, C. (1997). *The impact of lexical processing strategy instruction on L2 readers' strategy use, reading rate, reading comprehension, and vocabulary learning*. Unpublished doctoral dissertation, University of Toronto, Toronto, ON.
- Frawley, W., & Lantolf, J. P. (1985). Second language discourse: A Vygotskian perspective. *Applied Linguistics, 6*, 19-44.
- Froc, M. (1995). Error correction in French immersion. *The Canadian Modern Language Review, 51*, 708-717.
- Gass, S. M. (1988). Integrating research areas: A framework for second language studies. *Applied Linguistics, 9*, 198-217.
- Gass, S. M. (1997). *Input, interaction and the second language learner*. Mahwah, NJ: Erlbaum.

- Grevisse, M. (1990). *Précis de grammaire française* (29ième éd.). Paris: Éditions Duculot.
- Harley, B. (1989). Functional grammar in French immersion: A classroom experiment. *Applied Linguistics*, 10, 331-359.
- Harley, B. (1992). Patterns of second language development in French immersion. *Journal of French Language Studies*, 2, 159-183.
- Harley, B. (1993). Instructional strategies and SLA in early French immersion. *Studies in Second Language Acquisition*, 15, 245-259.
- Harley, B. (1994, October). *A focus on grammatical gender in the primary immersion classroom*. Paper presented at the meeting of the Second Language Research Forum, Montreal, QC.
- Harley, B. (1998). The role of focus-on-form tasks in promoting child L2 acquisition. In C. Doughty & J. Williams (Eds.), *Focus on form in classroom second language acquisition* (pp. 156-174). Cambridge, UK: Cambridge University Press.
- Harley, B., Howard, J., & Hart, D. (1998). Grammar in grade 2: An instructional experiment in primary French immersion. In S. Lapkin (Ed.), *French as a second language education in Canada: Recent empirical studies* (pp. 177-193). Toronto, ON: University of Toronto Press.
- Harley, B., & Swain, M. (1977). An analysis of verb form and function in the speech of French immersion pupils. *Working Papers on Bilingualism*, 14, 31-46.
- Harley, B., & Swain, M. (1984). The interlanguage of immersion students and its implications for second language teaching. In A. Davies, C. Criper, & A. Howatt (Eds.), *Interlanguage* (pp. 291-311). Edinburgh, UK: Edinburgh University Press.
- Harley, B., Ullman, R., & Mackay, D. (1985). *Parlons du passé*. Toronto, ON: Ontario Institute for Studies in Education, Modern Language Centre.
- Hatch, E. (1978a). Acquisition of syntax in a second language. In J. C. Richards (Ed.), *Understanding second and foreign language learning: Issues and approaches* (pp. 34-69). Rowley, MA: Newbury House.
- Hatch, E. (1978b). Discourse analysis and second language acquisition. In E. Hatch (Ed.), *Second language acquisition: A book of readings* (pp. 401-435). Rowley, MA: Newbury House.
- Hawkins, B. A. (1988). *Scaffolded classroom interaction and its relation to second language acquisition for language minority children*. Unpublished doctoral dissertation, University of California, Los Angeles, CA.

- Hawkins, R., & Towell, R. (1996). *French grammar usage*. Chicago, IL: NTC Publishing Group.
- Holunga, S. (1994). *The effect of metacognitive strategy training with verbalization on the oral accuracy of adult second language learners*. Unpublished doctoral dissertation, University of Toronto, Toronto, ON.
- Kagan, S., & McGroarty, M. (1993). Principles of cooperative learning for language and content gains. In D. D. Holt (Ed.), *Cooperative learning: A response to linguistic and cultural diversity* (pp. 47-66). Washington, DC: Center for Applied Linguistics.
- Kowal, M. (1997). *French immersion students' language growth in French: Perceptions, patterns and programming*. Unpublished doctoral dissertation, University of Toronto, Toronto, ON.
- Kowal, M., & Swain, M. (1994). Using collaborative language production tasks to promote students' language awareness. *Language Awareness*, 3, 73-93.
- Kowal, M., & Swain, M. (1997). From semantic to syntactic processing: How can we promote metalinguistic awareness in the French immersion classroom? In R. K. Johnson & M. Swain (Eds.), *Immersion education: International perspectives* (pp. 284-309). Cambridge, UK: Cambridge University Press.
- Kramersch, C. (1995). The applied linguist and the foreign language teacher: Can they talk to each other? *Australian Review of Applied Linguistics* 18, 1-16.
- Krashen, S. (1982). *Principles and practice in second language acquisition*. Oxford, UK: Pergamon.
- Krashen, S. (1985). *The input hypothesis: Issues and implications*. New York: Longman.
- Lantolf, J. P. (1994). Sociocultural theory and the second-language classroom: The lesson of strategic interaction. In J. E. Alatis (Ed.), *Strategic interaction and language acquisition: Theory, practice and research* (pp. 220-233). Washington, DC: Georgetown University Press.
- Lantolf, J. P., & Ahmed, M. K. (1989). Psycholinguistic perspectives on interlanguage variation: A Vygotskian analysis. In S. Gass, C. Madden, D. Preston, & L. Selinker (Eds.), *Variation in second language acquisition: Vol. II. Psycholinguistic issues* (pp. 93-108). Philadelphia, PA: Multilingual Matters.
- Lantolf, J. P., & Appel, G. (Eds.). (1994). *Vygotskian approaches to second language research*. Norwood, NJ: Ablex.



- Lantolf, J. P., DiCamilla, F., & Ahmed, M. K. (1997). The cognitive function of linguistic performance: Tense/aspect use by L1 and L2 speakers. *Language Sciences, 19*, 153-165.
- Lantolf, J. P., & Pavlenko, A. (1995). Sociocultural theory and second language acquisition. *Annual Review of Applied Linguistics, 15*, 108-124.
- LaPierre, D. (1994). *Language output in a cooperative learning setting: Determining their effects on second language learning*. Unpublished master's thesis, University of Toronto, Toronto, ON.
- Lapkin, S. (1979). An analysis of French verb errors made by second language learners of French in a bilingual program. *Studies in Second Language Acquisition, 2*, 65-84.
- Lapkin, S. (1984). How well do immersion students speak and write French? *Canadian Modern Language Review, 40*, 576-585.
- Lapkin, S., & Swain, M. (1990). French immersion research agenda for the 90s. *Canadian Modern Language Review, 46*, 638-674.
- Lapkin, S., & Swain, M. (1996). The teaching of vocabulary in a grade eight French immersion class: A descriptive case study. *Canadian Modern Language Review, 53*, 242-256.
- Lightbown, P. (1985). Input and acquisition for second language learners in and out of classrooms. *Applied Linguistics, 6*, 263-273.
- Lightbown, P. (1992). Getting quality input in the second and foreign language classroom. In C. Kramsch & S. McConnell Ginet (Eds.), *Text and context: Cross-disciplinary and crosscultural perspectives on language study* (pp. 187-197). Lexington, MA: Heath.
- Lightbown, P. (1998). The importance of timing in focus on form. In C. Doughty & J. Williams (Eds.), *Focus on form in classroom second language acquisition* (pp. 177-196). Cambridge, UK: Cambridge University Press.
- Lightbown, P., & Spada, N. (1990). Focus-on-form and corrective feedback in communicative language teaching: Effects on second language learning. *Studies in Second Language Acquisition, 12*, 429-448.
- Long, M. H. (1981). Input, interaction and second-language acquisition. In H. Winitz (Ed.), *Annals of the New York Academy of Sciences: Vol. 379. Native language and foreign language acquisition* (pp. 259-278). New York: New York Academy of Sciences.
- Long, M. H. (1985a). Input and second language acquisition theory. In S. M. Glass & C. G. Madden (Eds.), *Input in second language acquisition* (pp. 377-393). Cambridge, MA: Newbury House.

- Long, M. H. (1985b). A role for instruction in second language acquisition: Task-based language training. In K. Hyltenstam & M. Pienemann (Eds.), *Modelling and assessing second language acquisition* (pp. 77-100). Clevedon, UK: Multilingual Matters.
- Long, M. H. (1991). Focus on form: A design feature in language teaching methodology. In K. de Bot, D. Coste, R. L. Ginsberg, & C. Kramsch (Eds.), *Foreign language research in crosscultural perspective* (pp. 39-52). Amsterdam: John Benjamins.
- Long, M. H. (1994, October). *Focus on form and implicit negative feedback*. Paper presented at the meeting of the Second Language Research Forum, Montreal, QC.
- Long, M. H., & Porter, P. (1985). Group work, interlanguage talk, and second language acquisition. *TESOL Quarterly*, 19, 305-325.
- Lyster, R. (1990). The role of analytic language teaching in French immersion programs. *Canadian Modern Language Review*, 47, 159-175.
- Lyster, R. (1993). *The effect of functional-analytic teaching on aspects of sociolinguistic competence: A study in French immersion classrooms of the grade eight level*. Unpublished doctoral dissertation, University of Toronto, Toronto, ON.
- Lyster, R. (1994). La négociation de la forme: Stratégie analytique en classe d'immersion. *Canadian Modern Language Review*, 50, 446-465.
- Mackey, A. (1995). *Stepping up the pace: Input, interaction and interlanguage development—An empirical study of questions in ESL*. Unpublished doctoral dissertation, University of Sydney, Sydney, Australia.
- McGroarty, M. (1988). Second language acquisition theory relevant to linguistic minority students: Cummins, Krashen and Schumann. In S. McKay & S. C. Wong (Eds.), *Language diversity: Problem or resource?* (pp. 295-338). New York: Newbury House.
- McGroarty, M. (1991). What can peers provide? In J. E. Alatis (Ed.), *Linguistics and language pedagogy: The state of the art* (pp. 295-338). Washington, DC: Georgetown University Press.
- McGroarty, M. (1993). Cooperative learning and second language acquisition. In D. D. Holt (Ed.) *Cooperative learning: A response to linguistic and cultural diversity* (pp. 19-46). Washington, DC: Center for Applied Linguistics.
- McLaughlin, B. (1987). *Theories of second language acquisition*. London: Edward Arnold.

