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An Input Enhancement Study with ESL Children: Effects on the Acquisition of Possessive Determiners

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A Thesis Submitted to the Faculty of
Graduate Studies and Research in
Partial Fulfillment of the Requirements of the
Degree of Doctor of Philosophy

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This dissertation is dedicated to the memory of my father,
LeRoy P. London,
who shared his love of books with everyone he knew.

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Abstract

In this classroom-based study, the effects of input enhancement on the acquisition of a linguistic feature known to be problematic to francophone children learning English were investigated. The research questions were: 1) Can L2 learners benefit from typographically enhanced input in their acquisition of third person singular possessive determiners? 2) Is typographically enhanced input more effective than unenhanced input? 3) Is typographically enhanced input more effective when combined with a book flood”?

To investigate these questions, three treatment conditions were implemented with Grade 6 ESL learners. Groups E and E+ received a typographically enhanced input flood. This did not include explicit reference to the learners’ L1 nor was a pedagogical rule presented at any time. In addition to the typographically enhanced input, Group E+ was exposed to extensive reading and listening activities. To ensure that all groups in the study were exposed to written input containing the target features, Group U read unenhanced versions of the texts read by the other two groups. A pretest, immediate and delayed posttest design was used in this quasi-experimental study.

Results indicated that all three instructional treatments improved the learners’ acquisition of the target forms and that those in Group E+ received the greatest apparent benefits. At the immediate posttest, learners in Group E+ outperformed those in the other two groups on written tasks designed to measure their ability to recognize correct instances of the target forms. Learners in Group E+ also outperformed the others on an

oral production task. On the delayed posttest five weeks later, however, Groups E and U had caught up with Group E+, and most of the between-group differences had disappeared.

The finding that all learners had significantly increased in their accuracy and development of possessive determiners immediately following instruction suggests that the target forms were equally salient to the learners in the three groups. That all learners continued to improve but did not reach advanced developmental stages, however, suggests that the salience of these features in the input may not have been sufficiently explicit. The results are discussed in terms of the potential need for more explicit instruction in the acquisition of third person singular possessive determiners. This may be particularly important because of substantial differences in the way in which gender is marked in English and French.

Résumé

Cette étude menée en classe d'anglais, langue seconde, est une enquête sur les effets d'input mis en évidence sur l'acquisition du déterminant possessif, élément linguistique qui s'avère difficile pour les apprenants francophones. Les questions de recherche sont les suivantes: 1) Les apprenants peuvent-ils bénéficier d'un input mis en évidence par des moyens typographiques dans l'acquisition du déterminant possessif de la troisième personne du singulier (*his* et *her*)? 2) L'input typographiquement mis en évidence est-il plus efficace pour l'apprentissage que l'input qui ne l'est pas? 3) L'input typographiquement mis en évidence est-il plus efficace quand il est associé à l'accès accru aux livres et aux activités de lecture?

Trois conditions de traitement ont été retenues pour mettre en oeuvre cette étude auprès d'élèves en sixième année du primaire. Les groupes E et E+ ont lu des textes dans lesquels les pronoms ont été mis en évidence typographiquement. Dans ces deux conditions, il n'y a eu aucune référence explicite à la langue maternelle ni aux règles grammaticales. De plus, le groupe E+ a participé à un grand nombre d'activités de lecture et d'écoute. Pour pouvoir distinguer entre les effets éventuels de la mise en évidence et de la fréquence de l'exposition à l'élément linguistique visé, le group U a lu les mêmes textes lus par les groupes E et E+ dans lesquels il n'y avait aucune mise en évidence. Le plan de cette étude quasi-experimentale comprenait trois volets: des pré-tests, des post-tests, et des post-tests différés donnés plusieurs semaines après la fin du traitement.

Les résultats démontrent que les élèves exposés aux trois conditions ont progressé dans l'acquisition du déterminant possessif. Ce sont les élèves du group E+ qui semblaient faire le plus grand progrès immédiatement après le traitement. Cependant, aux post-tests différés les groupes E et U ont rattrapé le groupe E+ puisque la plupart des différences existant entre les groupes avaient disparu.

Le fait que tous les groupes ont fait du progrès significatif dans leur rendement aux post-tests tout de suite après le traitement laisse supposer que les trois groupes ont perçu du façon égale l'élément linguistique en question. Que tous les apprenants aient continué à s'améliorer sans toutefois arriver aux étapes les plus avancées fait supposer que la fréquence et la mise en évidence ne sont pas suffisantes pour amener les apprenants à maîtriser cet élément linguistique. Les résultats de cet étude débouchent sur une proposition pour un enseignement explicite des formes du déterminant possessif de la troisième personne du singulier. Cela prend une importance particulière en raison du fait que le genre grammatical est indiqué différemment en ce qui a trait au déterminants possessifs en anglais et en français.

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Chapter 1

Input and Second Language Acquisition

1.0 Introduction

For most of the history of second language teaching, instructional approaches have been based on the assumption that an explicit focus on language form is necessary for second language (L2) acquisition to take place. In this view of language teaching, isolated linguistic elements (e.g. structures, sound contrasts, lexical items) are the organizational units of the syllabus and the subject matter of individual lessons. Input is manipulated through pedagogical practices which include grammar and vocabulary explanations, dialogue memorization, display questions, error correction, and fill-in-the-blank exercises.

For the last several decades, however, this structure-by-structure approach to language teaching has been questioned by a number of researchers who see the acquisition of L2 knowledge as an essentially implicit process similar to first language (L1) acquisition, which proceeds in a systematic and largely predictable manner through exposure to rich and varied linguistic input that is provided in highly contextualized social interactions (see, for example, Krashen, 1981, 1982; Dulay and Burt, 1973). The morpheme acquisition and developmental sequence studies in first and second language acquisition research would seem to confirm the hypothesis that language development is under the control of the learner's built-in syllabus and is basically unaffected by instruction which focuses explicitly on targeted grammatical structures (Krashen, 1977; Felix, 1981). Although there has been some evidence suggesting that extensive grammar practice and drilling may have an effect by

altering the natural processes, these effects have been shown to be temporary in nature (Lightbown, 1983a,b; and see discussion in Long, 1988).

The structure-by-structure approach has also been questioned by teachers and curriculum planners (e.g. Prabhu, 1987), who suggest that to help learners attain an accurate and fluent command of the target language, it makes better sense to provide opportunities for them to experience language as a medium of communication than to make it an object of study. As a consequence, a number of instructional approaches have emerged which de-emphasize the importance of explicit teaching of linguistic forms and stress, instead, the value of exposure to comprehensible input (CI) and the use of the L2 in meaningful interaction. These include the Natural Approach (Krashen and Terrell, 1983), comprehension-based second language programs (e.g. Winitz, 1981; Lightbown, 1992a), and Communicative Language Teaching (CLT) (Brumfit, 1984; Littlewood, 1981; Widdowson, 1978). Although there are different interpretations of CLT and how it should be implemented, the general consensus seems to be that "that successful language learning involves not only a knowledge of the structures and forms of a language, but also the functions and purposes that a language serves in different communicative settings. This approach to teaching emphasizes the communication of meaning over the practice and manipulation of grammatical forms" (Lightbown and Spada, 1993:119-120). It is this approach to teaching which informed the ESL program development carried out in the late 1970s and 1980s by the Ministry of Education in Quebec, where the study described in this dissertation took place (Gouvernement du Québec, 1981, 1983, 1986).

In recent years, there has been a renewed interest in finding ways to integrate form-focused instruction within teaching approaches that focus primarily on meaning. This interest is motivated by findings from classroom-based research that suggest that when learning is entirely meaning-focused, some linguistic features do not develop to levels that might be anticipated despite extensive exposure to the target language in meaningful contexts (see e.g. Harley and Swain, 1984; Lightbown and Spada, 1990). Rutherford and Sharwood Smith (1985) have encouraged L2 teachers to use *consciousness raising* techniques to draw learners' attention to formal properties of the target language that they do not otherwise notice. Task-based proposals (e.g. Nunan, 1989; Loschky and Bley-Vroman, 1990; Long and Crookes, 1992; and Ellis, 1993) have also been proposed as a solution to this problem and are based on the assumption that attention to form is an essential component of an L2 instructional program.

While there is a consensus that it is important to help classroom-instructed learners become more accurate in their L2 production, there is no agreement with respect to how form-focused instruction should be delivered. Teachers wishing to direct learners' attention to linguistic form may select from among a wide variety of pedagogical procedures which range from explicit rule explanations to more implicit visual enhancement techniques. This also includes the provision of explicit and implicit types of corrective feedback. While the more explicit procedures risk diverting the learners attention away from communication, the more implicit ones may fail to draw the learner's attention to language form in ways that promote interlanguage development. Efforts to find the most appropriate pedagogical procedures are rendered more challenging when one takes into consideration the requirement

that form-focused instruction should neither interfere with the processing of language for meaning nor jeopardize the development of fluency, which is considered to be an important consequence of communicative approaches to L2 teaching.

The present study was carried out in the context of the debate as to how to most effectively implement form-focused instruction in the second language classroom. At the heart of the debate is the question of how much of the target language input learners must notice for acquisition to take place (for a recent review, see Schmidt, 1995b). Since learners are able to discover much of what they need to know about the target language on their own, a corollary to this question is what specific linguistic features learners may need help in noticing. Since learners' attentional resources are limited, another corollary is whether learners may need to have their attention drawn explicitly to some linguistic features while an implicit focus on form is sufficient to promote the acquisition of others. Answers to these questions involve consideration of a number of issues, including the learners' L1, their age, and their developmental readiness.

Form-focused instruction was operationalized in this study as typographical input enhancement, an implicit technique designed to increase the perceptual salience of a linguistic feature which learners were known to find problematic. This input enhancement was provided in such a way as to not interfere with their comprehension of the written texts in which it occurred. The treatment was implemented in a five-month classroom-based study involving three intact groups of grade 6 francophone learners of English as a second language (ESL) in Quebec. These young learners were studying in a communicatively-oriented

intensive ESL program in which they would spend five months of one academic year studying English for most of every school day.

The instructional treatment was as follows. Two groups read texts in which the possessive determiners (PDs) *his* and *her* were visually enhanced. One of the two enhanced groups had additional exposure to PDs through reading and listening to stories (a book flood) in which the target forms occurred naturally. A third group read unenhanced versions of the same texts. These three groups are referred to as Group E (enhanced input), Group E+ (enhanced input plus books) and Group U (unenhanced input). It was hypothesized that if typographical enhancement was sufficiently salient to promote acquisition of the target forms, learners in Groups E and E+ would outperform learners in Group U on written and oral production measures of their acquisition of third person singular PDs. It was also hypothesized that learners in Group E+, who had their attention drawn to PDs through typographical enhancement, would benefit from the additional opportunities provided by the book flood to notice these forms and that they would outperform learners in Group E on the written and oral production measures.

The first sections of this chapter are concerned with theoretical issues related to the role of the linguistic environment in L2 acquisition. Section 1.1 begins with definitions of input and intake, followed by a discussion of the role of input as seen from the innatist and cognitive perspectives. The section presents the Input Hypothesis of the Monitor Model proposed by Krashen to account for the relationship between input and innate L2 acquisition processes. Section 1.2 considers the nature of interlanguage (IL) knowledge and addresses claims regarding the interface between implicit and explicit knowledge. Section 1.3 presents

three views on the type of attention that is required for conversion of input to intake to occur.

Of particular importance to this dissertation research are claims related to the role that awareness may play in this process. Section 1.4 presents the findings from studies which describe the input available to the classroom-instructed L2 learner from the teacher, from other learners, and from books. Section 1.5 reviews the studies which have investigated the impact of extensive reading and listening to stories (i.e. book floods) on classroom-instructed L2 acquisition. Section 1.6 addresses a number of concerns that have been expressed about instruction that focuses primarily on meaning, sometimes to the virtual exclusion of any focus on the formal aspects of the target language. Finally, Section 1.7 summarizes the chapter.

1.1 The role of the linguistic environment in second language acquisition

1.1.1 Defining input and intake

Input is "the language to which the learner is exposed" (Ellis, 1985:298). It can be spoken or written and constitutes the "potentially processable language data made available to the learner" (Sharwood Smith, 1994:8). The term comprehensible input was introduced by Krashen (1982 and elsewhere) to refer to language that is "a little beyond" the learner's competence but that the learner can nonetheless understand. "The language may be comprehensible in this sense through the aid of clues such as gestures, situations, or prior information" (Lightbown and Spada, 1993:120). It is generally acknowledged in SLA research that CI is necessary for the development of second language knowledge to continue toward target-language norms (e.g. Larsen-Freeman, 1985; Long, 1990; Larsen Freeman and Long, 1991; VanPatten and Cadierno, 1993). However, it is also acknowledged that the

definition of CI is imprecise, and efforts to operationalize it have been problematic.

Since it is not possible to know from observation alone which language elements learners process from among the many to which they are exposed, a number of researchers have made the distinction, first noted by Corder (1967), between input and intake. Intake, as defined by VanPatten, is the "subset of the input that the learner actually perceives and processes" (1990:287). Gass (1988) suggested that for input to become intake, three conditions must be met: 1) features in the input must be noticed; 2) input must be comprehended by the learner; 3) intake must be integrated into the learner's implicit knowledge system (see also Chaudron, 1985).¹ As in the case of CI, intake is difficult to define and operationalize.

1.1.2 The role of input

1.1.2.1 The innatist perspective

The innatist view of language acquisition emphasizes learner-internal factors. Chomsky (1965, 1986) assumes that knowledge of language (competence) is represented in the mind of the L1 acquirer in the form of a generative grammar, which is an abstract system of principles and rules governing syntax, phonology, and morphology, and which accounts for all the grammatical sentences of a language. He claims that there are invariant principles which all languages have in common and which are wired-in to the human brain at birth, and parameters, which are set differently for different languages. Thus, Chomsky argues, the child L1 acquirer comes to the task with a kind of blueprint of what the grammar of the language will be like and, on the basis of the input available, is able to set the parameters for

the particular language being learned. Input is essential for the grammar to develop and is, at the same time, the impetus for development structured by a child's current grammar. This interaction between input containing positive evidence about what is possible in the language and the innate Universal Grammar (UG) serves to make the task of acquiring the L1 more manageable. The innatist position assumes that "the child is predisposed to deal with language input differently from other kinds of data and to deal with it in particular ways" (White, 1989:16).

UG theory is based on the assumption that all natural languages, including ILs, conform to built-in principles which do not have to be learned. If this is so, and the L2 acquirer still has access to UG principles, either directly, as in L1 acquisition, or indirectly, mediated via the L1, questions remain about how input data and UG interact in the creation of the L2 grammar. White (1989) argues that UG principles are still accessible in formal, as well as informal L2 acquisition although, in the classroom, the lack of naturalistic input may make it harder for some universal principles to be triggered. While negative evidence, that is, information about what is not allowed in the language, is believed to play an inconsequential role in L1 acquisition, classroom-instructed L2 learners may "get themselves into situations where negative evidence appears to be necessary" for resetting parameters (White, 1989:168).