- Minnick, N. (1987). *The development of Vygotsky's thought: An introduction* (N. Minick, Trans.). In R. W. Rieber & A. S. Carton (Eds.) *The collected works of L. S. Vygotsky* (Vol. 1). New York: Plenum.
- Ollivier, J. (1993). *Grammaire française* (2ième éd.). Laval, QC: Éditions Études Vivantes.
- Pica, T. (1987). Second language acquisition, social interaction, and the classroom. *Applied Linguistics*, 8, 1-21.
- Pica, T. (1991). Classroom interaction, participation and comprehension: Redefining relationships. *System*, 19, 437-452.
- Pica, T. (1994). Research on negotiation: What does it reveal about second-language learning conditions, processes, and outcomes? *Language Learning*, 44, 493-527.
- Pica, T., Holliday, L., Lewis, N., & Morgenthaler, L. (1989). Comprehensible output as an outcome of linguistic demands on the learner. *Studies in Second Language Acquisition*, 11, 63-90.
- Pica, T., Young, R., & Doughty, C. (1987). The impact of interaction on comprehension. *TESOL Quarterly*, 21, 737-758.
- Platt, E., & Brooks, F. B. (1994). The "acquisition-rich" environment revisited. *Modern Language Journal*, 78, 497-511.
- Rogoff, B., & Wertsch, J. (Eds.). (1984). *Children's learning in the zone of proximal development*. San Francisco, CA: Jossey-Bass.
- Rutherford, W., & Sharwood Smith, M. (1985). Consciousness raising and universal grammar. *Applied Linguistics*, 6, 274-282.
- Rutherford, W., & Sharwood Smith, M. (Eds.). (1988). *Grammar and second language teaching: A book of readings*. New York: Newbury House.
- Schinke-Llano, L. (1993). On the value of a Vygotskian framework for SLA theory and research. *Language Learning*, 43, 121-129.
- Schinke-Llano, L. (1994). Linguistic accomodation with LEP and LD children. In J.P. Lantolf & G. Appel (Eds.), *Vygotskian approaches to second language research* (pp.57-68). Norwood, NJ: Ablex.
- Schmidt, R. (1992). Psychological mechanisms underlying second language fluency. *Studies in Second Language Acquisition*, 14, 357-385.
- Selinker, L. (1972). Interlanguage. *International Review of Applied Linguistics*, 10, 209-231.

- Shrum, J., & Glisan, E. (Eds.). (1993). *Teacher's handbook: Contextualized language instruction*. Boston: Heinle and Heinle.
- Snow, M. A., & Brinton, D. M. (1988). Content-based language instruction: Investigating the effectiveness of the adjunct model. *TESOL Quarterly*, 22, 553-574.
- Spielman, S. (1996). Collaborative learning of the conditional in a grade eight French immersion classroom. *Second Languages Bulletin*, 15(30), 5-7.
- Stetsenko, A., & Arievitch, I. (1997). Constructing and deconstructing the self: comparing post-Vygotskian and discourse-based version of social constructivism. *Mind, Culture, and Activity*, 4, 159-171.
- Stern, H. H. (1992). *Issues and options in language teaching*. Oxford, UK: Oxford University Press.
- Swain, M. (1985). Communicative competence: Some roles of comprehensible input and comprehensible output in its development. In S. M. Gass & C. G. Madden (Eds.), *Input in second language acquisition* (pp. 235-253). Cambridge, MA: Newbury House.
- Swain, M. (1993). The output hypothesis: Just speaking and writing aren't enough. *The Canadian Modern Language Review, Golden Anniversary Issue*, 50, 158-164.
- Swain, M. (1995). Three functions of output in second language learning. In G. Cook & B. Seidlhofer (Eds.), *Principle and practice in applied linguistics: Studies in honour of H. G. Widdowson* (pp. 125-144). Oxford, UK: Oxford University Press.
- Swain, M. (1997). Collaborative dialogue: Its contribution to second language learning. *Revista Canaria de Estudios Ingleses*, 34, 115-132.
- Swain, M. (1998). Focus on form through conscious reflection. In C. Doughty & J. Williams (Eds.), *Focus on form in second language acquisition* (pp. 64-81). Cambridge, UK: Cambridge University Press.
- Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. Lantolf (Ed.) *Sociocultural theory and second language learning* (pp. 97-114). Oxford, UK: Oxford University Press.
- Swain, M., & Carroll, S. (1987). The immersion observation study. In B. Harley, P. Allen, J. Cummins, & M. Swain (Eds.), *The development of bilingual proficiency: Final report, volume II: Classroom treatment* (pp. 190-263). Toronto, ON: Ontario Institute for Studies in Education, Modern Language Centre.

- Swain, M., & Lapkin, S. (1982). *Evaluating bilingual education: A Canadian case study*. Clevedon, UK: Multilingual Matters.
- Swain, M., & Lapkin, S. (1986). Immersion French in secondary schools: 'The goods' and 'the bads.' *Contact*, 5, 2-9.
- Swain, M., & Lapkin, S. (1995). Problems in output and the cognitive processes they generate: A step towards second language learning. *Applied Linguistics*, 16, 371-391.
- Swain, M., & Lapkin, S. (1997). *Focus on form through collaborative dialogue: Exploring task effects* (Mimeo). Toronto, ON: Ontario Institute for Studies in Education, Modern Language Centre.
- Swain, M., & Lapkin, S. (1998). Interaction and second language learning: Two adolescent French immersion students working together. *Modern Language Journal*, 83, 320-335.
- Tarone, E. (1977). Conscious communication strategies in interlanguage. In H. D. Brown, C. C. Yorio, & R. C. Crymes (Eds.), *On TESOL '77* (pp. 194-203). Washington, DC: TESOL.
- van Lier, L. (1988). *The classroom and the language learner*. New York: Longman.
- van Lier, L. (2000). From input to affordance: Social-interactive learning from an ecological perspective. In J. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp 245-259). Oxford, UK: Oxford University Press.
- Vygotsky, L. S. (1962). *Thought and language*. Cambridge, MA: MIT Press.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Vygotsky, L. S. (1986). *Thought and language*. Cambridge, MA: MIT Press.
- Vygotsky, L. S. (1987). Thinking and speech. In R. W. Rieber & A. S. Carton (Eds.), *The collected works of L. S. Vygotsky* (Vol. 1). New York: Plenum.
- Wajnryb, R. (1990). *Grammar dictation*. Oxford, UK: Oxford University Press.
- Warden, M. (1997). *The effect of form-focused instruction on control over grammatical gender by French immersion students in grade 11*. Unpublished doctoral dissertation, University of Toronto, Toronto, ON.
- Washburn, G. N. (1994). Working in the ZPD: Fossilized and nonfossilized nonnative speakers. In J. P. Lantolf & G. Appel (Eds.), *Vygotskian approaches to second language research* (pp. 69-82). Norwood, NJ: Ablex.

- Wells, G. (1998). Using L1 to master L2: A response to Antón and DiCamilla's 'Socio-cognitive functions of L1 collaborative interaction in the L2 classroom.' *The Canadian Modern Language Review*, 54, 343-353.
- Wertsch, J. V. (1979). From social interaction to higher psychological processes: A clarification and application of Vygotsky's theory. *Human Development*, 22, 1-22.
- Wertsch, J. V. (1984). The zone of proximal development: Some conceptual issues. In B. Rogoff & J. V. Wertsch (Eds.), *Children's learning in the zone of proximal development* (pp. 7-18). San Francisco: Jossey-Bass.
- Wertsch, J. V. (1985a). *Vygotsky and the social formation of mind*. Cambridge, UK: Cambridge University Press.
- Wertsch, J. V. (Ed.). (1985b). *Culture, communication and cognition: Vygotskian perspectives*. Cambridge, MA: Cambridge University Press.
- Wertsch, J. V., & Hickmann, M. (1987). Problem solving in social interaction: A microgenetic analysis. In M. Hickmann (Ed.), *Social and functional approaches to language and thought* (pp. 251-266). Orlando, FL: Academic Press.
- White, L. (1991). Adverb placement in second language acquisition: Some effects of positive and negative evidence in the classroom. *Second Language Research*, 7, 133-161.
- Williams, J. (1997, March). *The place of focus on form in collaborative learning settings*. Paper presented at the meeting of the American Association for Applied Linguistics, Orlando, FL.

## **Appendix A**

### **Letter Requesting Informed Consent**

[originally printed on OISE letterhead]

Dear Parents or Guardians:

I am a X Board teacher presently pursuing doctoral studies at the Ontario Institute for Studies in Education (OISE), University of Toronto. I am requesting permission to have your son/daughter participate in my research project which aims to examine the way in which French immersion students learn verbs in a collaborative setting.

For the purpose of this research, I would like to examine various tasks from an integrated unit to be implemented in your son's/daughter's French immersion classroom beginning in February. Students will undertake three individual activities: a written paragraph, a fill in the blanks exercise, and an interview. In addition, group activities will include: an oral report, a written report and a newspaper article. I would like to tape-record eight students while they are engaged in these activities.

The results of these activities will have no effect on school grades. The information obtained from these tasks is for the purpose of this study only. In order to ensure confidentiality in the report of the findings, students and schools will not be referred to by name, but rather by numerical code so that they cannot be identified. Also, if at any time you no longer wish to have your son/daughter participate, you may request that he or she no longer do so.

The research has been approved by the school principal, the X Board of Education's Research Advisory Committee and OISE. When the study is complete, a report of the findings will be made available to interested parents in the school library. My main goal is the improvement of French immersion students' linguistic weaknesses through second language acquisition research. By allowing your son/daughter to participate, you will be helping us to move closer to that goal.

If you have any further questions, I can be reached at 000-0000. In addition, the principal will be available to handle any inquiries. Thank you very much for attending to this request. Your cooperation is greatly appreciated.

Sincerely,

Sylvia J. Spielman

The Ontario Institute for Studies in Education  
 The Modern Language Centre, 10-250  
 252 Bloor Street West  
 Toronto, ON M5S 1V6

### PARENT CONSENT FORM

*Please return to your son / daughter's teacher. Your cooperation is greatly appreciated. Merci beaucoup.*

Dear Ms. S. Spielman:

I have read your letter of \_\_\_\_\_ describing the research project *Collaborative learning of verbs in a Grade 8 French immersion classroom*, and kept a copy of it for future reference.

I will allow my son/daughter to participate in the study and to be tape-recorded during the collaborative tasks. I understand that the tape recordings will be confidential. My child will never be identified by name.

Yes \_\_\_\_\_

No \_\_\_\_\_

\_\_\_\_\_  
 student's name

\_\_\_\_\_  
 signature of parent/guardian

Date: \_\_\_\_\_.



## Appendix B

### Description of the Conditional

#### A. Formation du Conditionnel

(from Day, Collins, & Rioux, 1989, p. 13)

	<b>Radical du Futur</b>	+	<b>Terminaisons de l'Imparfait</b>
ex.	je chanter		ais
	tu finir		ais
	il fer		ait
	nous prendr		ions
	vous pourr		iez
	ils ir		aient

Quand tu n'es pas certain(e), consulte ton *Bescherelle*, demande à un(e) ami(e) qui s'y connaît ou à ton professeur.

Note: This information was written on chart paper and left on the wall in the classroom for the duration of the unit only. No external resources were available during testing.

**B. Description of the Uses of the Conditional**  
(translated from Day et al., 1989, pp. 5-6)

The **conditional** is used:

- 1) to express hypothetical situations or desires referring to an action which
  - a) cannot really happen.  
e.g., *Si j'étais un oiseau, j'**irais** dans les nuages.*
  - b) is possible but only under certain conditions.  
e.g., *Si j'étais une grande personne, je n'**aurais** pas besoin d'aller à l'école.*
  - c) is possible, but the condition is inferred.  
e.g., *A ta place, je ne **dirais** rien.*  
(*sous-entendu: Si j'étais à ta place.*)

**NOTE:**

In examples a) and b) the sentence has two parts: the subordinate clause starts with *Si* (If) and is followed by the imperfect. (This verb is the condition.) In the main clause, the verb is in the **conditional**. (This verb is the action which is possible only if the condition becomes a reality.)

Note: The following is a summary of the uses of the conditional not undertaken in the unit but given to the teacher as a reference.

- 2) to make polite or attenuated requests.
  - a) to be more polite.  
e.g., *Je **veux** du lait.*  
*Je **voudrais** du lait.*
  - b) to be less direct.  
e.g., *Je **veux** te demander quelque chose.*  
*Je **voudrais** te demander quelque chose.*

3) to express a desire or a suggestion.

a) a desire

e.g., *J'aimerais aller jouer dehors.*

b) a suggestion

e.g., *On pourrait jouer au ping-pong.*

NOTE: In these situations, the verbs *vouloir*, *pouvoir* and *aimer* are frequently used in the conditional.

4) to accept an invitation

e.g., *Veux-tu venir avec moi?*  
*Oui, ça me ferait plaisir.*

5) to give advice.

e.g., *Je suis en retard.*  
*Tu devrais te dépêcher.*

6) to repeat something that someone else said pertaining to a future action.

e.g., *Pierrette: Je vais aller au restaurant demain.*  
*Luc: Qu'est-ce que Pierrette a dit?*  
*Marie: Elle a dit qu'elle irait au restaurant demain.*

7) With *au cas où* (in case (of)).

e.g., *Je te donne mon numéro de téléphone au cas où tu en aurais besoin.*

8) When one does not have the intention of doing something. The verb *devoir* is used in this case.

e.g., *Je devrais arrêter de manger ces chocolats. (mais je ne peux pas.)*

9) When someone thinks or knows something is going to happen, and only when that action has already occurred and the person is now talking about it.

e.g., *Je savais qu'il pleuvrait.*  
e.g., *Elle pensait que le test serait facile.*

## **Appendix C**

### **Revised Conditional Unit (Adapted from Day, Collins, & Rioux, 1989)**

#### **Order of Activities and Description of Corresponding Tasks**

The curriculum implemented during the study was based on the original Day, Collins, and Rioux (1989) unit but was adapted and supplemented to suit the needs of the teacher, students and researcher. This appendix provides a detailed description of the activities and corresponding periods. In Table 3.1, the identification of the periods denotes when the activity occurred and does not necessarily mean it took the entire period(s).

#### **Introduction (Period 1)**

An introductory lesson by the teacher provided the rules for forming the conditional and explained its function in hypothetical situations. Information was elicited from the students through questioning and was complemented by explanations, rules and examples given by the teacher. The Si rule was discussed with the students. That is, a subordinate clause beginning with the conjunction *Si*, and including a verb in the imperfect tense is followed by the conditional in the main clause. The use of the conditional to depict a hypothetical situation was discussed. The translation of a French conditional by would and the infinitive in English was reviewed.

Examples of conditionals from the unit (Appendix F) had been previously copied by me on chart paper and were posted on the wall for the duration of the unit and

removed for testing. The students were asked by the teacher to copy this information in their grammar books. In addition, they were given a cloze task with 10 sentences to complete with their partner (see Appendix D). This served as a warm-up activity to work with their partner. An overview of the unit and the activities was then discussed with the students.

### **Planning of the Space Colony (Periods 2 and 3)**

The following period began with a brief review of the formation of the conditional and its use in hypothetical situations. The main activity, the planning of a space colony and a written report, was introduced giving background information and general instructions (revised p. 17 of the unit, Day et al., 1989) (Appendix E). The students were told to imagine that the earth was overpopulated and that they were part of a group of environmentalists or planning specialists of various professions, who had been hired to plan a space station that would recreate a natural environment where 1,000 pioneers could live. The questions from Activity 1 (1) (excluding B3 and B4) from the unit were put up on the overhead and briefly reviewed (Appendix E). These questions served as a guideline to the pairs' brainstorming of the initial space colony plan. The students were asked to brainstorm and list essential needs for the survival of humans on a new planet and then to organize these needs into categories. Students 1 and 2, for example, divided their information under Shelter, Vegetation, Food, Work, etc.

The next class began with a review of the rules for the formation of the conditional and referred to the verb examples on the chart paper. There was no brainstorming session of verbs and expressions denoting necessity in hypothetical situations, however the teacher provided the examples from the unit, such as *il*

*faudrait absolument, on n'aurait certainement besoin de* and listed them on the board whereupon the students were asked to copy them out on a separate sheet for reference when they were planning their space colony (Appendix F). In addition, a list of conditionals from the unit (Appendix G) in the third person singular were examined on the board and copied by the students for potential use in their written report.

### **Writing of Space Colony Plan (Periods 4, 5, 6, 7, 8, and 9)**

In the next period, dyads were asked to use their notes to collaboratively prepare the first draft of their written plan and to include the most important elements of a space colony. They were to describe their imaginary space colony and what life would be like for the space pioneers. The process writing method was used in the intervention: draft, repeated revisions and repeated corrections of the text were the basis for this activity.

### **Revision of Space Colony Plan (Periods 10, 11, 12, and 15)**

In the next periods the students were then given some time to make changes to their written plan of the space colony. They were asked to undertake revisions and editing of their draft. The students continued to work on their plan. They were given some guidance (explained in chapter 3) and asked to make a good copy of their plan.

### ***Jeu des Hypothèses (Period 5)***

The linguistic game, *Jeu des hypothèses* (Day et al., 1989) was completed in dyads. This game was designed to encourage students to use the conditional in eight scientific situations. They were asked to discuss what would happen if certain specified changes were made in each of the situations. Each situation is followed by three possibilities written in the conditional. The students are thus reading correct forms of the conditional as well as using them in their discussion. In addition, the students were asked by the teacher to translate into English the three conditionals. The answers were marked and returned for corrections in the following class.