The usefulness for SLA of this type of information is currently under discussion (see Schwartz, 1993), and more research is needed to examine the relative contributions of positive and negative evidence in SLA (see for example, White, 1991; Trahey, 1992, 1996; Trahey and White, 1993).

The Input Hypothesis Krashen has made specific and extensive claims about the

relationship between the linguistic environment and innate processes in SLA (Krashen 1982; 1985; 1994). The *Input Hypothesis*, the most important of the five hypotheses that make up Krashen's Monitor Model of L2 acquisition, states that "we acquire language in an amazingly simple way - when we understand messages" (1985:vii).² According to Krashen, learners acquire the rules of a language in a predictable order, and they progress along the natural order by understanding input that contains structures at their next level of interlanguage (IL) competence ($i + 1$). To understand messages containing unacquired structures, learners make use of the context (including extra-linguistic information), their knowledge of the world, and previously acquired linguistic competence. Acquisition occurs when they understand a form not yet acquired, connect it with a meaning, and "notice" a difference between the IL version of this form and instances of the form as they occur in the input (Krashen, 1983).

Krashen claims that there are two separate ways to develop ability in the L2, *acquisition* and *learning*. According to Krashen, the process of L2 acquisition is much like child L1 acquisition. That is, adults acquire a second language incidentally, without being aware that they are doing so and when they have the impression of doing something else like reading, listening, or participating in a conversation. The product of acquisition is said to be represented subconsciously in the brain, and Krashen cites as evidence the fact that most people cannot describe the rules they have acquired, even though they can say that something "feels" right or wrong. In contrast, both the process and the product of learning are held to be conscious. Learners are aware that they are learning and might also be able to describe the language patterns. Krashen holds that there is no transfer, or interface, between learned linguistic knowledge and knowledge that has been acquired subconsciously.

Krashen further specifies that acquisition and learning are used in different ways. Acquisition is more central in production than learning since it initiates utterances in the L2 and is responsible for fluency. Learning has only one function, that of a monitor, or editor, and can be used to make changes in the form of an utterance after it has been generated by the acquired system. Monitor use presupposes specific conditions, namely sufficient time, a focus on form, and knowledge of the rule. Thus it is claimed to have a limited role in L2 performance and no role in acquisition.

Numerous concerns have been raised with regard to the Monitor Model, particularly with respect to the empirical testing of the hypotheses (see, for example, McLaughlin, 1978; Gregg, 1984; Barash and James, 1994). Nonetheless, Krashen has had an important influence on L2 teaching practices which emphasize providing learners with CI and instruction that focuses on meaning rather than linguistic forms. Of interest here is the paradox of the Monitor Model: while Krashen claims CI is necessary and sufficient for L2 acquisition, he acknowledges that not all CI is processed for acquisition (Krashen, 1982). Indeed, a number of researchers have made the point that in listening and reading, L2 learners do not make full use of syntax in understanding messages, but rather benefit from their knowledge of the world, contextual clues, and the natural redundancy of language to process at the semantic level (see Gary and Gary, 1981; Swain, 1985; Harley, 1989; Swain and Lapkin, 1995; see also Cook, 1991, for a relevant distinction between *decoding* and *code breaking*). As Sharwood Smith (1986) pointed out, input can be processed in two different ways: exclusively for meaning, or for meaning and SLA at the same time. L2 learners processing only for meaning may not notice lexical items or structures that could in principle cause them to reorganize

their IL systems.³ In such cases, while the input may be comprehended, it does not become intake. This view of input processing derives from L1 research in cognitive psychology which suggests that attention is a limited resource and that an individual does not have the attentional capacity to perform two demanding tasks simultaneously (see review in Anderson, 1990). The cognitive perspective is discussed in the following section.

1.1.2.2 The cognitive perspective

Some SLA researchers have looked to cognitive science for an explanation of how language learners develop the ability to understand and produce the L2 in real time and to create new mental representations of the L2 grammar from the input while it is being comprehended (see, for example, McLaughlin, 1981, 1990b; Bialystok, 1978, 1982, 1988a, 1991b; Bialystok and Sharwood Smith, 1985; Sharwood Smith, 1981, 1986, 1991; Gass, 1989; Pienemann, 1984; O'Malley, Chamot & Walker, 1987; Schmidt, 1990; VanPatten, 1988). SLA research carried out within a cognitive framework assumes that learning a language is a complex cognitive process involving the development of a set of automatized subskills regulated by internal knowledge representations of the language system. The L2 learner is viewed as a limited capacity information processor, with restricted attentional resources available for the task of sifting through input and relating it to existing knowledge. In carrying out this task, the learner is assumed to use general cognitive processes, such as hypothesis testing, simplification and generalization, that are used in other forms of learning. Additional processes, such as the use of rules and associative learning mechanisms which may be idiosyncratic to the learner are said to be employed to meet the demands of specific

learning tasks (Seliger, 1980; McLaughlin, 1981; Oxford, 1990).⁴

The cognitive view assigns learners an active role in selecting, rejecting, and transforming information received from input into hypotheses about the target system (Sharwood Smith, 1995). However, as noted above, the relationship between input and intake is not direct. Learners are not sensitive to all the available input, and they do not necessarily make use of it to change their hypotheses. Although the mechanisms that account for noticing linguistic forms in the input may appear to be haphazard, researchers working within a cognitive perspective assume that data are collected on a principled basis which is determined by a number of factors including perceptual and psychological salience (Gass, 1988), linguistic constraints implied in markedness theory (Eckman, 1977), linguistic universals (Cook, 1985; White, 1989), and developmental readiness (Pienemann, 1984, 1989).

1.2 Interlanguage knowledge

The terms *intake* and *interlanguage knowledge* both refer to the outcome of input processing, that is, what the learner has learned. Knowledge of the L2 has been described as "a systematised body of mental representations underlying the learner's language use, irrespective of whether those mental representations coincide with those of a mature native speaker of the language" (Sharwood Smith, 1994:14). The notion of a set of *rules* is frequently invoked to describe this knowledge. It is assumed that while knowledge of the L2 is built up through exposure to language, learners do not take in actual rules through input. Rather, they take in instances of rules from which abstractions are made and stored in long-term memory. Samples of learner language are the observable manifestations of the resulting

system which permit speculation about learners' current interlanguage knowledge.⁵ That is, competence is inferred from performance.

There has been a tendency to assume that L2 knowledge can be differentiated according to the role that conscious processes are presumed to play in its development (see, in addition to Krashen, 1982 and elsewhere, Ellis, 1990; Sharwood Smith, 1994). *Implicit knowledge* is held to be built up without conscious reflection through experience with the target language. It is described as intuitive and is said to be used automatically and spontaneously to understand and produce messages in the target language (see for example Reber, 1976; Reber, Kassin, Lewis, and Cantor, 1980; Bialystok, 1978). *Explicit knowledge* is held to be conscious, built up formally through studying. It is said to consist of the conscious facts which the learner has and can articulate about language (Bialystok, 1978; Reber et al. 1980; Sharwood Smith, 1981; Ellis, 1990; Scott, 1989, 1990).

There are two views concerning the possibility of an *interface* operating between implicit and explicit knowledge. According to the *noninterface position*, acquired (implicit) and learned (explicit) knowledge are different in kind and stored separately, and no transfer from explicit to implicit knowledge is possible (Krashen, 1982). However, it is held that implicit knowledge can become explicit when metalinguistic information is supplied about something the learner already knows implicitly (Krashen, 1985).

Others take the view that the two kinds of knowledge, while different in kind, are nonetheless capable of influencing one another. There are two variants of the *interface position*. In the first, Ellis (1993, 1994a) has recently suggested that transfer is possible under certain stringent conditions, and he has also advanced several hypotheses regarding the role

of explicit knowledge in the development of implicit knowledge: 1) explicit knowledge can be used to monitor output, which in turn serves as a source of input (see also Sharwood Smith, 1981; Gass, 1988); 2) explicit knowledge can help learners pay attention to linguistic features in the input; 3) explicit knowledge can help learners notice the difference between their existing knowledge representation of a linguistic feature and instances observed in the input (Ellis, 1994a:170). It has also been suggested that explicit knowledge can help learners structure the input in ways that are beneficial for language development. Thus in this view, explicit knowledge can be instrumental in the acquisition of implicit knowledge (see also Hulstijn and De Graff, 1994; Scott, 1989, 1990; N. Ellis, 1994; Berry, 1994; VanPatten, 1993).

In the second variant of the interface position, the implicit/explicit distinction has been reconceptualized as a developmental continuum along which mental representations of linguistic knowledge evolve by becoming more analyzed, that is, more structured, explicit, and interconnected (Bialystok, 1988b, 1991b; Bialystok and Sharwood Smith, 1985). At the extreme unanalyzed end of the continuum, the learner uses prefabricated patterns, or chunks of language. Development along this dimension is characterized by changes in awareness of how the information is structured, rather than by differences in the amount or kind of information that is represented.⁶ Change is triggered by specific language experiences during which learners become increasingly aware of the relationships between forms and their meanings and functions.⁷ This awareness enables learners to deliberately manipulate their linguistic knowledge for particular purposes like creative writing and metalinguistic tasks.

In Sharwood Smith's (1994) view, metalinguistic knowledge is itself a continuum,

ranging from *metalinguistic awareness*, that is, the awareness of language as an object, as shown in spontaneous self-corrections, to the kind of highly sophisticated knowledge that enables language teachers and linguists to talk about the formal properties of a language. Metalinguistic awareness does not necessarily involve the use of metalanguage, or technical terminology, and young children who know nothing about terms like *noun* and *preposition* may play with language, creating rhymes and linguistic jokes (Sharwood Smith, 1993; see also Hawkins, 1984; Garvie, 1990; James and Garrett., 1991, regarding issues related to language awareness).

In Bialystok's model, the ability to provide a description of a form-meaning relationship or to state a grammatical rule is the endpoint of the analysis of linguistic knowledge. Metalinguistic knowledge may be deliberately developed during formal education through pedagogical techniques involving rule explanations, paradigms, sentence parsing, and translation.

VanPatten (1994) has suggested that questions focusing on the type of knowledge the learner develops (implicit, explicit, metalinguistic) put the focus on the product of acquisition, rather than on the crucial process by which input is converted to intake. In a process-oriented perspective, the important question relates to the allocation of limited attentional resources during input processing: "(w)hat gets attended to in the input and what does not?" (p. 28). This is an important question in light of VanPatten's (1990) finding that pedagogical tasks that require early stage learners to process input simultaneously for both meaning and form risk exceeding the learner's total attentional capacity and may result in the degradation of comprehension.³

1.3 Attending to the input

Attention is assumed to play an important role in determining when linguistic input enters the human information processing system and is registered in memory. As Tomlin and Villa pointed out,

Humans, like other cognizing organisms, are bombarded constantly with overwhelming amounts of sensory and cognitive information. It is the human attention systems that reduce and control the influx of information. Within the more narrowly defined problem of SLA, we find the learner also overwhelmed by incoming L2 input, and it is a virtual certainty that attention is employed to help sort out that input and to bring order to the chaos threatening to, and sometimes succeeding in, overwhelming the learner (1994:184).

The type of attention that is required for input to become intake in SLA is currently a topic of debate and discussion (for recent review articles see Schmidt, 1990, 1995a,b; McLaughlin, 1990a; Tomlin and Villa, 1994; Robinson, 1995). While Krashen (1981,1982) claims that acquisition is a subconscious process, Schmidt believes that "conscious understanding of the target language system is necessary if learners are to produce correct forms and use them appropriately" (1990:129; see also Schmidt and Frota, 1986). This position is known as the *noticing hypothesis* (Schmidt and Frota, 1986; Robinson, 1995). Others believe that both conscious and unconscious (explicit and implicit) learning processes play a role in L2 acquisition and have investigated the conditions under which one may be more effective than the other (e.g. Berry, 1994; N. Ellis, 1994; Hulstijn and de Graff, 1994). Three recent attempts to define attention and to clarify some of these issues are outlined below.

1.3.1 Tomlin and Villa

Tomlin and Villa (1994) have suggested disassociating the attentional processes of alertness, orientation, and detection from awareness and investigating them separately. These processes, which refer to distinct but interrelated networks within a limited-capacity attentional system, are defined by Tomlin and Villa as follows (p.190-4):

1. *Alertness* refers to the learner's overall readiness to deal with incoming stimuli; it increases the rate at which information is selected for further processing and is necessary for information processing although there may be associated costs for accuracy. Various types of signals can increase alertness and lead to an increased likelihood that data will be detected.

2. *Orientation* refers to the allocation of specific attentional resources to some type of sensory information at the exclusion of others; it involves activation of a higher level schema and is presumed to have facilitative or inhibitory consequences for further processing depending on whether or not the information is presented as expected. Orientation has potential explanatory power in SLA research to the extent that learners with prior experience may be predisposed to attend to form or meaning.

3. *Detection* refers to the selection of a particular and specific bit of information. While detection consumes a lot of attentional resources, it is a prerequisite to further processing such as storage or rehearsal in working memory. It is "the process by which particular exemplars are registered in memory and therefore could be made accessible to whatever the key processes are for learning, such as hypothesis formation and testing. Detection is the process that deals with specific and particular moments of acquisition, with

the current utterance in some interaction, and it is ultimately on this level that acquisition must operate" (p. 192-93).

Tomlin and Villa specified that none of these central components require awareness, which depends, according to Allport, on three conditions having been met: the individual a) shows some behaviour or cognitive change due to the experience; b) reports awareness of the experience; and c) describes the experience (Allport, 1988, in Tomlin and Villa, 1994:193). They suggested, furthermore, that the term *awareness*, rather than *consciousness*, be used to refer "to the subjective experience of any cognitive content or external stimulus" (p. 194), and they recast Schmidt's idea of *noticing* as *detection*, with awareness playing a potentially supportive, but non-essential, role in helping to set up the circumstances for detection.

1.3.2 Schmidt

Schmidt (1994) has proposed standardizing the theoretical construct of *consciousness* by considering four "senses" of consciousness that are common in everyday, technical, and theoretical uses of the term: intentionality, attention, awareness, and control.