### **The Dictogloss (Periods 9 and 13)**

The students were given two dictoglosses, six days apart. The dictogloss, a grammar dictation task, is a text reconstruction procedure undertaken in pairs (Wajnryb, 1990). It requires the students to accurately convey the same meaning as the original text. This encourages them to discuss the links between the form and meaning of the conditional. The two dictoglosses were related to the same theme as the unit and contained conditionals. The first dictogloss was relatively easy for most students and the second was relatively challenging for most. The first dictogloss was an adapted version of a text from the unit (Day et al. 1989, p. 33) originally used in preparation for the oral report. The second, longer dictogloss was more sophisticated than the first one and cognitively more demanding and proved difficult for the weaker students (see Appendix I). Many students felt frustrated so it was read out a fourth time. Samples of the first and final draft of a dictogloss are included in Appendix J.

After a mini-review of the formation and use of the conditional in hypothetical contexts, the students were told to recreate the passage that was read out by the teacher. The dictogloss' instructions are detailed in Appendix H. These instructions were distributed to the class for reading. They were repeated orally one step at a time. The students were asked to listen to the text the first time it was read and on the second and third readings to take notes of words and/or phrases that would enable them to recreate the passage. They were told to use their own and their partner's notes (Appendix J) in recreating the text to convey the same meaning as the original text. Lastly, after writing a draft together the students re-read the text together making any necessary changes. The students asked me for a transparency when they thought they were ready to recopy their corrected version. If there were any mistakes, the teacher or I asked the pair to check over their draft to see if any corrections could be made before distributing the transparency for the final copy. They rewrote the corrected first version on the transparency and handed it in to the teacher (Appendix J).

#### **Correction of Dictoglosses (Periods 12 and 14)**

In addition, the students were asked, at a later date, to correct their original draft which simply had the number of errors noted at the top of the page. In the first dictogloss the number of all grammatical errors was recorded. In the second, only the total number of verb errors was recorded and they were not identified in any way.



**Correction of Mistakes in the *Rapport Fictif* (Periods 12 and 13)**

Class discussions related to the dictogloss did not take place due to technical difficulties with the overhead. However, as a follow-up to the first dictogloss, students were asked to find errors in a longer text based on the content of the first dictogloss (Appendix K). There were a combination of eleven verbs in the present and future requiring the conditional. In addition, there were two typographical errors which were non-conditional mistakes. They served as distracters. Five days later the class continued with a second correction of this report (Period 14). Their first attempt had been corrected by me. The teacher explained that the verbs they had changed correctly had a check mark beside them and their errors, or those that had not been noticed by the students, were underlined. The students discussed their work and made changes together.

**Revision of Peers' Work (Periods 10 and 11)**

Some students in the class wrote lengthy space colony plans and thus had not completed their corrections. Based upon my experience in piloting the materials, I suggested that the teacher ask students to seek help from their peers. The three dyads in the study group were asked to help the fourth dyad with revisions of their more lengthy plan. A photocopy of the first page of their draft was distributed to the other three dyads and they continued with the task of editing their peers' work. The fourth pair continued with the editing of the second page of their own work. There was a repeated, short peer revision, of the fourth dyad's draft two days later.

**Writing of Comic Strip (Period 15)**

The students undertook a short exercise to write a dialogue for a comic strip eliciting the conditional. The five scenes depicted having a big party and buying a big house (Appendix W). The sentences varied, having the *si* clause at the beginning or in the middle. The rule is traditionally taught with examples where *Si*, the condition, begins the sentence. In this activity, the students were required to reverse the order.

## Appendix D

**Task: Fill in the Blanks**  
(written by S. Spielman Davidson)

Nom: \_\_\_\_\_ date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

**Pourriez-vous compléter les phrases? Consultez votre dictionnaire ou votre *Bescherelle* s'il est nécessaire.**

**/10**

1. Si j'étais le directeur je \_\_\_\_\_ plus de vacances  
(donner)  
aux étudiants.
2. Je \_\_\_\_\_ mon devoir si j'avais plus de temps.  
(faire)
3. Il \_\_\_\_\_ un bon joueur de hockey s'il pratiquait d'avantage.  
(être)
4. Si mes parents aimaient voyager, on \_\_\_\_\_ en Europe plus  
(aller)  
souvent.
5. Nous \_\_\_\_\_ aller au cinéma si nous avons de l'argent.  
(pouvoir)
6. Si le Lac Ontario était propre, \_\_\_\_\_ -vous vous baigner?  
(vouloir)
7. Si les filles avaient le choix elles \_\_\_\_\_  
(préférer)  
aller à la fête au lieu d'aller au cinéma.
8. Si tu étais musicien tu \_\_\_\_\_ devant tes amis.  
(jouer)
9. Si j'étais le professeur je \_\_\_\_\_.
10. Si mon ami(e) n'était pas ici il/elle \_\_\_\_\_.

*Note: Students were asked to complete sentences 9 and 10 with their own choice of verbs.*

## **Appendix E**

### **Planning of Space Colony**

(Activity 1(1) taken from Day, Collins, & Rioux, 1989, p. 23)

**I. Votre équipe commence son travail de planification.**

**Comme *écologistes*, votre première tâche serait de déterminer les éléments *essentiels* à la survie d'êtres humains et avec l'aide des géographes, paysagistes et architectes parmi vous, vous auriez aussi à planifier votre "colonie."**

**A. Voici quelques points à considérer:**

- **Quelles sources d'énergie/lumière/chaleur/oxygène/alimentation choisirait-on?**
- **Quel climat voudrait-on?**
- **Aurait-on un environnement urbain ou rural?**
- **Quel paysage y aurait-il? (relief, faune, flore)**
- **Est-ce qu'on y installerait une grande communauté ou plusieurs petites?**
- **Est-ce qu'on y aurait des moyens de communication et de transport internes?**

**B. Votre équipe:**

- 1) **se met d'accord sur les caractéristiques de la colonie et trouve des arguments pour les justifier (tenez compte de l'importance de l'écologie);**
- 2) **aide le secrétaire à prendre des notes;**
- 3) **ébauche une carte/un plan de la colonie; et**
- 4) **note sur le plan même ce que représente chaque partie de l'environnement et sa fonction.**

**Appendix F****List of Expressions Depicting Necessity in Hypothetical Contexts**

**Des expressions qui expriment le besoin et la nécessité  
dans des situations hypothétiques  
(from Day et al., 1989, p. 22)**

**exemples**

il faudrait absolument ...

on aurait sûrement/certainement besoin d'/de...

on ne pourrait pas vivre sans...

ça serait important/essentiel d'avoir...

on mourrait si on n'avait pas d'/de...

**Note:** These expressions were on the chalkboard. The students copied them on to a piece of paper which they kept on file with written work related to this unit.

**Appendix G****List of Conditional Verbs**

(Taken from Day, Collins, & Rioux, 1989, p. 38)

**Si on construisait une colonie dans l'espace, on.....**  
(If we built a colony in outer space, we.....)

**planterait, cultiverait**

**installerait**

**construirait, bâtirait**

**apporterait, amènerait**

**élèverait**

**produirait**

**choisirait, transformerait**

**établirait, formerait**

**discuterait, écrirait**

**clôturerait, diviserait**

**exigerait, demanderait, insisterait,**

**ramasserait**

**préparerait**

**dirait, ferait, pourrait, irait**

**aurait, serait**

## Appendix H

### Dictogloss Instructions and Notes from Student 2 (adapted from Wajnryb, 1990 and Kowal & Swain, 1994)

---

#### Dictogloss Instructions

Il faut recréer le texte lu par le professeur.

1. Écoute attentivement le professeur quand il lit le texte la première fois.
2. A la deuxième et troisième lecture, écris des mots et des phrases qui peuvent t'aider à recréer le texte (Student 2's notes are included below).
3. Ensuite avec un partenaire, utilisez les notes que vous avez faites pour recréer le texte.
4. Recréez le texte le plus proche que possible du texte original. Votre texte doit avoir le même sens que le texte original.
5. Corrigez le brouillon ensemble.
6. Copiez la bonne copie sur un acétate.
7. Partagez votre texte avec vos camarades en utilisant le rétroprojecteur.

**BONNE CHANCE!**

---

#### Notes from Student 2

La pollution -> Crise de l'énergie  
 Gaspies l'énergie sur la terre  
 Nouveau endroit -> vivre  
 autre planète - respecter notre envi.  
 sérieux - crise d'énergie attention a l'usage d'énergie  
 pollution - nous resisterions d'utiliser des autos

conclusion - d'arriver sur notre planète  
 faire attention

*Note: The student's written errors are reproduced in the notes above.*

**Appendix I**

**Dictogloss #2**  
(written by S. Spielman Davidson)

**La pollution et la crise de l'énergie**

**Les gens gaspillent nos ressources d'énergie sur cette terre. Donc nous aurons besoin de trouver un autre endroit où nous pouvons vivre. Alors, si nous allions sur une autre planète il faudrait respecter notre environnement. Ainsi nous éviterions les énormes problèmes que nous connaissons aujourd'hui.**

**Premièrement, si nous prenions au sérieux la possibilité d'une crise de l'énergie (sur la nouvelle planète), nous ferions plus attention à notre consommation d'électricité. Deuxièmement, si nous ne voulions pas la pollution, nous résisterions à la tentation d'utiliser souvent l'automobile.**

**En conclusion, une crise de l'énergie et la pollution deviendraient possibles à éviter si nous agissions dès notre arrivée sur la nouvelle planète.**



## **Appendix J**

### **Dictogloss #2: First and Final Draft of Dictogloss #2**

#### La pollution-Crise d'énergie

Nous gaspions l'énergie sur cette terre. Nous devrions trouver un nouveau endroit ou nous pourrions vivre. Si nous {aillons to irions} à une autre planète, nous devrions respecter notre environnement.