1. Consciousness as *intentionality* underlies the distinction between incidental and intentional (that is, deliberate) learning. Schmidt cited evidence that incidental learning occurs in L2 in the acquisition of vocabulary through extensive reading (Krashen, 1989; Hulstijn, 1992)

2. Consciousness as *attention* refers to "subjective awareness of the objects of focal attention" (p. 16). This is the mechanism by which humans attend to a subset of the numerous environmental stimuli impinging on their senses at any one time. It is partly, but

not entirely, under voluntary control. Schmidt equated focal attention with what Tomlin and Villa (1994) have called "detection with awareness" and with what he calls "noticing". In Schmidt's view, no learning, incidental or intentional, can take place without noticing although learning can take place when the primary attentional focus is elsewhere (peripheral attention). He conceded that since no operational definition of noticing has been proposed that will allow falsification of the *noticing hypothesis*, a modified hypothesis might be adopted that "more noticing leads to more learning" (p. 18).⁹

3. Schmidt noted that *awareness* is the most common sense of consciousness. In his view, assertions that L2 learning takes place without consciousness refer instead to the operation of low-level awareness processes. One such example is the so-called induction-without-awareness processes that are said to be implicated in SLA when learners "know" more than they can express (e.g. Reber, 1989, 1992; Green and Hecht, 1992). A higher level of awareness is involved in the "matching" (Klein, 1986) or "notice the gap" problem (Ellis, 1993; Krashen, 1983; Schmidt and Frota, 1986), which requires learners to be able to "somehow step outside of themselves to attain a perspective on their own language performance" (Schmidt, 1994:19). The *noticing hypothesis* claims that learning requires awareness at the time of learning, not that memory of the event be preserved or recalled each time the learned material is encountered.

4. Consciousness as *control* refers to L2 learners' ability to use language. In early stages, learners may devote considerable attention to memory searches required to access the words and structures needed to express their intentions. As learning progresses, these processes become more automatized and less demanding of attentional resources, which can

be allocated to meaning and communicating the message. In this view, control and automatization are seen as the endpoints on a continuum, and knowledge develops along with automaticity (see J. Anderson, 1983; McLaughlin, 1990b; Newell, 1990, for different theories accounting for the development of automaticity). In contrast, Bialystok (e.g. 1982, 1994a) views the development of linguistic knowledge and the development of the ability to access that knowledge fluently in comprehension and production as orthogonal dimensions. That is, development along one dimension can occur independently of development along the other.

1.3.3 Robinson

Robinson (1995) noted that the concept of attention has three uses: 1) to describe the processes involved in "selecting" the information to be processed and stored in memory; 2) to describe learners' "capacity" for processing information; 3) to describe the mental "effort" involved in processing information (p. 287-8). Working within the framework of Schmidt's *noticing hypothesis*, he defined noticing as "detection with awareness and rehearsal in short-term memory" and argued that noticing "is necessary to learning and subsequent encoding in long-term memory" (p. 318). Robinson suggested that recent "attentional theory provides a framework for relating the act of noticing to those L2 task conditions that facilitate it" (p. 293).

Classroom-based studies which have investigated the effects on SLA of different types of "attention getting" pedagogical techniques and instructional tasks are examined in Chapter 2.

1.4 Describing input in the second language classroom

1.4.1 Input from the teacher

In many second and foreign language classrooms, the teacher provides most of the target language input that the learners hear. When the teacher is a native speaker (NS) of the target language, most studies have found teacher talk (TT) to be grammatical (e.g. Wong-Fillmore, 1985; see Long, 1981, and Chaudron, 1988, regarding ungrammatical TT by NS teachers). Few studies have looked at SLA in classes where the teacher is a non-native speaker of the target language even though input from the teacher and peers is the only input available for L2 acquisition in many classrooms around the world (but see Wong-Fillmore, 1992, for an exception to this).

The assumption underlying descriptive TT research is that the modifications in teachers' speech (e.g. slower speech, simplified pronunciation, vocabulary and syntax) are important for SLA to the extent that they simplify the target language input and render it more comprehensible, easier to process and, as Hatch (1983) noted, more likely to serve as an implicit teaching mode. Krashen has claimed that simple codes like TT are necessary for language acquisition (Krashen, 1981; 1985). White pointed out, however, that grammatically simplified input is "only of limited value, since it does not contain information relevant to complex sentences, effectively depriving the learner of important information about language" (White, 1989:40). In Long's opinion (Long, 1981; 1983), changes at the level of discourse "allow communication to proceed while exposing the learner to linguistic material which he or she cannot yet handle without their help" and make unfamiliar linguistic input comprehensible (1983:212).

One category of discourse features which is characteristic of TT encompasses the reacting moves teachers sometimes use to provide learners with feedback regarding the correctness or appropriateness of their responses. Error treatment is operationally defined as "any reaction of the teacher which clearly transforms, disapprovingly refers to, or demands improvement of the learner's utterance" (Chaudron, 1977:31).¹⁰ This broad definition encompasses both implicit and explicit corrections.

Teachers are generally inconsistent and unclear in their treatment of error (Ellis, 1990; Chaudron, 1977). They give feedback on form and content simultaneously; they use the same overt behaviour for more than one purpose; they fail to indicate where or how an utterance is deviant; they correct an error in one part of a lesson, but ignore it later with another learner. It is not surprising that many of their feedback moves go unnoticed by learners. Chaudron (1977) examined different types of corrective repetition and the extent to which learners incorporated this treatment into their next utterance (which Lyster and Ranta, in press, called uptake). He found that the overall success rate was low for the uptake of corrections of linguistic errors. Lyster and Ranta also found a low uptake ratio in their study of corrective feedback in French immersion classrooms. These studies suggest that corrective feedback may be less effective than teachers assume it to be in promoting L2 development and that other types of modifications may be needed to draw learners' attention to problematic aspects of the target language.

1.4.2 Input from other learners

Even if the teacher is a native speaker of the target language, when the learners far

outnumber the teacher, there may simply not be enough high quality input available in the classroom. A number of researchers have suggested that deviant input from other learners may be related to persistent output errors. The phenomenon has been noted in immersion, intensive, and bilingual classrooms, where learners may be exposed to as many as five hours of target language input a day, much of it IL input.

Classroom dialects have been observed in Spanish and French immersion classrooms (e.g. Plann, 1977; Harley and Swain, 1984). Research has shown that Canadian French immersion learners have well-developed comprehension skills, but their oral and written French differs in grammatical, lexical, and sociolinguistic ways from that of native speakers. Harley and Swain attributed this, at least in part, to mother tongue influence: "in a classroom context where the learners share a mutually reinforcing L1 and are relatively cut off from speakers of the L2 other than their teacher, there is a distinct continuing effect of the L1 at all grade levels" (p.299).

Similar observations have been made of intensive primary school ESL learners in communicatively oriented classes in Quebec who speak their new L2 fluently and confidently after a short time but make similar errors because of their shared L1 background. Furthermore, the large quantity of CI that they provide each other appears to confirm their incorrect hypotheses about the target language (Spada and Lightbown, 1989; Lightbown, 1992b).

Since small-group work is typically a design feature of communicatively-oriented L2 classes, a number of researchers have investigated IL talk when learners interact with each other. Not surprisingly, IL talk produced during group work tasks has been found to be less

grammatical than TT (Pica and Doughty, 1985; Porter, 1986; for L1 research, see Schegloff, Jefferson, and Sacks, 1977). However, despite the risk that learners exposed to IL talk will acquire the errors it contains, Porter found that when learners in small groups corrected each other's errors, their corrections were usually correct, and few errors produced in small groups were repetitions of fellow-learners' errors.

A number of researchers have argued that the benefits of IL talk outweigh the disadvantages. Krashen (1985) maintains that learners can provide each other with CI that contains enough $i + 1$ to be useful for acquisition. In Long's view, the greatest benefit is in interaction, where the negotiation of meaning occurs (Long, 1981, Long and Porter, 1985). Because communication breakdowns are more frequent among NNSs and because they cannot rely on NSs skilled in foreigner talk to intervene, non-native speakers (NNSs) working in groups get more practice in negotiating to restore meaning than they get in teacher-centred classes or NS-NNS conversation. In the process, they correct, or repair, the syntax, lexicon, and phonology in their own and other learner's speech (see Pica, 1994; Larsen-Freeman and Long, 1991; and Ellis, 1994b; for reviews of research investigating how L2 learners repair trouble in interaction in order to achieve understanding).

1.4.3 Input from books

Wong-Fillmore (1992) has suggested that teachers whose command of the TL is non-standard can improve the quality of the input they provide to their learners by reading stories aloud. Lightbown's (1992a,b) research, in a program where elementary school learners read

along while they listened to stories tape-recorded by NSs, provides support for this type of pedagogical activity.

Krashen has made strong claims about the value of reading as a source of comprehensible input for L2 acquisition of grammar, vocabulary, and spelling for learners of all proficiency levels (1984, 1988, 1989, 1993a,b). Much of his justification comes from L1 correlational research which suggests that “in school free reading studies and ‘out of school’ self-reported free voluntary reading studies show that more reading results in better reading comprehension, writing style, vocabulary, spelling, and grammatical development” (1993b:12). There is considerable support for this claim in the domain of vocabulary acquisition. For example, Nagy’s research with L1 children suggests that incidental learning from written context accounts for much of their vocabulary growth during the school years (see Nagy, Herman, and Anderson, 1985; Nagy, Anderson and Herman, 1987). Krashen has carried out several data-based studies to investigate more directly the relationship between CI from reading and incidental vocabulary acquisition by adult ESL readers (Krashen, 1989; Pitts, White, and Krashen, 1989; Cho and Krashen, 1994). These studies indicate that adult L2 learners, like L1 readers, can acquire vocabulary by reading, and that reading can be an important source of vocabulary development.

In support of his claims about the value of reading, Krashen has made explicit reference to the top-down reading models proposed by Goodman (1967, 1973, 1984 and elsewhere) and Smith (1972, 1973, 1982). According to Goodman (1967), reading is a “psycholinguistic guessing game”. He argued against the notion that reading is a precise, sequential identification of letters and words, proposing instead a cyclical and selective

process which makes use of the redundancies inherent in language. In Goodman's view, readers make partial use of the graphic input and, in addition, use syntactic and semantic information to make predictions; then sample just enough of the print to confirm their expectations, or to correct them, and the cycle begins again. Smith has also stressed the importance of predictions (or anticipation) and de-emphasized the role of the decoding processes for the proficient reader on the justification that careful attention to every letter would overload the processing capacity and impede comprehension.

Krashen's willingness to adopt a top-down model to explain the effectiveness of CI from reading in the L2 is problematic since the model implies that readers who bring extensive background knowledge to the text will miss opportunities for acquisition precisely because they can comprehend without attending to the lexical and syntactic information on the page. After numerous claims that good readers become good writers (Krashen, 1984 and elsewhere), Krashen (1993b) has recently acknowledged this contradiction and has offered the following suggestion which nonetheless allows him to retain the model. Despite massive amounts of comprehensible input from written texts, fluent readers may have "tiny gaps" in their competence. As a result, they may make errors in spelling (e.g. confusing suffixes like *-ance* and *-ence*), punctuation, grammar (e.g. subject-verb agreement), or segmentation (confusing *it's* for *its*) that "usually do not make much of a difference in terms of communication" (p. 69). For this reason, according to Krashen, skilled readers may benefit from a limited amount of direct teaching in order to fill the gaps created by their successful reading techniques (p. 71-72). While this would appear to be a considerable understatement of the problem, it is nonetheless noteworthy that Krashen has acknowledged that

comprehensible input from reading may not be sufficient for L2 learners to acquire some aspects of the target language grammar.

A number of other researchers have investigated the relationship between L2 reading and vocabulary learning, with specific attention to learning from context, the role of background knowledge, frequency of occurrence, and salience (see, for example, Huckin, Haynes, and Coady, 1993). These studies have been carried out from the perspective of interactive models of reading. While top-down models assume that semantic processes direct lower-level processes, interactive models presuppose that higher- and lower-level processes interact.

Perfetti's Verbal Efficiency Model (1985; Perfetti and Lesgold, 1979; Perfetti and Roth, 1981) is based on an interactive theory of reading which claims a central role for low-level processes during reading. These processes include word recognition, lexical access, syntactic parsing, and propositional encoding. Higher level processes involve global text features, such as proposition integration, inferencing, and the construction of the text in memory. The low-level processes have the greatest potential for becoming highly efficient for comprehension, provided that the reader has a sufficiently large vocabulary. However, readers with small vocabularies are disadvantaged as compared to readers with large vocabularies in that the former need to expend a greater than optimal share of their attentional resources on memory searches and attempts to infer the meanings of words from context. This leaves them with fewer resources for the more resource-demanding text work and may severely impede comprehension.

For unskilled readers, Perfetti suggested “massive practice in everyday text reading” to improve coding speeds and short-term memory (Perfetti and Lesgold, 1979:76). With continued practice, readers build up a larger language base of lexical entries, orthographic and associated phonemic patterns. The associations among words become strengthened and the chances increase that the activation of a word might be above “resting level” before the reader encounters it in print. Practice also serves to strengthen the mental representations of syntactic features in memory. Thus this theory appears to predict that as they become efficient decoders, L1 readers’ knowledge of language and their ability to access this information easily and quickly develop simultaneously.

The theory has important implications for L2 readers. It predicts that L2 readers with restricted vocabularies and limited knowledge of syntax may compensate for these deficiencies by relying on background knowledge and applying top-down strategies in their efforts to understand written texts (for research investigating the efficiency of these processes with skilled L2 readers, see Segalowitz, 1986; Segalowitz and Hébert, 1990; Poulsen, 1992). Consequently, in order to improve the effectiveness of reading practice for L2 acquisition, it may be beneficial in certain instructional contexts to direct the learner’s attention to specific features of the target language (vocabulary, syntax, morphology) that they would otherwise not notice in the written input precisely because they are becoming more efficient.

Stanovich (1981) has proposed a compensatory model which assumes that, in the case of skilled readers with highly automatized word recognition skills, word recognition is completed before any conscious attention process can begin to operate. Contrary to claims made by top-down theorists, Stanovich found that skilled readers do not use guessing from

context as their regular word identification strategy. Rather, their word recognition skills are highly automatized and efficient, and they restrict their use of context and background knowledge to anticipating upcoming words and to generating the meanings of unknown words. On the other hand, contextual effects are said to be important for readers with slower word-recognition speeds. The model predicts that readers who are deficient in linguistic knowledge can compensate with other types of knowledge, including L1 language skills and strategies. Stanovich's emphasis on individual differences suggests that some L2 learners might rely more on context and background knowledge while reading than do other readers and, therefore, pay less attention to unfamiliar words on the page (for recent research investigating the compensatory use of background knowledge by L2 readers, see Donin, Goyette, and Graves, in preparation, reported in Donin, 1995; Chen, 1995).

Bialystok and Harley support the idea that reading practice plays a role in the development of syntax and morphology. Bialystok (1991b) claims that analyzed knowledge may develop as a result of reading in an L2. Reading "forces (the) language learner to examine the structure of the second language through the process of analysis so that the language is represented as a formal system. This means that bilingual children who are also biliterate have had the experience of analyzing two linguistic systems, the result of which must translate into a more powerful and more analytic conception of language in general" (p. 130).

In the context of French immersion, Harley (Harley and Swain, 1984; Harley, 1993) has suggested that written input can provide beginning L2 learners with information that is not evident from oral input. By making information available about non-salient segments of

the target language, reading can lead to more target-like segmentation in oral production (e.g. the discovery that the French *j'ai* (I have) is not one word, but consists of *je* plus *ai*). Harley (1993) noted that more research is needed, however, to discover the ways in which linguistic awareness might be differentially stimulated by oral or written language.

The work reviewed here provides support for the claim that reading practice increases L2 learners' knowledge of the target language code and improves their ability to access it. The following section presents a review of some of the empirical studies that have investigated the effects of extensive reading on L2 acquisition and comprehension.

1.5 Improving the quality of classroom input: empirical studies of book floods

The pedagogical perspective on the value of reading practice in an L2 is clearly expressed in Nuttall's recommendation to language learners: "The best way to improve your knowledge of a foreign language is to go and live among its speakers. The next best way is to read extensively in it" (Nuttall, 1982:168). A number of classroom-based book flood studies conducted with children indicate that reading and listening to stories can provide valuable, possibly essential, exposure to the target language, particularly in contexts where high quality CI is difficult to obtain. The term *book flood* refers to a situation in which an L1 or L2 classroom or school is saturated with books (see Ingham, 1982, for L1). To be considered a flood, there must be a great many more books in the classroom as a result of the flood than there were before, such that books have a clear presence for the learners.¹¹ These book floods have been implemented to compensate for weaknesses in the regular L2 instructional program by improving the quality of the input available to learners.

The book floods reported in the L2 literature have been of two types. In the first, the book flood constituted a meaning-based alternative to a structural audiolingual program, and the learning outcomes in the experimental and regular programs were compared (Elley and Mangubhai, 1983; Mangubhai, 1986; Elley, 1991; Lightbown, 1992a,b). In the second, the book flood provided enrichment for the regular L2 program, either during school hours or after school, and the treatment groups were compared to control classes, or to themselves in a pretest/posttest design (Hafiz and Tudor, 1989, 1990; Romney, Romney and Braun, 1988).

In both types of flood, learners were exposed to large amounts of CI over a period of time through reading and/or listening to high-interest stories. Elley and Mangubhai (1983) hypothesized that reading interesting stories would be beneficial for L2 acquisition in the following ways: 1) by increasing the strength of motivation; 2) by emphasizing meaning over form; 3) by providing more exposure to the language, 4) more contextualization of new language, and 5) authentic models of the L2 to compensate for teachers who may be non-native speakers of English. *High-interest* is a subjective term, however, and the book flood studies do not report how the interest level was determined or the amount of attention that was paid to the cultural relevance of the texts that were used.¹² It is also important to note that there is not always clear evidence in the book flood studies that the input is comprehensible.

In addition to outperforming control groups on measures of reading comprehension, learners who were exposed to books as an alternative to a structure-based program also showed an advantage on measures of listening comprehension, grammar, receptive vocabulary, and oral production. Similar results were obtained in book flood enrichment

programs. In addition, book flood learners in one enrichment program wrote more, employed a wider range of vocabulary items, and were more accurate in their spelling, lexical choices, and use of grammatical structures than the two control groups (Hafiz and Tudor, 1990). Thus the studies strongly suggest that input from books can be beneficial for both comprehension and the acquisition of some features in the L2 grammar.

1.6 Problems arising from exclusively meaning-based instruction

Although the benefits of increased exposure to comprehensible target language input have been demonstrated in book flood programs, there is a growing body of evidence which indicates that when instruction focuses on meaning to the virtual exclusion of form, learners may fail to reach acceptably high levels of accuracy in their use of the L2. Children in immersion programs, who receive considerable exposure to CI through reading material, are often cited as illustrating this phenomenon. While they have been shown to achieve excellent results on global comprehension tests, reaching, or in some cases even exceeding, the results of native speaker comparison groups (Swain and Lapkin, 1982, 1986; Swain, 1984; Genesee, 1987), their oral and written production has been found to exhibit a number of non-nativelike features despite exposure to large quantities of CI (Harley & Swain, 1984; Harley, 1989; Swain, 1985; Swain and Lapkin, 1995; Lyster, 1994a,b).

Learners in an input-rich book flood program in New Brunswick have a comparable profile. They are confident and autonomous when solving their language comprehension problems, and, although they have few opportunities in class to practice their L2 speaking skills, they express themselves orally with surprising ease (Lightbown, 1992a). However,

when writing samples from two experimental groups of Grade 8 learners who had been in the comprehension-based program since Grade 3 were compared with those of learners in a more structure-based program, the book flood learners were found to have more problems with accuracy despite their obvious fluency and ease of expression (Lightbown and J. White, 1993). The writing samples were first drafts collected under test conditions, and many errors were made by learners in both types of ESL program. Nonetheless, the experimental learners were less likely than their traditionally instructed counterparts to mark sentences for past tense and more likely to use French words or flagrant false cognates in their compositions.

Similar evidence for the insufficiency of CI is provided by Grade 5 and 6 learners in intensive ESL classes in Quebec. After five months of instruction that consists primarily of meaning-based listening and speaking activities which provide rich and varied CI, along with opportunities for the negotiation of meaning, intensive learners' comprehension scores are good. In fact, class means on a global listening comprehension test developed by the Ministry of Education are generally better than the provincial average for students finishing Secondary 3 (Grade 9), who have accumulated the same total number of hours of English, spread out over a longer period of time (Lightbown and Spada, 1991). Intensive learners have also been noted to develop high levels of fluency and "communicative confidence". However, there is much room for improvement in terms of accuracy. Analyses of the oral production data from a number of intensive classes reveal that their oral English is marked by numerous errors, many of which are common to all intensive learners (Lightbown and Spada, 1990).

Some applied linguists have used findings like these to put early communicative

language teaching into question, particularly at beginners levels, and to sound the alarm that if early errors are not addressed through error correction and explicit form-focused instruction, aspects of the IL will fossilize and the learner will never advance beyond low levels of proficiency. Hammerly (1987) went so far as to recommend the elimination of early immersion programs altogether, to be replaced by "semi-intensive, systematic instruction - step-by-step teaching/learning of the second language for about two hours a day...to establish a solid foundation, especially in the structure of the language" which would "prevent the early entrenchment of a faulty interlanguage" (p. 399).

Higgs and Clifford (1982) echoed this concern about early fossilization of interlanguage errors in the L2 development of adult learners, who are said to develop "terminal two" profiles (high vocabulary, low grammar) if they are led too rapidly into the "creative aspects of language use", either because they receive no formal instruction, or because their instruction is lacking in form-focused feedback. Learners can only move beyond Level 2 of the ACTFL proficiency guidelines, Higgs and Clifford claimed, if the development of grammar skills forms an important part of the curriculum from the beginning and if learners are not pushed in communicative tasks that are far beyond their performance level.¹³

VanPatten (1988), on the other hand, argued that beginners cannot make use of error correction since it overloads their limited processing systems. He pointed out that Higgs and Clifford neglected to provide evidence in the form of data-based studies to back up their claims and accused them of creating "an era of *fossilophobia*" in which teachers assume that if they do not teach grammar and provide corrective feedback right from the beginning of

instruction, they are thereby responsible for learners' errors" (p. 247).

1.7 Chapter summary

Research is needed into the conditions under which L2 learners might benefit from more focused input, corrective feedback, and direct instruction. Findings such as those from immersion and intensive ESL research have raised questions about the quality of the input in CLT contexts where the learners all share the same L1 (e.g. Lightbown, 1992b). As noted above, when much of the input available to classroom learners is the linguistic output of their peers, learners may not be able to obtain the necessary evidence to disconfirm their faulty hypotheses about the L2 and bring their IL closer to the L2 norms. In particular, the role of focused written input in drawing learners' attention to specific linguistic features is in need of investigation.

Chapter 2 provides a theoretical framework for examining the effects of form-based instruction on L2 development and reviews empirical research carried out in classrooms with child and adult L2 learners.

Endnotes for Chapter 1

1. Gass allowed for the storage of some unintegrated linguistic information as explicit knowledge that might be used to monitor output (see also discussion in section 1.3 regarding the possibility of an interface between implicit and explicit knowledge).
2. The five hypotheses of the Monitor Model include the Input Hypothesis; Acquisition-Learning Hypothesis; Monitor Hypothesis; Natural Order Hypothesis; Affective-Filter Hypothesis. See Krashen, 1982 and 1985, for elaboration.
3. The term *notice* will be defined in Section 1.3. Until then, it will refer loosely to "paying attention" or "perceiving" without any specification as to whether or not awareness is implicated.
4. The hypothesis that L2 learning processes resemble other types of complex skill learning sets cognitive theorists apart from innatists who, following Chomsky (1975), assign unique status to language ability (e.g Cook, 1985; White, 1989). It is important to keep in mind, however, that cognitive and linguistic theories separately provide only a partial account of SLA and must be linked in order to show how an L2 grammar is constructed (Ellis, 1990; McLaughlin, 1990b).
5. Different linguistic theories offer competing formalizations of linguistic rules, and connectionist models of cognition question the need to posit any rules of this type at all (see discussion in Robinson, 1996).
6. This increasingly analyzed interlanguage does not necessarily become more target-like since the model is not criterion-referenced.
7. In the case of L1 acquisition, cognitive maturity is assumed to play an important role. In learning to read, the child is presented with such concrete cues concerning language structure as letter-sound patterns, spaces between words, capitalization and punctuation. Because languages share aspects of structure, the learner can apply those structures to the analysis of other languages (Bialystok and Ryan, 1985).
8. VanPatten (1990) defined comprehension as attention to informational content (p. 290). Comprehension was operationalized through analyses of recall protocols written in the learners' L1 (English) immediately after listening to a passage in the L2 (Spanish).
9. Schmidt (1993:4) proposed that "availability for self-report" at or near the time of noticing be the defining criterion. However, he conceded that memory and the availability of metalanguage for describing the experience may make noticing hard to verify (in Harley, 1994, p. 58).

10. Chaudron (1977) used the term *treatment*. It is more general than *feedback*, a term used to describe teachers' attempts to supply learners with information about the correctness of their productions, and *correction*, which emphasizes the effects of feedback on learning.
11. It is difficult to specify the number of books that are needed for a flood. Each of the experimental classes in Mangubhai and Elley's (1983) study received 250 story books. In the Bradford book flood experiment, there were 4,500 books for three classes in each of two schools (Ingham, 1982:37). Despite this seemingly large number of books, the teachers reported that the children (ages 11-13), most reading in their L1, English, were so enthusiastic that they quickly exhausted the supply and had to return to checking books out of the well-stocked libraries.
12. Some of the research cited here was carried out in the South Pacific (Mangubhai and Elley, 1983; Elley, 1991) and Pakistan (Hafiz and Tudor, 1990). The use of North American and/or European texts might have affected the interest level in unanticipated ways (see Kramsch, 1993, regarding issues related to cultural relevance in L2 teaching).
13. Higgs and Clifford were not advocating a return to traditional grammar-based methods, but rather a "systematic recognition of the ultimate role that linguistic accuracy plays in the achievement of true communicative competence, in which it truly does matter how the message is transmitted" (Higgs and Clifford, 1982:77).

Chapter 2

Form-focused Instruction and Second Language Acquisition

2.0 Introduction

Section 2.1 of this chapter begins with a discussion of the role that salience is presumed to play in L2 acquisition. It then presents a theoretical framework that permits comparisons to be made in terms of explicitness, elaboration, and type of evidence (positive or negative) among studies which have investigated the effects of different types of form-focused instruction. Section 2.2 reviews findings from classroom-based pedagogical intervention studies carried out with children and adults in which input has been manipulated in a variety of implicit and explicit ways intended to increase its usefulness for second language acquisition.

2.1 Theoretical framework

A number of L2 theorists and researchers have suggested that learners in communicatively-oriented programs can benefit from form-focused instruction designed to overcome the limitations of regular classroom input (e.g. Rutherford, 1987; Allen, 1983; Brumfit, 1984; Yalden, 1987; Stern, 1990; Sharwood Smith, 1981, 1991; Lightbown, 1992b; Lightbown and Spada, 1990). This is not the same as Hammerly's (1987) call for a return to traditional grammar teaching, which Long (1991) labelled a *focus on forms*. Rather, it represents an approach which "overtly draws students' attention to linguistic elements as they arise incidentally in lessons whose overriding focus is on meaning or communication", a

distinction which Long has attempted to capture with the term *focus on form* (p. 46).

One of the key features underlying the effectiveness of form-focused instruction is presumed to be its salience (see, for example, Long, 1988). Perceptual salience refers to the prominent or striking effect caused by the physical attributes of the target structure. Other features of the input that might govern salience include linguistic complexity, similarity/dissimilarity between the learner's L1 and L2, and frequency of occurrence (see discussion in Alanen, 1995). Salience can also be generated internally by the learner's natural processing mechanisms. This may occur because the learner has attained a prerequisite developmental stage such that aspects of the input that were previously opaque (present in the input, but ignored) become salient and are attended to; it may also be related to knowledge of other foreign languages (Sharwood Smith, 1981, 1991; N. Ellis, 1993; Alanen, 1995).

When teachers and textbook writers want to increase the salience of particular aspects of the target language input in order to direct learners' attention, they can select from among a number of different pedagogical techniques. Several terms have been used to describe these attention getting techniques: *consciousness-raising*, *input-salience creation* and *induced input salience* (Sharwood Smith, 1981; Rutherford, 1987; Rutherford and Sharwood Smith, 1985). However, the term *input enhancement* more accurately reflects the fact that it is the input that is being manipulated, and not necessarily the internal mental processes of the learner since "what is made salient by the teacher may not be perceived as salient by the learner" (Sharwood Smith 1991:120; see also Alwright, 1984, and Slimani, 1989).

While SLA researchers are ultimately interested in the learner's attention to form, whether generated internally or externally, the variable which can be observed is the way in

which the teacher or materials writer puts "flags" in the input to try to direct the learner's attention to particular linguistic properties contained therein. Discovering the extent to which learners use this externally-induced salience to develop their own internal mental signals, thereby triggering changes in the relevant grammatical representations, is at the heart of research investigating the relationship between enhanced input and L2 acquisition.

Sharwood Smith (1981, 1991) has suggested that there are two useful ways of categorizing input enhancement. The first is along the separate dimensions of explicitness and elaboration. The second is in terms of the kind of evidence, positive or negative, that is provided to the learner.

Explicitness Explicitness has to do with the sophistication and detail of the pedagogically motivated input enhancement process and in this context refers to the instructional techniques and task conditions, rather than to knowledge representations or learning processes. At the most explicit end of the continuum, enhancement involves metalinguistically sophisticated rule explanations and paradigms. Implicit (or less explicit, in Sharwood Smith's terms) enhancement, at the other end, aims to draw the learner's attention to form without any attempt to provide an explanation. Implicit pedagogical techniques include 1) signals from the teacher such as facial gestures or hand movements and audible signals like a sharp intake of breath; 2) typographical conventions such as underlining, capitalizing, colouring, and drawing boxes and arrows; 3) intensified exposure, during which the learner is "flooded" with an artificially large number of instances of the target structure. The teacher has the option of introducing implicitly enhanced features without comment or,

still without recourse to metalinguistic terminology, asking learners to pay attention because, for example, all "question words" will be underlined or coloured.