Nous devrions prendre sérieusement cette crise d'énergie et {nous, crossed out} faire attention à l'usage d'énergie.

Nous devrions résister d'utiliser les autos pour améliorer {la to l'} environnement et diminuer la pollution.

En conclusion - Dès que nous arrivons sur notre nouvelle planète nous devrions faire attention. (Students 2 and 3)

#### La pollution-Crise d'énergie

Nous gaspions {l'énergie} sur cette {Terre}. Nous {devrions} trouver un nouveau endroit ou nous {pourrions} vivre. Si nous {allions} à une autre planète, nous devrions respecter notre {environnement}.

Nous devrions prendre sérieusement cette crise {d'énergie} et faire attention à l'usage d'énergie.

Nous devrions résister d'utiliser les {automobiles} pour améliorer {l'environnement} et diminuer la pollution.

En conclusion, {dès} que nous {arrivons} sur notre nouvelle planète nous devrions faire attention {au niveau de la pollution}. (Students 1 and 2)

*Note: The written changes made by students while writing these texts are indicated in { }.*

## Appendix K

### Correction of Errors in a Report of a Fictitious Space Colony

(Text taken from the Day, Collins, & Rioux unit, 1989, p. 33)

Noms: \_\_\_\_\_ la date: \_\_\_\_/\_\_\_\_/\_\_\_\_  
 \_\_\_\_\_

#### *Rapport fictif d'une colonie spatiale*

***Directives: Pourrais-tu trouver les 13 fautes? Corrige les fautes et ensuite explique brièvement pourquoi c'est une faute. Il faut convaincre ton partenaire que tu as raison. BONNE CHANCE!***

**Bonjour chers citoyens,**

**Bienvenue à notre colonie spatiale imaginaire. Si nos idées étaient acceptées, on aurait un mode de vie formidable. Notre colonie est en forme de quatre petits dômes faits de plastique transparent. L'oxygène est en abondance mais il faudra quand même faire attention. Il faudra toujours nettoyer les tuyaux de plastique. Ces tuyaux sont suspendus au plafond dans tous les dômes.**

**Il n'y aurait pas de gros animaux parce qu'ils prennent trop de place. On n'a pas besoin de beaucoup de nourriture non plus parce qu'on a des pilules. Alors il suffit d'avoir un petit jardin et quelques petits animaux.**

**Comme moyens de transport locaux, nous utilisons des tapis aériens et pour aller d'un dôme à un autre nous nous servons d'ascenseurs souterrains supersoniques.**

## Appendix L

## Cloze Test

(Day, Collins, &amp; Rioux, 1989)

Nom: Student 1

\_ / \_ /

A l'usage  
du bureau

INSTRUCTIONS: Yvan rencontre son ami Omer. Voici le dialogue qui s'ensuit. Complétez ce dialogue en mettant les verbes au bon temps.

- Omer: La nuit dernière j'ai fait un rêve...j'étais maire de Toronto. C' était chouette!  
*être* NA
- Yvan: Si tu avais les pieds sur terre, tu agirais et tu te présenterais aux prochaines élections municipales.  
*agir* 3  
*présenter* 3
- Omer: C'est justement ce que je veux faire.
- Yvan: Voyons donc! Tu serais drôlement embêté si cela se réalisait. Je parie que tu n'as pas encore élaboré de programme.  
*être* 3
- Omer: Détrompe-toi! Si j'étais élu maire de Toronto, je ferais construire un immense dôme en plexiglas qui recouvrait tout Toronto. Il pourrait être rose; comme ça tous les Torontois voyaient la vie en rose.  
*faire* 3  
*recouvrir* 0  
*pouvoir* 3  
*voir* 0
- Yvan: Ça commence bien. Continue.  
*Continuer* NA
- Omer: Ce dôme nous permettrait également de capter l'énergie solaire! Si nous pouvions capter l'énergie solaire, nous n' aurions plus besoin d'apporter nos parapluies.  
*permettre* 1  
*avoir* 3
- Nous n' irions plus en Californie en hiver. Au contraire  
*aller* 3

	tous les touristes du continent <u>viendraient</u> ici. On	3
	<u>interdirait</u> toute circulation automobile; tous les	1
	<i>venir</i>	
	<u>interdire</u>	
	Torontois <u>sachaient</u> et <u>veulaient</u> faire	0 0
	<i>savoir</i> <i>vouloir</i>	
	de la bicyclette. Je t'assure que si nous avions fait cela il y a	
	longtemps, nous ne <u>devrions</u> pas lutter contre	3
	<i>devoir</i>	
	la pollution aujourd'hui. Les cocotiers <u>pourraient</u>	3
	<i>pouvoir</i>	
	pousser à côté des pins, les crocodiles <u>fraterniseraient</u>	3
	<i>fraterniser</i>	
	avec les castors. Tout <u>respirerait</u> la bonne humeur et....	3
	<i>respirer</i>	
Yvan:	Mon pauvre ami! Tu <u>rêves</u> en couleurs! Ton	NA
	<i>rêver</i>	
	programme est complètement loufoque et impossible à	
	réaliser. Écoute, si j'étais élu et si je <u>deviendrai</u> maire	NA
	<i>devenir</i>	
	de Toronto, je <u>nettoyerai</u> la ville. Je <u>ferais</u> démolir	3 0
	<i>nettoyer</i> <i>faire</i>	
	toutes les maisons datant de plus de cinquante ans. On	
	les <u>remplacerait</u> par des gratte-ciel, ce qui <u>réglait</u>	3 0
	<i>remplacer</i> <i>régler</i>	
	la crise du logement. Les rues <u>deviendraient</u> des	3
	<i>devenir</i>	
	autoroutes et on <u>constuissait</u> plus de terrains de	0
	<i>construire</i>	
	stationnement. L'industrie de la construction	
	<u>connaissait</u> un grand essor et on <u>éliminerait</u>	0 3
	<i>connaître</i> <i>éliminer</i>	
	du même coup le chômage.	3
Omer:	Ton rêve <u>est</u> monstrueux. A t'entendre parler, rien	NA
	<i>être</i>	
	ne va à Toronto.	
Yvan:	Et moi, je soutiens que si les Torontois étaient assez naïfs	
	pour se rallier à tes idées farfelues, eh bien! Je <u>serais</u>	3
	<i>être</i>	
	depuis belle lurette danseur étoile aux Grands Ballets	
	Canadiens, malgré ma bedaine!	

**Total Score: 56/81**

## Appendix M

Paragraph Test  
(Day et al., 1989)Form A  
Nom: Student 7    /    /    3  
9

Il y a plusieurs caractères imaginaires que vous connaissez et que vous retrouvez dans les bandes dessinées. Par exemple, il y a Garfield, Evelyn, la Pie Voleuse, et les Schtroumpfs et la Schtroumpfette. Il y a aussi Astérix, Tintin, Snoopy, et Lucie.

Écris un paragraphe d'au moins six (6) phrases en commençant par la phrase suivante:

*Si j'étais* **une caractère imaginaire qu'on connaisse et qu'on retrouvez dans les bands dessinées je sérais une caractère bizarre et énergenique. C'est tres - difficile, je ne peux pas penser du'une caractère comme moi. Mais la caractère que je vais choisi est Garfield. Parce qu'il est un peut négative et il y a les temps que je peut être négative comme lui. Il mange beaucoup, moi je peux mangais beaucoup si je veule. Si j'étais Garfield je peux changer quelque chois de vie comme être plus gentil contre Odi. Même je peux vas sur une "diet" parce que Garfield est une peut sur la gros côté. Je pense aussi que la petit chat gris est très ennuyant et il y a les temps comme Garfield, quand je veut le tué se chat gris.**

3

0

0

Form B

Nom: Student 7

3  
30

Il y a plusieurs personnages importants que vous connaissez. Ça peut être un athlète tel que Mike Tyson ou une athlète telle que Carolyn Waldo. Ça peut être une vedette de la chanson comme Melinda Carlisle ou Brian Adams ou bien une vedette de cinéma comme Bill Cosby ou Valerie Harper.

Écris un paragraphe d'au moins six (6) phrases en commençant par la phrase suivante:

***Si j'étais Clare Danes (la fille de 'My So-Called Life') j'essayerais\* de laisser la programme sur la télé.*** 3

***J'aurai beaucoup d'argent*** 0

***et je pourrai travailler*** 0

***avec Jared Leto. Je donnerai beaucoup*** 0

***de mon argent pour la recherche du***

***cancer. Je pourrai faire ce que je*** 0

***veux parce que personne ne***

***penserai rien, parce que les*** 0

***gens fameux son supposé de***

***faire les chose audacieuse. J'achèterai*** 0

***tous mes vêtements de F/X,***

***Graffity Alley et Black Market,***

***parce que je pourrai porter ce*** 0

***que je veux. Mais, à la même***

***fois, je serai jeune (comme 16)*** 0

***et près de mes parents. Ça***

***serae ideal.*** 0

\*Note: *J'essaierais* is also correct where -y- changes to -i- before a mute -e-.