The assumption underlying the use of implicit input manipulation techniques is that the signals, textual enhancement, and intensified exposure will permit the learner to detect relevant formal regularities in the input and differences between current interlanguage knowledge representations and input data with minimal cost to attentional resources.

Elaboration Elaboration refers to the amount of time taken up by the input enhancement procedure. At the unelaborated end of the continuum, the enhancement is brief, lasting only a few seconds. It might consist of a quick explanation or a short signal after an error is made. Elaborated input might also be brief, but repeated every time a particular error occurs; or it might involve long explanations; or it might be programmed into a pedagogical sequence extending over an instructional period lasting days or weeks. These two dimensions of explicitness and elaboration can be combined to form a matrix on which different types of input enhancement can be plotted.

Evidence Sharwood Smith (1991) suggested that input enhancement can also be categorized in terms of the kind of evidence, positive or negative, that is provided to the learner. Positive evidence informs the learner about what is possible in the L2 and has the potential to trigger changes in the L2 grammar to bring it into line with native-speaker norms. It is provided implicitly by naturally occurring samples of grammatical language as well as by intensified exposure to particular linguistic features, and explicitly by elaborated and unelaborated form-focused instruction. Positive evidence can be made more informative through enhancement, as when the importance of a particular form is highlighted through

typographical means (e.g. third person singular -s: he walks).

Negative evidence provides information about what is not possible in the L2. It can be direct or indirect. Direct negative evidence is rare in the input provided by native speakers outside instructional contexts, but it does occur in the L2 classroom and can vary in terms of explicitness and degree of elaboration. One type of direct negative evidence is corrective feedback, which can be considered explicit when the teacher locates the error for the student and provides information about how to correct it. Another type of direct negative evidence involves the presentation of incorrect examples of the target language in the form of "typical" learner errors. The errors may be explicitly identified through textual enhancement techniques, or they may be unmarked and implicit, with the learner's task being to identify and, perhaps, correct them.

In the case of indirect negative evidence, the learner is presumed to notice the non-occurrence of certain linguistic features that he "expects" in some way to show up in the input. The construct of indirect negative evidence is contentious, however, as it is incompatible with most nativist accounts of language acquisition, as well as with cognitive processing theories. It is considered to place an unreasonable load on information processing since the learner would be required to keep his hypothesis in mind while detecting that something was missing from the input over an extended period of time (see discussions in Bley-Vroman, 1986; White, 1990; and Birdsong, 1989).

Sharwood Smith (1993) suggested that these different categories and levels of input enhancement may form the basis of theoretically principled and controlled pedagogical investigations in "areas where learners appear to have reached a learning plateau or fossilized

(p.7). In the next section, the findings from a group of quasi- experimental pedagogical studies conducted in L2 classrooms and several closely related experimental laboratory studies are reviewed. In these studies, instructional input has been manipulated explicitly and implicitly with the aim of drawing learners' attention to aspects of the target language that they are known to find difficult.

2.2 Classroom-based empirical research

2.2.1 Studies with children and adolescents

2.2.1.1 French immersion studies

Recent research by Harley (1989), Day and Shapson (1991) and Lyster (1994b) in early French immersion classrooms indicates that some types of form-focused instruction can have a beneficial effect on the IL development of learners who have received predominantly meaning-focused instruction for several years and whose French differs in systematic ways from that of native speakers of French in terms of grammatical and sociolinguistic competence (for earlier descriptive research, see Harley and Swain, 1984; Harley, Allen, Cummins, and Swain, 1990). Although explicit French grammar instruction is typically offered during language arts content lessons, this instruction "tends to limit itself to decontextualized grammar teaching emphasizing the learning and categorizing of forms rather than relating the forms to meaning in context" (Lyster, 1994b:264). The three instructional intervention studies described below integrated form-focused instruction into content-based lessons in an attempt to make specific structural or sociolinguistic features more salient to the learners. They all followed a pretest/posttest/delayed posttest design to

compare learners in treatment and comparison groups on a variety of different measures.

Harley Harley (1989) hypothesized that learners in grade 6, who used passé composé and imperfect verb forms without having grasped their different aspectual functions, would benefit from focused input which provided opportunities to use these verb forms in a variety of comprehension and production activities. Instructional materials were developed for use over an eight-week period. Children were exposed to many instances of passé composé and imperfect verbs in activities that required them to understand and use the target forms.

Three measures were used to assess the learners' ability to use passé composé and imperfect verb forms: compositions, cloze tests, and oral interviews. At the first posttest, there was a significant effect for instruction on the cloze test and oral interview but not on the composition task. By the delayed posttest three months later, the comparison groups had caught up with the experimental groups, and there were no longer any significant differences between them on any of the measures.

Harley offered several explanations for these results. The first was that the verb forms were not made sufficiently salient, and that as a result, learners did not detect the functional difference between the passé composé and the imperfect. This may be because the students were never told the focus of the instructional unit; because the instructional materials did not lead them, or the teachers, to focus on form; or because most of the teachers, like immersion and other L2 teachers in general, did not reliably provide corrective feedback when students made errors with the forms that were the intended focus of the instructional materials. In other words, learners may have needed to have their attention

drawn more explicitly to the L1/L2 differences in past tense verb forms and their functions. Harley's second explanation is that the total number of hours of focused instruction was insufficient and/or poorly distributed. Approximately twelve hours spread out over eight weeks may not have attracted the learners' attention. Her third explanation was that, since these learners had managed to communicate with their teachers and with each other for years in the classroom dialect without making the functional contrast between the two forms, the optimal developmental moment may have passed and the structures had stabilized. Harley suggested that if such were the case, the learners might have needed a more explicit and elaborate type of input enhancement than the experimental treatment provided.

Day and Shapson Day and Shapson (1991) carried out their study with grade 7 learners. The experimental treatment consisted of a specially designed curriculum unit focussing on the use of the conditional in hypothetical situations and for making polite requests. The conditional was targeted because previous immersion research had indicated that learners not only have low accuracy rates in their oral production of conditionals, but the frequency of conditionals in the classroom input may be insufficient to allow them to acquire the form.

The materials incorporated a number of different implicit and explicit form-focused instructional techniques that aimed to provide intensified exposure to conditionals, as well as opportunities to use these forms in communicative situations. The treatment also included "group and self-evaluation procedures to encourage students to develop conscious awareness of their language use, particularly with respect to the conditional. In these procedures, one student is designated to be the 'monitor of French' during each meeting and is asked to record

the number of times the conditional is used and each time English is spoken on evaluation forms provided in the student folders” (p. 35). Following Harley (1989), assessment instruments consisted of a cloze test, a written composition, and an oral interview. At the immediate posttest and at the delayed posttest eleven weeks later, the experimental groups’ scores were significantly higher than those of the control groups on the cloze test and on the written composition, but not on the oral interview. It is difficult to tease apart which of the variables (increased exposure, production practice, or metalinguistic awareness) contributed to the gains made by the experimental groups and, as the researchers suggested, the benefits may have derived from the combination of these instructional features, rather than from any one in isolation.

Lyster Lyster’s (1994b) study was designed to build on the Harley and Day and Shapson research in two ways. First, it was carried out with grade 8 learners who were, by virtue of their age, presumed to be more able than learners in lower grades to benefit from linguistic analysis. Second, it examined the potential benefits of form-focused instruction on language functions and sociolinguistic features rather than on strictly syntactic aspects of language. The instructional unit was implemented over a five-week period for an average of 12 hours and was designed to highlight how language varies from formal to informal social contexts. Explicit input enhancement techniques directed learners’ attention to differences among language functions and their appropriate forms in different contexts, and these were reinforced through intensive reading activities. Structural exercises explicitly focused on verb inflections resulting from the use of *tu* and *vous* in formal and informal situations; role plays and letter-writing activities provided opportunities to practice making sociolinguistic

distinctions orally and in writing; and cooperative learning activities required students to discuss their discoveries and negotiate the ways in which their new knowledge could be applied in order to complete structured group projects.

Assessment instruments consisted of a written production test, an oral production test, and a multiple choice test. On all three measures, experimental groups significantly outperformed comparison groups at the immediate posttest, and they maintained this advantage at the delayed posttest four weeks later. The gains in the two production measures were primarily due to an increased ability among the experimental groups to use *vous* in formal situations. The gains in the multiple choice test indicated that the instructed groups were better able than the uninstructed learners to recognize formal and informal contexts and to identify utterances that are appropriate for use in these contexts.

Lyster suggested that the study provides some support for the benefits of sustained explicit instruction when the functional distinction is structurally simple, as in the case of *vous* versus *tu*. Two functional distinctions involving structurally more complex forms were presented implicitly in this study, the use of the conditional as a marker of politeness and the use of polite closings in formal letters. In the first case, there was no significant improvement, and in the second, there was only temporary improvement

Lyster pointed out that no claims can be made regarding how implicit and explicit instruction involving comprehension or production activities contributed to learning as the study was not designed to tease apart these different aspects of the instructional treatment. However, he suggested that, given "the fluid nature of socio-stylistic variation" (p.280), the non-prescriptive approach which aimed to develop the learners' ability to make informed

choices would appear to be more effective in developing sociolinguistic competence than traditional approaches involving rules and drills.

The three French immersion studies reviewed here raise a number of issues that are relevant in the context of this dissertation study. The first issue relates to the salience of the form-focused instruction offered. If the instruction is not sufficiently salient, the result may be an experimental treatment that is more meaning- than form-based (e.g. Harley, 1989; see also Sharwood Smith, 1991). The second issue relates to the interaction of structural complexity and the explicitness of instruction. Lyster (1994b) suggested that the structurally simple pronouns *tu* and *vous* used to make sociolinguistic distinctions were easier for French immersion learners, and therefore more amenable to improvement through instruction, than the grammatically complex phrases used to mark politeness. This interpretation may be reframed in terms of salience in the following way: as structural complexity increases, functional salience decreases. Furthermore, if the *tu/vous* distinction is primarily a lexical one for these learners, and it is structurally and semantically less complex than the *passé composé/imparfait* distinction targeted by Harley (1989) and the conditional mood targeted by Day and Shapson (1991), it may be more appropriate for instruction involving explicit pedagogical rules.¹ This must remain within the realm of speculation, however, as none of the immersion studies specifically manipulated structural, semantic, or functional complexity. However, Lyster's interpretation is supported by the findings of Robinson's (1996) recent laboratory study carried out with adults given implicit and explicit instruction on simple and complex rules, namely that learners explicitly instructed on simple rules outperformed the others in learning those simple rules. The third issue is the importance of

long-term follow-up testing to determine whether or not the gains made by the experimental groups are maintained over time. As Harley's study shows, comparison groups can catch up with experimental groups. Such a finding must be interpreted carefully, however, as a number of explanations are possible. For example, comparison group teachers may not fit the expected pattern of paying little or no attention to form and may even be focusing on the linguistic feature in question (see discussion in Lyster, 1994a; see also Spada and Lightbown, 1993).

2.2.1.2 Intensive ESL

Additional information about the beneficial effects of form-focused instruction within a meaning-based approach comes from a series of investigations conducted in intensive ESL classrooms in grades 5 and 6 in Quebec.

Observational study Lightbown and Spada (1990) carried out an observational study in intact ESL classes taught by four different teachers. The investigators found a relationship between the amount of time teachers devoted to form-focused instruction and learners' accuracy on five linguistic features that were known from previous research to cause difficulties for francophone learners. Two findings are of particular interest: 1) the learners with the lowest accuracy scores on an oral production task were the ones whose teacher was never observed to focus on grammatical aspects of language; 2) the learners who used the most introducer forms with the verb *to be* (as opposed to *to have*) had a teacher who used a particularly salient type of corrective feedback with this linguistic feature.

This finding of an apparent relationship between focus on form and learning outcomes led to a program of classroom-based research which has investigated the effects of different types of form-focused instruction provided within a communicative context: 1) input enhancement involving explicit explanations (positive and negative evidence) and corrective feedback (White, 1991; White, Spada, Lightbown, and Ranta, 1991; Spada and Lightbown, 1993); 2) input enhancement involving intensified exposure to implicit positive evidence (Trahey, 1992, 1996; Trahey and White, 1993). As in the immersion studies, a pretest/posttest/delayed posttest design was implemented.

Explicit input enhancement

Question formation study Question formation was selected for focused instruction in this quasi-experimental study because francophone learners commonly have difficulties with inversion in English yes/no and wh-questions (White, Spada, Lightbown, and Ranta, 1991; Spada and Lightbown, 1993). In French, inversion in questions is optional, and uninverted questions are more frequent and acceptable than they are in English. In addition, questions in French can be formed by using a fronting device (*est-ce que*) followed by subject-verb-object (SVO) order. Spada and Lightbown (1993) hypothesized that learners might consider inversion to be similarly optional in English and see *do*-fronting as an equivalent to *est-ce que*. If such is the case, then form-focused instruction might be expected to help these learners discover the limits on the use of SVO order. Additionally, emphasizing the role of *do* and other auxiliaries was expected to increase the salience of these unstressed forms, which learners might miss in the stream of speech during normal conversation.

The exercises and activities during the two-week instructional period included

explicit instruction and corrective feedback on the placement of subjects, auxiliaries, and wh-pronouns. Findings from the pre- and posttests revealed that instruction on question formation had an immediate and lasting impact on syntactic accuracy. In the paper and pencil tasks, there was a drop in errors involving failure to invert that lasted to the long-term post-test five months after the instructional treatment period had ended. The oral data were analyzed in terms of accuracy and in terms of stage development. Accuracy, or the percentage of well-formed questions, was interpreted in terms of word order. The analysis of stage development was based on Pienemann, Johnston and Brindley's (1988) proposed six-stage sequence. Accuracy increased significantly between the pretest and immediate posttest and continued to increase dramatically up to the second posttest five weeks later. Furthermore, most students advanced at least one stage between the pre- and immediate posttest; some showed continued development at the follow-up test, and most of the others were found not to have back-tracked to an earlier developmental stage when they were tested again five months later.

This pattern of development suggests that learners in this study were at the appropriate stage of developmental readiness to benefit from the instruction (Pienemann, 1984, 1985).² Furthermore, it would seem that since exposure to questions continued, and since opportunities to use them were plentiful during the two months of the intensive course that followed the instructional period, learners had the opportunity to develop additional control over the comprehension and production of wh-questions after the experimental treatment period had ended. However, it is not immediately evident why development continued for some learners during the five-month interval between the second and third

posttests when the intensive classes had ended and learners had no English instruction and, presumably, little outside exposure to questions. Lightbown (1992b) speculated that the combination of instruction plus continuing exposure permitted learners to reach an acquisition threshold where they could continue development "off-line", in the absence of further question input.

Question formation study: new comparison group Due to errors in the data collection procedure for the oral communication task, a second comparison class was chosen as the so-called uninstructed group (Spada and Lightbown, 1993). At the time it was selected, there was no reason to suspect that this class was different in any significant way from the other intensive groups that had been used for observation and treatment over the course of the research project. However, on every administration of the oral task starting with the pre-test, this group out-performed both of the experimental groups as well as the first comparison class.

As the teacher of this class had been asked to tape-record some "typical" samples of her teaching, it was possible to draw some tentative conclusions about the type of instructional input her students were exposed to. She had not been told the specific purpose of the research and thus could not possibly have known that the treatment portion of the study had investigated question development. Yet her lessons were full of questions, and she provided consistent corrective feedback on questions and on other linguistic forms. At one point prior to the investigation, she had evidently "taught" question formation by providing explicit and perhaps metalinguistic information, and continued to refer to this information in her lessons.

This comparison class turned out, then, to be an "instructed group", but the exposure to questions was surely not limited to a two-week period. Instead, this teacher drew the learners' attention to their question errors (and other errors, as well) in a communicative setting over a period of time that probably extended over the entire five-months of the intensive program.

These unexpected findings are important in two respects. First, they point to the probable advantage of "context-embedded focus on form, made available over an extended time period" (Spada and Lightbown, 1993:218) over any type of form-focused instruction that leads to a "structure of the day" type of exposure. Second, they serve as a reminder of the need for regular classroom observation before and while a research project is underway. Teachers within communicative programs vary in their approach to form-focused instruction, and the extent to which they focus on form can also change from one activity to the next. Consequently, interviews conducted outside of class and even past research experiences with particular teachers cannot substitute for an observational component that reveals what these teachers are really doing in the classroom (for discussion regarding differences in orientation to teaching linguistic form among teachers in communicative programs, see Spada, 1987; Allen, Swain, Harley and Cummins, 1990; Lightbown and Spada, 1990).

Adverb placement study Another study carried out in intensive ESL classes was designed to investigate the role of explicit form-focused instruction in teaching the placement of adverbs of frequency and manner (White, 1991). Each experimental group received an hour a day over a two week period of explicit form-focused instruction that included rule explanations and corrective feedback.

For francophone learners of English, the placement of adverbs causes a potential problem because the L1 and L2 rules overlap. Both English and French allow the following two orders:

1. ASVO (adverb-subject-verb-object):
 - a. Often she eats an apple.
 - b. Souvent elle mange une pomme.
2. SVOA (subject-verb-object-adverb):
 - c. She eats an apple often.
 - d. Elle mange une pomme souvent.

However, while French permits an adverb to interrupt a verb and its object, English does not. That is, SVAO order results in a grammatically correct sentence in French while the equivalent word order is grammatically incorrect in English.

3. SVAO (subject-verb-adverb-object)
 - e. *She eats often an apple.
 - f. Elle mange souvent une pomme.

In addition, English permits SAVO order, whereas French does not.

4. SAVO (subject-adverb-verb-object)
 - g. She often eats an apple.
 - h. *Elle souvent mange une pomme.

French L1 learners of English generally assume that SVAO is a possible order in English, and that SAVO is not.

White (1991) suggested that these two faulty hypotheses require different kinds of information to be disconfirmed. Since examples of SAVO order occur naturally in the input, positive evidence is sufficient to cause a change in the IL. In the case of SVAO, however, naturally occurring input provides no useful information, and the learner is unlikely to detect the absence of SVAO sentences. Therefore, in order to bring the IL into line with the L2, the learner needs negative evidence, that is, explicit information that SVAO sentences are not possible in English (see White, 1989, 1991, for discussion).

Findings from the study generally confirmed this prediction. Comparison groups, which were presumed to have received only positive evidence from the regular classroom input, retained SVAO in their interlanguage. Only the groups that received explicit instruction in adverb placement and negative evidence in the form of corrective feedback gave any indication on the first posttest of knowing that SVAO order is impossible in English. They retained what they had learned for five weeks. However, by the follow-up posttest one year later, these learners had lost most of what they had learned about adverb placement. Thus it appears that negative evidence, while effective in the short-term, did not have lasting effects on the IL development of these learners.

It was not possible to draw firm conclusions from this study regarding the role of either positive or negative evidence. First, unlike information questions, adverbs were almost never used in any of the classes. Thus it would appear that only the adverb groups received any exposure at all to adverbs, and this exposure took place only during the two-week

treatment period. Second, negative evidence was also limited to the treatment period because there was no continuing corrective feedback provided on adverb placement. In fact, it is unlikely that adverbs were ever produced by these learners outside the treatment period. As Lightbown (1992b) pointed out, this isolated instruction was not dissimilar in some ways to the "focus on forms" type of instruction that produced temporary results in earlier classroom SLA research (e.g. Lightbown, Spada and Wallace, 1980). White (1991) suggested that a longer period of exposure to negative evidence, combined with some reenforcing positive and negative evidence during the following months, might have resulted in more lasting effects for the form-focused instruction.

Implicit input enhancement

Adverb placement study Trahey designed a second adverb study to determine whether positive evidence alone is sufficient to lead francophone students to reject SVAO order (Trahey, 1992, 1996; Trahey and White, 1993). In this study, experimental groups were exposed to a "flood" of positive evidence in the form of activities that implicitly taught the meanings and uses of adverbs of frequency and manner. These adverbs appeared in all possible English orders, particularly SAVO.³ Teachers were asked not to provide explicit information about adverb placement rules or to correct adverb placement errors.

Analysis of the test results immediately after the two-week adverb flood and again three weeks later confirmed the hypothesis that, on the basis of positive evidence alone, these students would learn SAVO, the order that English allows, but that they would still use SVAO, the order that is ungrammatical in English but grammatical in the L1. A follow-up

posttest one year later revealed that the students knowledge of adverb placement had not changed (Trahey, 1992, 1996).

Given the rarity of adverbs in the regular classroom input, Trahey (1992) suggested that these findings point to the need for a study investigating an adverb input flood that extends over a longer period of time. However, it is not clear that more exposure to the target forms would have led to different results. In the first place, errors in adverb placement do not affect meaning and do not interfere with communication. Thus it is possible that students were not motivated by communication breakdowns to pay attention to differences between the L1 and L2 rules. Trahey also suggested that, given the semantic "unimportance" of these differences and the absence of the forms from daily communicative activities in the classroom, learners may have needed to have their attention drawn more saliently and more explicitly to the fact that SVAO order is not allowed in English. The results of the explicit study suggest, however, that this would only be successful if exposure to adverbs is available in the classroom input on a sustained basis.

In summary, there is evidence from classroom-based research carried out with children that teachers may need to judiciously supplement naturally occurring positive evidence with focused input for a number of reasons. The first three reasons were suggested by White, Spada, Lightbown, and Ranta (1991): 1) to draw attention to properties of the input that might otherwise be missed (e.g. *do*-support in the case of questions and negatives); 2) to help accelerate the rate at which learners can "unlearn" incorrect analyses of the L2 by supplying negative evidence about forms not possible in the target language (this may be particularly important when the classroom input consists largely of the IL of other same-L1

learners whose hypotheses about the target language are similarly incorrect); 3) to disconfirm hypotheses the learner makes on the basis of perceived similarities to the L1 that cannot be disconfirmed on the basis of positive evidence alone (this occurs when L1 and L2 rules overlap and the rule hypothesized on the basis of the L1 is more general than the L2 rule). An additional reason was suggested by Day and Shapson (1991) and Lyster (1994b): 4) to provide evidence regarding forms or functional distinctions that do not normally occur in classroom discourse, but which are frequent outside of instructional contexts.

The immersion and intensive studies also suggest that instructional treatment periods may need to be intensified or lengthened. Learners may need more exposure to input containing the target linguistic forms before IL change becomes measurable, or before conclusions about the effectiveness of instruction can be drawn. The studies also show that delayed posttests are crucial to the interpretation of findings from classroom-based L2 research.

2.2.2 Studies with adults

2.2.2.1 Visual enhancement

Doughty Doughty's (1988,1991) study investigated the effects of two types of comprehension-based focus-on-form instruction on the rate of acquisition of a well-researched linguistic feature, English relativization. On the basis of previous findings (e.g. Gass, 1982; Eckmann, Bell and Nelson, 1988; Pavesi, 1986), Doughty predicted that instruction on the formation of object of preposition relative clauses would generalize to the supposedly easier relative clauses higher on Keenan and Comrie's (1977) proposed universal

accessibility hierarchy. This hierarchy, derived from crosslinguistic comparisons, demonstrates an implicational relationship among the noun phrases that are accessible to relativation and, by extension, a presumed order of difficulty.

Adult learners of mixed L1s were randomly assigned to two experimental groups and one control group. Subjects went to the computer lab to work on lessons consisting of texts in which object of preposition relative clauses were embedded in every sentence. The treatments were as follows. 1) The Meaning Oriented Group (MOG) was exposed to an implicit type of input manipulation involving textual enhancement with no appeal to metalinguistic knowledge. This treatment consisted of expansion and clarification of each sentence using screen presentation features of colour differential highlighting and capitalization. These visual techniques were designed to draw students' attention to relative clauses in a way that would make the relationship between the relative pronoun and head noun apparent. An explanation of the propositional content of each sentence added redundancy and aimed to clarify the meaning of the relative clause. 2) The Rule Oriented Group (ROG) received instruction aimed at demonstrating the process of relativization. This treatment included metalinguistic rule statements and perceptually salient on-screen animation and manipulation of the sentences that explicitly presented the relationship between the major elements of each relative clause, but no attempt was made to clarify the meanings of the sentences. 3) To ensure that exposure to input containing relative clauses was constant across groups, the control group read the unenhanced texts, sentence by sentence, as they appeared on the computer screen.

All subjects were posttested immediately after the end of the ten-day treatment

period. The results showed an advantage for the MOG group with respect to comprehension of texts containing relative clauses. Both experimental groups showed a strong effect for instruction with respect to relativization. The control group also showed some gains in relativization ability, which Doughty suggested was due to exposure, but the increase was significantly smaller than that of either experimental group.

Doughty attributed the findings to the salience of the visual cues. Both treatment groups improved equivalently in relativization, and significantly more than the control group. Since the MOG group was offered no metalinguistic explanation, she concluded that the results were due to the fact that the learners' attention was deliberately directed to the relative pronoun and head noun in each sentence. Learners in the MOG group were required to infer this relationship whereas learners in the ROG group were explicitly told and shown the relationship. Although Doughty predicted that the effects of MOG-type instruction would be permanent, whereas the benefits of ROG would be temporary, her study cannot address the long-term effects since it does not include a follow-up posttest.

Other design features limit the generalizability of the study: the small number of subjects (6 or 7 per group) restricted the statistical analyses; the random assignment to groups resulted in five out of six same-L1 speakers in the control group; the high pretest scores on relativization obtained by the control group as compared to the two treatment groups make it problematic to interpret their lower gain scores on relativization as a result of the absence of instruction. However, the highly controlled instructional procedures made the findings sufficiently interesting to warrant further research into the effects of visual input enhancement, specifically the role of salience and redundancy, on the acquisition of other

linguistic features.

Alanen Alanen's (1995) laboratory study, which was carried out with adult beginners learning semi-artificial Finnish, investigated the effects of combining visual enhancement with explicit instruction. Alanen hypothesized that typographical enhancement (italics) in combination with metalinguistic rules presented before the learning phase would be more effective in helping learners pay attention to target features in the input than exposure to either typographical enhancement or rules separately. During two study sessions, four groups of learners were given short passages in Finnish to read for comprehension. Each group received one of the following instructional treatments: 1) typographical enhancement, 2) rule statements, 3) a combination of rules plus typographical enhancement, or 4) exposure to unenhanced input. She labelled these groups Enhance, Rule, Rule & Enhance, and Control, respectively. The group that received both typographical enhancement and explicit rule-based instruction was predicted to outperform the others.

Acquisition of the target features (two locative suffixes and four types of consonant alternation) was measured by a sentence completion task immediately after instruction. Performance was assumed to depend on the extent to which learners had noticed the enhanced items. In addition, think aloud protocols recorded during the study sessions were analyzed to determine whether the type of instruction affected the learners' focus of attention, and recordings made during the completion of a grammaticality judgement task were also analyzed to find out about the explicit knowledge learners had acquired from the input.

Learners in all four groups progressed, and no clear-cut differences in accuracy emerged. However, there were differences in the types of overgeneralization errors that were

made. While learners in the meaning-based groups (Control and Enhance) overgeneralized the form that was the most frequent in the input, learners in the rule-based groups (Rule and Rule & Enhance) overgeneralized the form which would be predicted by the L1 rule. This was particularly interesting in light of the fact that the L1/L2 difference was never explicitly stated during instruction. Furthermore, there was a clear effect for treatment on the learners' ability to formulate explicit rules. That is, learners in the two rule-based groups were fairly accurate in restating the rules although they failed to fully apply them in production, while learners in the meaning-based groups tended to form rules based on incorrect assumptions.

The think-aloud protocols revealed that not all of the learners in the two groups which had been exposed to typographical enhancement had considered a reason for the use of italics. This led Alanen to conclude that typographical enhancement alone may not have been sufficiently salient to result in efficient retrieval later during the sentence completion task. Finally, a relationship between noticing and acquisition was suggested by the finding that in all four groups, learners who showed evidence of having acquired a particular target structure were the ones who mentioned it in their think-alouds. The indication that learners in the meaning-based groups also paid attention to form is a reminder that learners have their own agenda during instruction and that learning outcomes (and research results) may be determined by the characteristics and background factors of individual learners.

Although Alanen's study provides a number of insights into the effects of typographical input enhancement on L2 acquisition, it is important to keep in mind the limitations of this investigation: the number of subjects was small (36); exposure to the target language was brief (two learning sessions) and not sustained; only one instrument was used

to measure acquisition of the target linguistic features; and, like Doughty's study, there were no delayed posttests to measure the long-term effects of the instruction.

2.2.2.2 Input processing

VanPatten has carried out a series of studies in university-level Spanish L2 classrooms to develop an alternative to traditional grammar instruction (VanPatten, 1990, 1993; VanPatten and Cadierno, 1993; VanPatten and Sanz, 1995). The research is based on a model of L2 acquisition and use which recognizes three different sets of processes: 1) input processes involved in the conversion of input to intake; 2) processes of accommodation and restructuring through which intake is incorporated into the developing interlanguage system; 3) processes such as retrieval and monitoring which are involved in accessing the developing system to create output.

According to VanPatten (1993), traditional grammar instruction and production practice develop the third set of processes to help the learner access the IL system. This is "akin to putting the cart before the horse when it comes to acquisition; the learner is asked to produce when the developing system has not yet had the relevant intake data" (p. 436). In his view, explicit grammar instruction should help the learner build a cognitive representation of the L2 (see Ellis, 1993 for a similar view). This can be accomplished through practice activities that explicitly focus learners' attention on grammatical features in the input that they might otherwise misinterpret or miss altogether. VanPatten calls this type of instruction *processing instruction*, and its goal is to encourage correct form-meaning mappings that

result in better intake. The structured input used in processing instruction is "purposefully 'prepared' and 'manipulated' to highlight particular grammatical features" (1993:438).