## Appendix N

### Interview Test

(Day, Collins, & Rioux, 1989)

#### ENTREVUE: (VERSION A) Club Med

<b>Part A:</b>	<b>31/48</b>
<b>Part B:</b>	<b>3/15</b>
<b>Total Score:</b>	<b>34/63</b>

Researcher: Les vacances de Mars arrivent bientôt. Qu'est-ce que tu vas faire pendant les vacances?

Student: Je ne suis pas certaine encore. Peut-être ma famille vont aller pour une vacance.

5. Researcher: D'accord, et qu'est-ce que tu aimes faire pendant les vacances?

Student: J'aime nager, faire le lecture, un peu de devoir probably.

Researcher: Pendant les vacances? [S: Oui.]

#### Partie A

1. Researcher: Alors, est-ce que tu préfères avoir des vacances ou aller à l'école?

Student: Les vacances.

Researcher: Moi aussi, je préfères les vacances. Ça serait bien d'avoir les vacances tout le temps. Moi, j'aime regarder les guides de vacances et rêver de ce que je pourrais faire. Voilà un guide de vacances familiales. Il y a des endroits merveilleux à visiter et il y a toute sortes de choses intéressantes à faire. Regarde-le.

2. Researcher: Est-ce que tu aimerais visiter un de ces endroits?

Student: Oui. Je pense que j'aimerais visiter le Jamaïque. 3

Researcher: Supposons que tu gagnais un concours et qu'on venait de te téléphoner pour te dire que tu pouvais aller n'importe où. Où irais-tu et que ferais-tu si tu gagnais

- des vacances pour toi et ta famille. Parle-moi de tes vacances idéales.
- Student: J'irais à quelque part chaud comme le Jamaïque et je ferais le natation, peut-être prendre des leçons, et faire le shopping. 3  
3 0  
0
- Researcher: Alors, commence ta phrase avec "je" -- "shopping."
- Student: Je ferais le shopping, et je ferais la natation. 3 3
3. Researcher: Et le soir, qu'est-ce que tu ferais?
- Student: J'irais aux des présentations, j'irais pour une belle dîner et les choses comme ça. 3 3
4. Researcher: Et tes parents, qu'est-ce que qu'ils feraient, eux? Raconte-moi trois choses différentes que tes parents feraient.
- Student: Mes parents, ils fera le natation ou peut-être ils prendraient une les leçons ou fera la lecture. 0  
3 0
5. Researcher: Si tu recevais en plus de ton voyage 500 dollars pour tes dépenses personnelles, que ferais-tu avec l'argent? Raconte-moi trois choses que tu ferais avec ces 500 dollars.
- Student: Je prendrais des leçons et je feras du shopping et peut-être achèterais [R: Je] J'achèterais des vêtements et des choses comme ça. 1 0  
3 3
- Researcher: D'accord. As-tu dit trois choses? Oui? [S: Oui.]

### Partie B

6. Researcher: (14.09) Je viens de te poser beaucoup de questions sur tes vacances idéales. Maintenant j'aimerais que toi, tu joues le rôle de l'interviewer et que tu me poses des questions.
7. Researcher: Prétends que tu fais une entrevue pour un journal de jeunes et que tu dois dire à ton public quel genre de choses un adulte ferait s'il gagnait un voyage quelque part. Pose-moi des questions sur mes vacances idéales. Tu peux me demander n'importe quoi.
- Student: Okay. Où est-ce que tu iras sur tes vacances idéales? 0



- Researcher: **J'irais aux Bermudes.**
- Student: **Qu'est-ce que tu fais aux Bermudes?** 3
- Researcher: **Je ferais la planche à voile.**
- Student: **Okay. Est-ce que tu prendras des leçons?** 0
- Researcher: **Oui, je prendrais des leçons de planche à voile et de la plongée sous-marine.**
- Student: **Est-ce que vous aimerez rester à une hôtel grande ou petite?** 0
- Researcher: **J'aimerais rester dans un grand hôtel.**
- Student: **Est-ce que tu préfères nager dans les um sur la plage ou dans une piscine?** 0
- Researcher: **Aux Bermudes, je préférerais nager dans l'océan, à la plage.**
- Student: **Okay.**
- Researcher: **C'est tout?**

## Appendix O

### Scoring Scheme for Tests: Cloze, Paragraph, and Interview (Translated and adapted from Day, Collins, & Rioux, 1989)

#### Instructions for Cloze Test Evaluation

**General Rules:** If a verb was not in the conditional, i.e. did not have a conditional ending, it was allotted 0 points. This included all verbs in the future (See section below on 0 points). When a student made two mistakes in one verb, points for the most serious mistake only were deducted. A few examples of total scores of mistakes in both the verb ending and root follow.

*Je faiserait* (1 point) *Ils veulrait* (1 point) *J'allerait* (1 point)

#### 3 points

Three points are given

- a) when the conditional verb is correct **or**
- b) when the conditional verb is correct and a minor mistake is made only in the verb root.

Minor mistakes include:

- spelling error with an accent (*j'acheterais* for *j'achèterais*)
- omission of the reflexive pronoun or incorrect reflexive pronoun (*je lèverais* / *je se lèverais* for *je me lèverais*)
- spelling error in verb root including a careless spelling error (*j'arêterais* for *j'arrêterais*, *il posseraient* for *ils posseraient*, *j'amerais* for *j'aimerais*)

#### 2 points

Two points are given:

- when the conditional ending is phonetically correct but misspelled (*je voudrait* for *je voudrais*, *il voudrais* for *il voudrait*, *il serest* for *il serait*)  
**or**
- if there is a spelling mistake with the conditional "r" (not the "r" in the root of the verb) if the "r" is doubled when it should not be or vice versa (*je ferrais* for *je ferrais*, *j'aurrais* for *j'aurais* **or** *je pourrais* for *je pourrais*, *tu verais* for *tu verrais*).

### 1 point

Count one point in the following instances:

- when the formation of the conditional is incorrect (most often with irregular verbs such as *aller*, *savoir*, *faire*) (see Table 1 on the following page).
- when there is a spelling mistake with **er/ir/re** endings, this includes the addition of **-e-** for **-re** verbs such as *permettre* (je *permetterais* for je **permettrais**), the use of **-e-** with **-ir** verbs such as *brandir* (je *branderais* for je **brandirais**), or the omission of **-e-** for **-er** verbs such as *arrêter* (*j'arrêtrais* for **j'arrêterais**)
- when the conditional ending does not agree with the subject of the verb (nous *arriverais* for nous **arriverions**, je *brandirions* for je **brandirais**)
- when a compound conditional is used in a present conditional context (*j'aurais fini* for je **finirais**)
- when an English verb has been “francisé” (je *dresserais* for je **m'habillerais**)

**Table 1**  
**Sample of Incorrectly Formed Conditional Verbs**

<p style="text-align: center;"><u>aller</u></p> <p>j'allerais</p> <p style="text-align: center;"><u>être</u></p> <p>j'éterais</p> <p style="text-align: center;"><u>savoir</u></p> <p>ils saveraient je savoyerais je sacherais on sarait</p> <p style="text-align: center;"><u>devoir</u></p> <p>je deverais</p>	<p style="text-align: center;"><u>faire</u></p> <p>je faiserais je fairais <u>venir/devenir</u> ils veniraient je vendrais ils venraient ils devenirraient</p> <p style="text-align: center;"><u>pouvoir</u></p> <p>ils peuvraient je pouvrais je peuvrais</p> <p style="text-align: center;"><u>vouloir</u></p> <p>ils veulraient je voulerais je veurais</p>	<p style="text-align: center;"><u>voir</u></p> <p>je voirais je vaurais <u>avoir</u> j'avoyerais j'averais j'arais</p> <p style="text-align: center;"><u>other verbs</u></p> <p>je boiverais je brandisserais on construiserait je prendrais je changeurais je connaisserais j'écrrirerais</p>
---	--	--

**0 points**

Count 0 points when there is no conditional  
(i.e. when there is no conditional ending).

For example:	je devais	je vais manger	je brandiront
	ils interdirent	j'aille	je criais
	je dorme	m'assoyer	je dévorais
	je dévorais	ils poserent	tu agirais
	tu agiras	il pourra	ils iront
	je marcherai	il sera	tu seras

Also count 0 points in the following case:

- when a verb is conjugated without the conditional “r” (ils *viendraient* for ils **viendraient**)

**Note:** All verbs not in the conditional were allotted 0 points. This included all verbs in the future. For example, *je marcherai, tu marcheras, il marchera, nous marcherons, vous marcherez* and *ils/elles marcheront*. The student could possibly be making a minor spelling mistake in the ending when writing *je marcherai* for *je marcherais* but cannot be given the benefit of the doubt in this study for several reasons. The oral and written differences between the conditional and the future inflections had been discussed during the course of the unit. This included *je marcherais* versus *je marcherai*. In examining the data it was apparent that students were often clearly using the future and obtaining no points. It did not seem consistent to be giving 0 points for the use of the future *tu marcheras* in one part of the test and then give some credit for the future *je marcherai* in the next sentence. One is reminded that only 1 point was given to a verb with a conditional ending that was not perfectly correct.

### Instructions for Paragraph Evaluation

1. Read the paragraph and underline and highlight all verbs that are or should be in the conditional form. Do not forget to include subordinate clauses which require the use of the conditional. Remember that some contexts allow for other verb tenses (the present indicative to generalize, for example).  
Example: **J'aimerais voir les gens qui font des films.**
2. Give **one, two or three** points according to the instructions for the cloze test.
3. Note the following:
  - (a) If an English verb is used but written in the conditional, count **one** point.  
Example: Je *dresserais* for je **m'habillerais**.
  - (b) Students are not penalized for lexical errors. The following verb would receive **three** points even though the choice of verb is inappropriate:  
*J'apporterais* mes amis au CN Tower for **J'amènerais** mes amis à la Tour CN.
  - (c) If an incorrect verb is used and written in the conditional, give **one** point.  
Example: *J'aurais* à Disney World for **J'irais** à Disney World.
  - (d) If the past conditional is used in a present conditional context, count according to the instructions.  
Example: Je **serais allé** voir mes amis.
  - (e) Count 0 in cases where the construction is wrong even though one of the verbs is in the conditional.  
Example: *Je vais apporterai* for **j'apporterais**.

### Instructions for Oral Test Evaluation

1. Read the written transcript of the interview. Any segment containing repetition and/or corrections should be put into brackets as these parts will not be evaluated. Only count what follows the repetition and/or correction. Example: (Je vais euh, je aller ... non) j'irais
2. Underline and highlight all verbs, including Anglicisms, that are or should be in the conditional form. Do not forget to include subordinate clauses which require the use of the conditional. Remember that some contexts allow for other verb tenses (the present indicative to generalize, for example).
3. Give **one** or **three** points according to the instructions for the cloze test. Given the nature of the spoken language being evaluated here there is no need to consider the "2 points" category which refers to verbs with spelling mistakes. If an incorrect verb is used but said in the conditional give **one** and not three points (*J'aurais* en Californie for *J'irais* en Californie).
4. (a) When the student uses an infinitive instead of the conditional, count 0 for each infinitive. Example: Voir mes parents et faire du bateau et manger would be given a score of 3 x 0 points whereas *J'irais* à la plage et faire du bateau et nager would get 3 points for the first verb and 2 x 0 points for what follows.
  - (b) If the student starts a sentence with a conjugated verb and then continues with infinitives there are several possibilities for grading.
    - If the infinitives used are not semantically related to the first verb, count 3 points for the first verb if correct and 0 for the following verbs.  
Example: "Je pourrais aller aux magasins, acheter des disques" would get 3 points for the first verb and 0 for the second. The comma following the word "magasins" indicates a pause in the student's speech.
    - If the infinitives in a sentence are correctly linked, they are not counted as verbs that should be conjugated.  
Example: "Je pourrais aller aux magasins et acheter des disques" would simply get 3 points for the first verb because the conjunction "et" was used for linking the two infinitives "aller" and "acheter."  
The sentence "Je vais aller acheter des choses et payer pour le cinéma" would get 0 for the first verb which should be but isn't in the conditional.

**Note:**

If the student corrects him/herself and changes the first verb said, only count the second verb said. Finally, if the student is prompted by the interviewer and corrects him/herself, count 0 for the infinitives used and evaluate what follows according to the instructions given above. Similarly, if the student is asked by the interviewer to repeat him/herself or is interrupted, for whatever reason, count all verbs.

5. Count 0 in cases where the conditional is wrong even though one of the verbs is in the conditional.  
Example: *Je vais apporter* for *j'apporterais*
6. For the second part of the oral test in which the student plays the role of interviewer, underline all questions requiring the use of the conditional. Do not count questions of a general nature that do not need the conditional.  
Example: Où vas-tu en vacances?

## Appendix P

### Conditionals Pretested in the Unit Tests and Corresponding Test Results by Individual

<b>A. Identical Conditionals</b>	<b>Cloze Item #/ Paragraph Test</b>	<b>Number of times pretest items matched up to tailor-made test items</b>
aurait	Paragraph	1
aurions	B40	4
devrions	A33	1
ferions	B41	1
irions	B32	2
pourrait	A24	2
seraient	B39/42	4
serait	Paragraph	1
voudraient	A32	1
	<b>Total:</b>	<b>17</b>

### **B. Identical Features**

1) Identical Roots		<b>Total: 14</b>
2) Third Person Singular	<i>(ait)</i>	<b>Total: 40</b>
3) Third Person Plural	<i>(aient)</i>	<b>Total: 33</b>



TMT Items and Pre and Delayed-Posttests from the Unit by Individual

Student #	Week #3, 4, or 5 Posttests	Week #16 Delayed-Posttests
<b>A. Identical conditionals</b>		
Student 1	0/5	2/5
Student 2	0/4	2/4
Student 3	0/2	2/2
Student 4	NA	NA
Student 5	0/1	0/1
Student 6	NA	NA
Student 7	0/2	2/2
Student 8	0/3	2/3
Total Score for all Students	0/17 (0%)	10/17 (59%)
<b>B. Identical Features</b>		
<b>1) Identical Roots</b>		
Student 1	0/2	2/2
Student 2	0/1	0/1
Student 3	0/1	1/1
Student 4	NA	NA
Student 5	0/1	1/1
Student 6	0/3	2/3
Student 7	0/4	4/4
Student 8	0/2	1/2
Total Score for all Students	0/14 (0%)	11/14 (79%)
<b>2) Third Person Singular</b>		
Student 1	0/1	0/1
Student 2	0/9	6/9
Student 3	0/1	0/1
Student 4	NA	NA
Student 5	0/10	0/10
Student 6	0/9	4/9
Student 7	0/9	5/9
Student 8	0/1	0/1
Total Score for all Students	0/40 (0%)	15/40 (38%)
<b>3) Third Person Plural</b>		
Student 1	0/4	4/4
Student 2	3/7	5/7
Student 3	1/4	2/4
Student 4	4/6	5/6
Student 5	0/6	0/6
Student 6	0/6	0/6
Student 7	NA	NA
Student 8	NA	NA
Total Score for all Students	8/33 (24%)	16/33 (48%)

## Appendix Q

### Procedures in the Development of Three Categories of CREs

Past studies have used two categories: 1) meaning-based episodes, as in how to say something in French (Kowal, 1997; Swain & Lapkin, 1995); and 2) form-based (Swain & Lapkin, 1995) or grammatical-based episodes (Kowal, 1997; Kowal & Swain, 1994). It became apparent, as I identified the CREs, that the second category was rather broad for the purposes of my study related solely to the conditional. That is, the form/grammatical-based category included any talk about a conditional which did not entail its specific meaning.

Before redefining the form/grammatical category, I created a list of grammatical points about the conditional based on transcripts of the students' dialogues, the teacher's instruction and my background knowledge. Examples include regular and irregular roots, subject-verb agreements, the rule calling for the use of the conditional following a subordinate clause containing *Si* and the imperfect (referred to as the *Si* rule). I also reviewed the description of the conditional in various grammar texts (Grevisse, 1969; Hawkins & Towell, 1997) before further examination of the dialogues. This list served as a general guide to describe the grammatical content of the students' dialogues.

I revised the form/grammatical category (Kowal, 1997; Swain & Lapkin, 1995) into two aspects: formal features and tense selection. Formal features-based CREs concerned the formation of the conditional whereas tense selection-based CREs, the use of the conditional. Upon further examination of the transcripts of these dialogues, the talk related to the meaning category included translations and explanations of specific conditionals. I experimented with the new categories on my own and occasionally discussed it with the other coder before I completed the coding of all the transcripts. The CREs were thus finally

classified into three main categories: formal features, tense selection, and lexical meaning.

## **Appendix R**

### **Resolving Discrepancies Related to the Three Categories**

Rather than immediately discussing specific discrepancies with the rater, I believed reliabilities could improve by asking the rater to reexamine her transcripts. I simply informed her that 1) I had identified more CRXs; 2) I had sometimes coded her single-CRXs as double-CRXs; and 3) I had answered her questions (in writing on her transcripts) regarding the 4 CRXs she identified but had not categorized. Using this supplementary information, she reexamined the transcripts and made changes before we met to discuss the results.

The reliabilities of the identification of the CRXs and the categorization of the CREs improved in the second examination where the rater made 7 changes. First, the rater identified 2 of the 7 CRXs previously unidentified yielding a revised reliability of 91% (50/55). When the 5 unidentified CRXs were pointed out by me, she agreed they were CRXs and immediately categorized them in an identical fashion.

Second, the rater categorized only 1 of the 7 CRXs previously coded differently. Again, 6 of the 7 double-CRXs remained single-CRXs. However upon discussion, she readily agreed that all 6 should be double-CRXs with CREs in the formal features and tense selection categories. In addition, the 4 CRXs not categorized in the first coding session were now coded by the rater in the same categories as mine. The second coding yielded a revised reliability of 84% (42/50) for categorization.