In a series of studies employing a pretest/posttest design with three posttests, VanPatten compared processing instruction, traditional instruction, and no instruction in the acquisition of two linguistic features by Spanish L2 learners: preverbal object pronouns (syntax) and preterit verbs (morphology) (VanPatten, 1993; VanPatten and Cadierno, 1993; VanPatten and Sanz, 1995). In all the studies, learners receiving processing instruction significantly outperformed learners receiving traditional or no instruction on comprehension tests involving the target forms. This is not surprising as the tests were biased for the processing group. What is noteworthy, however, is that learners receiving processing instruction performed as well as learners receiving traditional instruction on production tests, which were biased for the traditional group. Furthermore, the advantage for processing instruction was still significant at the third posttest one month following the treatment.

Overall, these studies provide evidence that explicit grammar instruction combined with instruction that focuses on altering input processing strategies leads to changes in knowledge, and that this knowledge is available for use in different kinds of tasks.

2.2.2.3 Garden path studies

Tomasello and Herron (1988, 1989) carried out several classroom experiments in which learners were induced to generate their own negative evidence, with a little help from the teacher (Sharwood Smith, 1993:177). The subjects were university students in structure-based French as a foreign language classes, and the research involved two types of

overgeneralization errors that are commonly made by these learners: eight errors involving exceptions to a grammatical pattern, and eight language transfer errors from English to French.

The researchers used a counterbalanced design with each structure taught two ways in two classes at two-week intervals by the teacher-researcher during regular class time. In each class, the teacher introduced the regular form using oral pattern drills written on the blackboard with blanks or with translation. In the control condition the teacher illustrated the exception orally and on the board, giving the correct form and explaining the rule. In the experimental, or Garden Path condition, the teacher led the students to overgeneralize the pattern and produce an error. She wrote the error on the board, corrected it orally, crossed it out, and wrote the correct form above it on the board. Three fill-in the blank and translation tests for each structure were given 1-4 days, 4-11 days, and 6-23 days after instruction. A comparison of Garden Path and control conditions across all structures showed an advantage for the Garden Path condition for each test.

A number of explanations have been offered for the results. Tomasello and Herron attributed the superior performance in the experimental condition to the subjects' active engagement in hypothesis testing and problem solving which helped learners "focus their attention on the relevant features of the structures" (1988: 917). In Schmidt and Frota's (1986) terms, learners were forced by the instructional treatment to notice the gap between their output and the target language forms.

Not only was the learners' attention focused on problem solving, it was also focused on the blackboard, where the crossing out of errors was visually salient. Salience was further

increased by the fact that the technique was no doubt surprising to students unaccustomed to it, and the novelty may also help to account for the results (J. Upshur, personal communication; a similar point was also made in Vigil and Oller, 1976, and Oller, 1988). Lightbown and Spada (1990) noted, as well, that timing may have been a critical factor in this research. In the Garden Path experiments, negative evidence and input enhancement were provided at the very moment when learners might have been engaged in testing their hypotheses.

There are a number of problems with Tomasello and Herron's research design (see Beck and Eubank, 1991). First, there were no follow-up posttests to verify that the results were not temporary. Second, as only one type of task was used to measure the results, it is not clear that the results would generalize from writing to other types of performance. Third, as Herron was both the teacher and the researcher, there is the possibility that experimenter expectancy influenced the results. And finally, as the technique involves pattern drilling, and the tasks are decontextualized, its application to communicative language teaching contexts is not immediately evident although one can imagine other ways of leading students "down the garden path". Despite these limitations, however, the study adds to the research literature suggesting an important role for pedagogical techniques which explicitly and saliently direct learners' attention to problematic features of the target language.

2.2.2.4 Implicit/Explicit feedback

Carroll and Swain (1993) continued the line of investigation begun by Tomasello and Herron to find out whether adult L2 learners can benefit from negative feedback on

errors. In their laboratory study involving L1 Spanish learners of ESL, they compared the effectiveness of explicit and implicit negative feedback on overgeneralization errors involving a complex linguistic feature, dative alternation:

Mary found a job for Antonio.

Mary found Antonio a job.

The students pronounced a new word for their teacher.

*The students pronounced their teacher a new word.

Explicit negative feedback consisted of an overt oral statement that a learner's output was not part of the target language. Implicit negative feedback included corrections, confirmation checks, failures to understand, and requests for clarification, all of which required learners to infer that their utterance was wrong or had caused the interlocutor's comprehension problems. Carroll and Swain noted that each type of feedback has advantages and disadvantages. While explicit feedback that clearly states why an utterance is wrong might provide more useable information than an indirect statement, such feedback poses potential problems of interpretation for the learner, who may not be able to understand the grammatical descriptions and explanations offered. On the other hand, while the need for metalanguage is eliminated in the case of implicit feedback, the learner is left with no clear indication of the source of the error and must infer from the context what the problem is.

Subjects in the study were assigned to one of four treatment groups differing in the type of response made to their errors with dative alternation. During training sessions, they saw and heard stimuli with prepositional phrases and were asked to guess the alternating forms. Each group was given a different type of feedback to their incorrect responses: 1)

explicit hypothesis rejection - subjects were told they were wrong and given an explanation; 2) explicit utterance rejection - subjects were told they were wrong but were not corrected; 3) modelling plus implicit negative feedback - subjects were given a reformulated correct response; 4) indirect metalinguistic feedback - subjects were asked if they were sure that their response was correct. A comparison group received no feedback of any type.

The major finding was that all four explicit and implicit negative feedback groups significantly outperformed the comparison group on a grammaticality judgement task at the immediate posstest and at the delayed posttest one week later. Furthermore, the group receiving the most explicit type of negative feedback outperformed the three other feedback groups at the delayed posttest.

While it is tempting to conclude that explicit feedback is the most effective in the long run, the study must be interpreted cautiously since the time between the two posttests was short and the testing procedure involved only one type of performance task. Furthermore, as Carroll and Swain pointed out, the study did not control for time-on-task, and the fact that feedback to Group 1 took more time than that given to the other groups may account for the superior results shown by Group 1. The researchers also noted that the salience of all four types of feedback may account for their effectiveness relative to the comparison group. Since this study took place in a laboratory, it is also limited in terms of how much it can tell us about corrective feedback in classroom settings. Despite these limitations, the study suggests that while adult learners can benefit from both explicit and implicit negative feedback in learning abstract linguistic generalizations, the benefits of explicit feedback are greater.

2.3 Chapter summary

Sharwood Smith's (1981, 1991) suggestion that input enhancement can be categorized along the dimensions of explicitness and elaboration, as well as in terms of the type of evidence it includes, has provided a framework for investigating the salience of specific linguistic features in the input available to L2 learners. The application of these categories permits a principled comparison among pedagogical intervention studies carried out in classrooms and laboratory settings with child and adult learners of several different L2s. Taken as a whole, these studies indicate that form-focused instruction can have a beneficial effect on IL development when this instruction is integrated within lessons whose primary focus is meaning. However, several factors appear to play an important role in the effectiveness of this instruction. These include the structural and semantic complexity of the target forms, their frequency and salience in the input, L1/L2 differences, the duration of the focused instruction, and the timing of this instruction with respect to the learners' developmental readiness to receive it. The necessity for delayed follow-up tests was highlighted in several of the studies.

Chapter 3 reviews the theoretical background and empirical research related to the acquisition of the target features of this study, third person singular possessive determiners. It then presents the research questions and the hypotheses that were tested.

Endnotes for Chapter 2

1. In this dissertation, following Robinson (1996), a pedagogical rule is defined as a “simplified version of linguistic rules that necessarily fall short of exhaustive treatment” (p.32).
2. It is important to note that this study was not designed to directly test Pienemann’s “teachability hypothesis”. A study recently completed by Spada and Lightbown (in preparation) investigated this by providing a treatment which specifically targeted particular stages of question development in relation to the learners’ developmental readiness.
3. As in the first study, adverbs were used as much as possible in sentences in the simple present since English and French do not differ with respect to the placement of adverbs with auxiliaries.

Chapter 3

Target Features, Research Questions and Hypotheses

3.0 Introduction

The selection of third person singular possessive determiners (PDs) as the target features for this input enhancement study was motivated by the following considerations: 1) PDs have been examined within the context of ESL classes and are known to present particular difficulties for francophone learners of English (Zobl, 1985, Martens, 1988; Lightbown and Spada, 1990; 2) no study has investigated enhancing PDs in extended written texts; 3) prior theoretical and empirical work has provided a framework for the analysis of developmental aspects of PDs (Zobl, 1984, 1985; Lightbown and Spada, 1990).

Section 3.1 of this chapter focuses on the theoretical issues and empirical evidence related to the L2 acquisition of pronouns in general, and third person singular possessive determiners, in particular. Section 3.2 outlines the research questions addressed in the study, together with the hypotheses that were tested.

3.1 The acquisition of pronouns and possessive determiners

3.1.1 Theoretical issues

The systematic acquisition of personal and possessive pronouns reflects the complexity of the morphological, syntactic, semantic, and referential information carried by pronominal forms. Research carried out in naturalistic as well as classroom contexts shows

that learners do not acquire pronouns one after the other in sequence, but rather pass through a series of stages as they attempt to make sense of the personal and possessive pronoun subsystems (e.g. Felix, 1981; Zobl, 1983, 1984, 1985). Along the way, their use of these forms is characterized by variability, deletions, ungrammatical substitutions, and overgeneralizations.

Table 3.1

Personal, reflexive, possessive pronouns, from Quirk, Greenbaum, Leech & Svartvik, 1972

			personal pronouns		reflexive pronouns	possessive pronouns	
			subject	object		determiner	nominal
1 st person	singular		I	me	myself	my	mine
	plural		we	us	ourselves	our	ours
2 nd person	singular		you		yourself	your	yours
	plural				yourselves		
3 rd person	sing.	masculine	he	him	himself	his	
		Feminine	she	her	herself	her	hers
		neutral	it		itself	its	
	plural		they	them	themselves	their	theirs

Every personal and possessive pronoun is marked for case, number, and person, and some are also marked for gender. Table 3.1 presents the English pronoun system and shows the morphological form and function of each. It can be seen from the table that all personal and possessive pronouns are marked for person (first, second, third). First and third person

pronouns are also marked for number (singular, plural); and third person singular pronouns are additionally marked for gender (masculine, feminine). Thus, it is apparent that the third person singular forms which were investigated in this study are the ones that carry the most semantic information.

L2 learners have an understanding of conversational roles used to establish person and number and the specificity of reference since anaphoric reference (used in its broad sense here to include anaphora and cataphora) exists in all natural languages (Gundel and Tarone, 1983). Languages differ in the way in which anaphora rules are applied, however. Of particular importance to the present research is the difference between the English and French rules for marking gender on third person singular PDs.

Francophone learners of English find *his* and *her* to be particularly difficult and often continue to have problems with these forms after many years of ESL instruction. The persistence of their problems may be due, at least in part, to differences between the English and French rules for establishing the gender of third person singular PDs. English uses an agreement rule referring to the natural gender of the possessor: the masculine form *his* is used when the possessor is masculine; the feminine form *her* is used when the possessor is feminine. French, on the other hand, requires agreement between the grammatical gender of the noun naming the possessed entity (person or thing) and the PD: the masculine form *son* is used when the possessed noun is masculine; the feminine forms *sa* is used when the possessed noun is feminine.¹

The English and French agreement rules for PDs are illustrated in (1) and (2) below, where capital letters (M and F) represent the gender required in English, and lower case letters (m and f) represent the gender required in French. All the examples involve kinship terms (e.g. mother, father), which have natural gender, as well as grammatical gender in French.

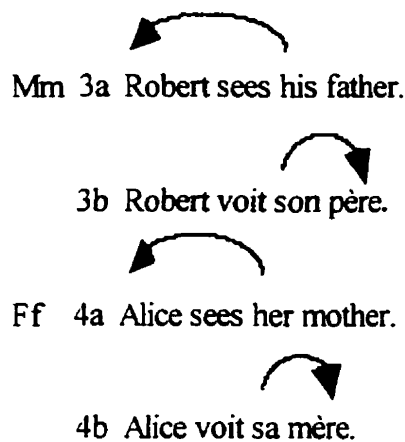
Mf 1a Robert sees his mother.

1b Robert voit sa mère.

Fm 2a Alice sees her father.

2b Alice voit son père.

When the natural gender of the possessor and the grammatical/natural gender of the possessed entity are different, as in the sentences above, the difference between the English and French rules is more transparent than when the natural gender of the possessor and possessed entity are the same. When they are the same, it is not possible to know whether the learner is using the L1 French rule or the L2 English rule since grammatically correct English PDs would be produced in either case, as can be seen in (3) and (4)..



English and French also differ with respect to possession of body parts. In French, body parts are normally referred to using the definite article, and possession is marked with a reflexive pronoun. In English, possession of body parts is normally indicated with a possessive form. Compare the English and French sentences in (5):

- 5a Alice is washing *her* hair. (feminine PD)
- 5b Alice *se* lave *les* cheveux. (feminine subject; third person singular reflexive pronoun; definite article)

Note, however, that in English, the definite article is used with possessed body parts in prepositional phrases (e.g. I took her by the hand; he was hit on the head by a baseball) (Quirk et al., 1972). Although input containing the definite article with possessed body parts may be infrequent, particularly in the classroom, it would seem that any input at all of this type could serve to reinforce the French rule.

3.1.2 Empirical evidence

It is not surprising, considering the complexities of the personal and possessive pronoun systems, that L2 learners need a considerable amount of time to make sense of them.

Studies show that learners begin by avoiding pronouns and using nouns (Felix, 1981) or the definite determiner (Zobl, 1985; Martens, 1988) instead. Once they begin to use pronouns and PDs, they may substitute one for another in apparently free variation (Nicholas, 1986), or they may overgeneralize one all-purpose pronoun to all contexts (Butterworth, 1972; Fillmore, 1976). Avoidance, seemingly random substitution and overgeneralization of a single form indicate a lack of control over case, number, person, and gender, the feature markings that are obligatory in the target language. The studies that are discussed below shed light on the process by which L2 learners gain this control.