## Appendix S

### List of Verbs Talked about During CRXs

#### Tailor-Made Test Items of Students 1 and 2

##### TMT #1

- 1-1     aurait
- 1-3     s'il avait + ferait
- 1-5     tu ferais
- 1-6     on irait
- 1-8     il neigerait

##### TMT #2

- 2- 43   serait/seraient
- 2-46   on aurait
- 2-50   serait/seraient
- 2-51   pourrait
- 2-52   mettraient
- 2-55   prendrait
- 2-58   générerait
- 2-60   ferait
- 2-61   serait envoyé
- 2-63   construirait
- 2-64   ferions

##### TMT #3

- 3-222   Si + irions
- 3-223   serait
- 3-224   faudrait
- 3-225   seraient
- 3-226   prendraient
- 3-227   gaspilleraient
- 3-228   on aurait
- 3-229   suffirait
- 3-230   utiliserions
- 3-231   servirions
- 3-232   devrions
- 3-233   irions
- 3-235   serait nettoyé et purifié
- 3-236   pourrions
- 3-238   devrions
- 3-252   on résisterait
- nous résisterions
- 3-253   devrait
- 3-254   gaspilleraient

3-255 serait  
 3-256 aurions  
 3-260 aujourd'hui + gaspilleraient

### **Tailor-Made Test Items of Students 3 and 4**

#### **TMT #1**

1-13 aurait  
 1-14 générerait  
 1-17 habiterait  
 1-18 auriez

#### **TMT #2**

2-80 on aurait  
 2-83 pourrait  
 2-84 mettraient  
 2-86 orbiterait  
 2-90 prendrait  
 2-95 seraient  
 2-99 je vivrais  
 2-100 mangeraient  
 2-101 entourerait  
 2-116 ferions

#### **TMT #3**

3-264 Si + allions/irions  
 3-267 devrait  
 3-268 éviterions  
 3-270 serait  
 3-271 serait  
 3-272 faudrait  
 3-273 prendraient  
 3-274 utiliserions  
 3-275 servirions  
 3-276 aurait/a  
 3-277 suffirait  
 3-278 pourrions  
 3-279 devrait  
 3-252 résisterait  
       résisterions  
 3-253 devrait  
 3-254 gaspilleraient  
 3-255 serait  
 3-256 aurions

**Tailor-Made Test Items of Students 5 and 6****TMT #1**

- 23. habiteraient /habiteront
- 24. pourrions s/pouvions
- 25. irait
- 26. iraient
- 27. apporterait

**TMT #2**

- 116. appartiendrait
- 117. pourrait
- 119. [86] orbiterait
- 122. seraient
- 123. deviendrait
- 126. générerait
- 128. iriez
- 130. choisirions
- 131. encouragerait
- 132. pour qu'on puisse/pourrait
- 133. vérifieraient
- 134. voudraient
- 139. seraient
- 141. pour planter/planterait
- 148. ferions /ferion
- 154. mangerait /mangerai
- 156. collectionnerions /collectionnerions
- 157. planterait /planterais
- 163. produiraient
- 166. couvrirait (root)

**TMT #3**

- 284. serait
- 285. serait
- 286. faudrait
- 287. prendraient
- 288. utiliserions
- 289. servirions
- 290. aurait
- 291. suffirait
- 292. devrait
- 293. respecterions
- 294. seraient
- 296. Si + savions /saurions
- 297. Aujourd'hui + gaspillent / gaspilleraient
- 299. gaspilleraient

- 308. j'achèterais /ait
- 309. boirait
- 310. danserait /ais

### **Tailor-Made Test Items of Students 7 and 8**

#### **TMT #1**

- 1-36 cultiveraient
- 1-37 conserverait/ devrait conserver
- 1-38 fondrait
- 1-39 voudrait
- 1-40 devrait conserver/ doit faire de la conservation
- 1-41 cultiveraient/ planteraient

#### **TMT #2**

- 2-178 Si + ferait
- 2-179 pour survivrait
- 2-180 voudraient savoir
- 2-182 pour qu'on pourrait
- 2-183 boiraient
- 2-184 répareraient
- 2-186 ferait
- 2-187 transpirerait
- 2-188 entrerait
- 2-189 planète nous donnerait
- 2-191 coulerait
- 2-198 aurait
- 2-199 pourrait
- 2-200 mettraient
- 2-201 ferions
- 2-203 pour que nous choisirions
- 2-207 pour qu'on pourrait partir
- 2-209 vivrait

#### **TMT #3**

- 3-312 serait
- 3-313 faudrait
- 3-314 seraient
- 3-315 prendraient
- 3-316 gaspilleraient
- 3-317 s'il y aurait
- 3-318 aurait
- 3-319 utiliserions
- 3-320 servirions



- 3-321 devrait respecter
- 3-322 Si + gaspilleraient
- 3-323 serait
- 3-324 aujourd'hui + gaspilleraient
- 3-325 gaspilleraient
- 3-326 conserverait/ devrait conserver
- 3-327 trouverait/ devrait trouver
- 3-328 dômes faits/ferait en plastique
- 3-329 pour aller/ irait
- 3-330 partirait
- 3-331 pour survivre/survivrait
- 3-332 quand la machine marche elle fait/ferait
- 3-333 nous aurions
- 3-334 Si + nous aurions

## Appendix T

### Transcript Notations

The following notations (Allwright & Bailey, 1991; Kowal & Swain, 1994) have been used in the transcription. Students' errors are left as is in their dialogues and written work throughout the thesis.

S3	Student #3
T	Teacher
R	Researcher
N	Nurse
_____	utterances made simultaneously
x	a word which I could not understand (one x per word)
<b>Bold</b>	use of English
**	Due to oral language, the verb ending is unknown due to homophonous person markings. For example, one does not know for sure what the student is thinking when she says, " <i>ils iraient</i> ."** This verb ending has the same spelling with two other person markings, <i>il irait</i> and <i>tu irais</i> . In addition, in the data some students wrote the singular for the plural or vice versa, e.g., <i>ils irait</i> for <i>ils iraient</i> .
( )	comments added by me to aid comprehension
r-i-e-n	spelling of word or saying a letter name, e.g., -e-
"...."	students are reading text
^ ^	emphasis in expression
<i>words in italics</i>	what student is writing and simultaneously saying
[ ]	indicates what student is writing while the partner is dictating
{ }	written changes made in written text (not necessarily verbalized)
.....	dialogue omitted not related to conditional.

## Appendix U

Translation of Double-CRX *Si nous irions*

- 01 S2: **Yah.** If we go- to another planet we would have to respect our environment.
- 02 S3: **Okay**
- 03 S2: (finishes writing, but has written *Si nous aillons à* instead of oral suggestion *Si on vais*) **Okay.....**
- 04 S2: **Okay we're done.**
- 05 S3: **xx [student's name] turn it back on.**
- 06 S2: "We should find a new place where we could live (uses incorrect form of conditional). If we" (*aillons* is next written word not read)
- 07 S3: "If we"
- 08 S2: **see (or Si) that I don't know about.**
- 09 S3: If we would go\*\*
- 10 S2: **Maybe.** If we would go (Nurse arrives unexpectedly to use office. R and N are speaking.)
- 11 S3: **Um** If we would go\*\* (3rd person plural or singular pronunciation) "to another planet we must" (misreads *devrions*) **I think it's** would go\*\*
- 12 S2: **or (we) would go**
- 13 S3: **xx**
- 14 S2: **yah isn't it Okay**
- 15 S3: **Or (we) will go**
- 16 S2: (we) would go (*aillons* changed to *irions* in written text)
- 17 S3: "to another planet we must (misreads *devrions*) respect" .....

\*\* Due to oral language, the verb ending is unknown due to homophonous person markings. See Appendix T for further details.

## Appendix V

Translation of Triple-CRX *Si nous irions* (Example 6.4)

- 01 S1: "If we-" (stops reading, *irions* is the next word, *aillons* is crossed out but still visible) we will go "(we) would go"?
- 02 S2: **Yah that one I didn't know about. S3 did that.**
- 03 S1: **If we to go. I know where to go is. Why am I asking this stupid question?**
- 04 S2: **p. (page) 6 or something.**
- 05 S1: **No it's not.**
- 06 S2: **Like not page 6, but ^verb^ number 6**
- 07 S1: **It's like**
- 08 S2: **No, 6 is like -er- verbs.**
- 09 S1: to have, to be,
- 10 S2: to go **is only 32** (verb # in *Bescherelle*) **or 22 or something.**
- 11 S1: **I know** (looking through *Bescherelle*) (We) would go **that's right.** "If we *would go*" to another planet we would have to respect our" **we would have to- Okay if we would go-no**, if we all- (says *all*, French infinitive of *aller* cut off) would go\*\* (*iraient / irait\*\**, do not know if singular or plural pronunciation because oral language) **it wouldn't be would go** "If we" *ir-* (*ir* is irregular root of *aller*, crossing out word) will go, **It wouldn't be would go because if we would go- if-**
- 12 S2: **Right! So it's imperfect.**
- 13 S1: imperfect, imperfect you (plural) went, If we *went*,
- 14 S2: **Hey, that's what I had. Student 3 changed it.**
- 15 S1: **Well she's just ... okay**
- 16 S2: **Oh, I had -i- (in *aillons* on rough copy) but I don't know.**
- 17 S1: "If we went to another planet we would have to respect our environment." **Let's read this out in English. ....**
- 18 S1: (reading text) "We will have to find a new place where we could live."(pause) If we went to another planet, we (says *deur*, ending of French verb cut off)-"Oh! I **xx** (perhaps saying **shouldn't be**) **reading this in French. Okay. We will have to find a new place where we would where we could live.**
- 19 S2: **where we where would could live**
- 20 S1: **If we**
- 21 S2: **Go!**
- 22 S1: **Yah if we go to another planet we would have to respect our environment.**

Note: **Bold** denotes original dialogue in English.  
 Plain text is English translation of students' French dialogue.  
 See Appendix T for additional transcript notations.

Appendix W

Comic Strip