Felix (Felix, 1981; Felix and Hahn, 1985) examined German high school ESL learners' ungrammatical substitutions during audiolingual lessons extending over an entire school year.² Felix and Hahn described the process by which the learners in their study acquired the semantic features of personal pronouns and PDs in the following way. The first feature to be sorted out was case. Learners initially made the broad distinction between possessives, on the one hand, and subjects and objects, on the other. They stopped substituting personal pronouns for PDs, and vice versa, before they differentiated between subject and object case. Once they were able to differentiate among the three pronoun cases, learners began to make distinctions of number, gradually reducing substitutions between the singular and plural forms. At this point, they continued to make errors involving person and

gender, often relying on *you* and *your* as all-purpose pronouns. The next semantic feature to be acquired was person, which involves making distinctions among three categories. The final feature to be acquired was gender, which in English involves two categories that are applied solely to third person singular pronominal forms. Felix and Hahn felt confident that their data indicated a "strong underlying systematicity" in the way in which input is processed (1985:233) and that the order of error rates/difficulty revealed the acquisition sequence.³

Felix (1981) argued that a theory of L1 interference has little to contribute to our understanding of how pronoun development proceeds. The striking fact about the pronoun errors made by the learners in his study

is that the German pronominal system is, with few exceptions, practically identical to the English one. Apart from a small number of gender and number distinctions the students could substantially rely on their L1 knowledge to master the English system. However, they evidently choose not to do so. Ignoring virtually everything their L1 has to offer them in terms of interlingual assistance, they approach the English pronominal system without any L1 bias. ... For both tutored and untutored learners the system of personal and possessive pronouns apparently represents a considerable challenge which can only be successfully met over a period of time. The students' abilities at this early developmental point are clearly insufficient to cope with a system of such complexity. Even though the use of pronouns was practised every day, a gradual and systematic process was necessary to internalize the lexical and semantic features involved in this domain (p. 106-7).

Zobl's theoretical and empirical work provides counterevidence and suggests that L1 influence may play a much stronger role in pronoun development than Felix proposed. Zobl (1983, 1984, 1985) carried out three studies in which he manipulated the input to investigate the factors that contributed to the acquisition of the PDs *his* and *her* by classroom-instructed francophone adults learning ESL. These studies, which he referred to as Experiments 1, 2, and 3 (E 1, 2, and 3), will be discussed in some detail since the findings

relate directly to this research.

Having noticed in informal interviews that beginning and low intermediate French L1 university students demonstrated "considerable variability and difficulty in their use of the third person singular PD rule for the application of *his* and *her*", Zobl investigated the extent to which implicational relationships of markedness, as well as L1 influence, affected the observed variability (1984:164). He predicted that in the acquisition of the English agreement rule, beginning learners would not transfer grammatical gender from the L1, but where natural and grammatical gender coincide, they would retain natural gender marking of the possessed object for some time with kinship terms (e.g. mother, father). The first part of the prediction was based on Kellerman's (1978a,b) argument that learners expect idiosyncratic and specific aspects of their L1 to be unique; one such aspect is grammatical gender, which is arbitrary and devoid of semantic motivation. Natural gender, on the other hand, is both meaningful and grounded in perception, and Zobl expected L1 influence to be evident with possessed kinship terms.

In Zobl's first (cross-sectional) study (E1), beginner and low-intermediate learners were shown a set of pictures.⁴ For each picture, the interviewer orally asked a question designed to elicit a response containing *his* or *her* in one of three semantic domains: possessed inanimate entities, body parts, or kinship terms. Learners were told to write an answer to each question "spontaneously" within 20-25 seconds. Zobl found that control of the PD rule appears to be strongly influenced by the semantic domain to which the possessed entity belongs. His findings can be summarized as follows: 1) learners marked body parts

and kinship terms for gender more frequently than inanimate entities; 2) however, when gender was marked, learners were less accurate in the kinship domain than in the body parts and inanimate domains.

Zobl proposed that when the body parts and inanimate domains were combined, the order of difficulty (human domain > nonhuman domain) reflected a contrast in markedness between human-nonhuman that could be stated as an implicational relationship for the acquisition of the mature PD forms: human $\supset$ nonhuman (see discussion in Zobl, 1985).

Zobl also compared the error rates within the kinship domain in terms of the gender of the PD required in English and in the translationally equivalent French form. Recall from Section 3.1.1 that there are four possible English-French gender combinations, where M=*his*, F=*her*, m=*son*, and f=*sa*. Zobl observed the following order of difficulty, presented from most to least difficult: Fm > Ff > Mf > Mm. This order, which suggests that the feminine PD *her* is more difficult than the masculine *his*, reflects the tendency of learners in Zobl's study to overgeneralize the masculine form more than the feminine form. The finding is consistent with other research which has documented overgeneralization of masculine pronoun forms to feminine contexts (e.g. Tarone, Frauenfelder and Selinker, 1976; Adiv, 1980 for French immersion students; Martens, 1988, for ESL). Zobl (1985) argued that feminine forms are marked with respect to masculine forms. Accordingly, he proposed that this order represented a second implicational relationship: feminine $\supset$ masculine.⁵

The order also suggests that when the gender of the possessor coincides with the natural gender of the kinship entity (Mm and Ff), learners are more accurate in their use of

his and *her* than when the genders are different (Mf and Fm). Zobl noted that learners with no knowledge of the agreement rule can nonetheless appear to know it when they apply the French rule in such cases.

On the basis of the cross-sectional data, Zobl (1984:177) proposed that francophone learners broke down the mature English agreement rule for gender marking into subrules which they applied in the following sequence, moving from the most general to the most specific:

1. definite article
2. person/possessive marking, e.g. *your*
3. third person marking, e.g. *his* overgeneralized
4. French rule
5. mature English rule

Zobl suggested that learners applied each of the subrules systematically, first in the nonhuman domain and later in the human domain. This led to variability of rule application across domains. Within each domain, overgeneralization of the masculine form led to additional variability. Furthermore, individual learners differed in the extent to which they applied the French rule, as evidenced by correct performance in the human domain in Mm and Ff contexts, and incorrect performance in Mf and Fm contexts. For some learners, the French rule appeared to be particularly strong, and Zobl hypothesized that before development could proceed, this rule would need to be restructured. In Zobl's terms, restructuring consists of decomplexification followed by reconstruction. That is, learners

would simplify the rule by dropping the gender distinction and overgeneralizing one form, predictably the masculine, in the human domain and perhaps also in the nonhuman domain. Only later could they reconstruct the rule according to the features that make up the target language agreement rule (see McLaughlin, 1990b, and Lightbown, 1985b, for a different view of restructuring in L2; see Karmiloff-Smith, 1986, for L1). Zobl found that learners also differed in the extent to which they applied the French rule requiring the definite article with body parts. Some learners held onto this L1 rule after they had acquired control of the mature agreement rule with inanimate and kinship nouns.

Zobl (1985) carried out two pedagogical intervention studies (E2 and E3) building on his findings in the E1 study. Since no appreciable differences had been found between error rates for body parts and inanimate entities, these two domains were collapsed for E2 and E3 to become the nonhuman domain, which was opposed to the human domain comprising kinship terms. In these two pedagogical studies (E3 is essentially a replication of E2), Zobl investigated the ways in which learners make use of implicational relationships implicit in the two scales of difficulty he had found (namely *her* > *his* and *human* > *nonhuman*) to acquire control of the agreement rule. Low-level francophone adult ESL learners were randomly assigned to one of two treatment groups, the human data group and the nonhuman data group. Each group was pretested and posttested following the procedure described above for E1. Immediately following the pretest, each group had a concentrated 15-minute exposure session in which participants were shown a new set of pictures. The researcher asked the group questions, which individual subjects answered orally. The questions asked

of the human group elicited only *his* and *her* responses marking possession of human entities, and the questions asked of the nonhuman group elicited *his* and *her* responses marking possession of inanimate entities and body parts. The treatment involved no explicit instruction or rule explanation, and errors were corrected by repetition or paraphrase. Thus the PD input consisted of the responses of the group members and the examples and corrections made by the researcher.

Zobl hypothesized that since knowledge of the PD agreement rule with human entities implies knowledge of the rule with nonhuman entities, learners exposed to input data from the human domain would project any knowledge benefits to the nonhuman domain as well. He also hypothesized that the converse would not hold since knowledge of the rule with nonhuman entities does not imply knowledge with human entities.

Zobl claimed that the findings largely supported his hypothesis of projection via markedness implications. When the human data groups were compared to the nonhuman data groups at the E2 and E3 posttests, the human data groups were shown to have a greater increase in the use of gender-marked possessive forms overall, a greater decrease in the use of definite articles, and less avoidance of PDs. On the other hand, the nonhuman data groups had a larger incidence of rule simplification (E2) and more stability of non-target subrules (E3) than the human data groups at the posttests. Zobl concluded that unmarked input data was less effective than marked data in encouraging learners to reorganize their preexposure rules. Furthermore, "markedness conditions in the input data may well provide the crucial and necessary shortcuts which make possible the ultimate states of knowledge in spite of the

limitations of the input data from an experiential point of view" (1985:344).

An alternative explanation for Zobl's findings involves salience. The reasoning is as follows. When learners in the human data group tried to transfer the L1 rule with possessed human entities, they likely looked for examples in the input to confirm their hypothesis. However, the presence of numerous Mf and Fm forms disconfirmed their L1=L2 prediction. The novelty of these unanticipated forms may have increased their salience and increased the likelihood that learners would pay attention to them. Furthermore, the presence of Mm and Ff forms in the instructional input may have provided a contrast that helped learners notice the gap between their IL rule and the English rule and bring the IL rule closer to the target language norm. Finally, it follows that learners would have been able to generalize this rule to other semantic domains.

Despite the limitations in Zobl's research (i.e. brevity of exposure to contrasting features and the absence of follow-up testing), his findings and interpretations of them suggest a useful direction for further research. Specifically, if kin-different PD contexts are inherently salient to francophone ESL learners and if they carry information that facilitates acquisition, then further enhancement through implicit or explicit pedagogical techniques should be even more beneficial for acquisition.

Martens While Zobl's research can be criticized on several grounds, namely the brief exposure period (15 minutes), his use of only one measure (written answers to oral questions about a set of pictures), and the absence of a delayed posttest, it points a direction for future work. The studies carried out by Martens (1988) and Lightbown and Spada (1990) build on

Zobl's empirical findings and extend his work to the acquisition of PDs by francophone children. Martens investigated what learners know compared to what they do regarding the PDs *his* and *her*. During classroom observations, Martens had noted numerous PD gender errors in the oral performance of grade 5 and 6 francophone ESL students in Quebec. She was particularly interested in two issues: first, the errors seemed to indicate that learners were not simply following the French rules for gender marking; second, despite Zobl's findings, it seemed "counterintuitive" to her that "students did not, in fact, know and understand the appropriate usage" (1988:10) even though they did not demonstrate this knowledge reliably in oral performance. She hypothesized that students would be more accurate in making gender distinctions between *his* and *her* when they were engaged in a task focusing on grammatical form than they would be in a task focusing on oral communication.

The participants in Martens' study were four groups of francophone intensive ESL students in grades 5 and 6. She used three measures: 1) an oral production task in the form of a split-screen picture differences game known as the Picture Card Game (PCG) played by the investigator and each student individually; this was administered to one ESL intensive class; 2) a grammaticality judgement (GJ) task in the form of a story about a boy's birthday party with "mistakes" which the students were asked to identify; this was administered to four classes; 3) an oral interview that probed the judgements of a subset of the students who had completed the GJ task.

Martens designed the GJ passage and her analysis procedures for the PCG and the GJ tasks according to Zobl's claims regarding markedness. She proposed that if markedness

were making a strong contribution to the learners' developing IL rule system for PDs, we would expect to find the following developmental sequence (- = unmarked; + = marked):

Masculine Nonhuman (-/-)

Masculine Human (-/+) Feminine Nonhuman (+/-)⁶

Feminine Human (+/+)

In the GJ task, *his* and *her* were used correctly six times each and incorrectly 10 times each. Correct and incorrect forms were equally divided according to the features nonhuman/human and nearly balanced for possessor-possessioned gender agreement (Mf, Fm, Mm, and Ff). Body parts were included with inanimate objects in the nonhuman category.

Oral data: Analyses of the PCG were carried out according to the features person, case and gender for each subject who used two or more tokens of the personal pronoun and PD forms.⁷ There were four coding categories: 1) correct (when used, the feature in question was correct); 2) overuse (one pronoun was overgeneralized); 3) substitution (another pronoun or determiner, usually the definite article, was used in its place); 4) never correct (the subject used a form, but never correctly). The findings were as follows:

- Substitutions involving **person** were rare. All of the person errors were made by two students (out of 30) who consistently substituted *your* for *his* and *her* and by three others who substituted the definite article.

- **Case** errors were also rare. Twenty-four out of 25 students who provided subject pronouns used subjective case; the task did not require much use of the objective case, but

the 12 who used this case did so correctly. Genitive case was supplied correctly by 17 students. One of these students also used the definite article in place of the genitive, as did some of the other students who used no genitives. Martens suggested that the rest were using a strategy of avoiding genitive forms.

- Most oral production errors were due to **gender** confusion in subjective, objective, and genitive cases. More students used masculine forms than used feminine forms (22 versus 12) but few used either with complete gender accuracy. Martens claimed this showed that students either did not know the feminine forms or were unsure and avoided them. There was a strong tendency to overgeneralize masculine forms in subject, object, and genitive cases.⁸ Furthermore, there was no tendency to apply the French rule and use feminine forms when grammatical or natural gender was feminine. However, it is not possible to determine the extent to which learners transferred the French rule and substituted a definite article for a PD with a body part (e.g. He have the finger in the mouth). Following Zobl, Martens combined the body parts and inanimate domains in the nonhuman category, and these analysis procedures may have obscured L1 influence in the body parts domain. Consequently, even though learners were not following their L1 rule for gender marking in all domains, questions remain about the influence of the L1 in the acquisition of PDs by francophone learners of English.

Grammaticality judgement data: Analyses of the GJ task revealed that students were generally not proficient in recognizing deviant uses of *his* and *her* (students were instructed to put an X on an incorrect form; they were not asked to attempt a correction). Only 9% of the

students were classified as highly accurate (scoring 80% or above); 18% were moderately competent (60-75%); 21% had very limited ability (30-55%); 24% were extremely weak (5-25%); and 28% made no accurate judgements.

Two other findings are worthy of note. First, judgements about nonhuman PDs (inanimate and body parts) were significantly more accurate than judgements about human PD forms:

nonhuman (masculine/feminine) > human (masculine/feminine)

Second, judgements about feminine forms were significantly more accurate than judgements about masculine forms:

feminine (nonhuman/human) > masculine (nonhuman/human)

Although this second finding seems to contradict the results of the oral data, Martens noted that correct identification of a misused *her* did not necessarily signal accuracy with the feminine form, but could reflect instead a tendency to overgeneralize *his* by marking all correct and incorrect instances of *her* as wrong.

Oral interview data: Results of the oral interview indicated that students' judgements, whether accurate or inaccurate, were authentic judgements. Some learners provided explicit information; others seemed to rely on intuition; and some of the explicit information they provided was incorrect. Nonetheless, Martens concluded that "even the poorest performers made judgements according to rules active in their ILs" (p.64).

Recall that Martens had predicted that learners' performance on the GJ task would show that they knew more about the PD rule than their performance on the PCG indicated.

Despite the fact that frequent errors in use of *his/her* had been observed in the spontaneous speech (on the PCG task) of the intensive program students, I felt that such errors might well be apparent to the learners themselves when they were engaged in a task with a focus on form. It seemed that the clarity and salience of gender distinction might lead to correct recognition" (32-3).

However, she concluded from the GJ results that the students in her study apparently did not know the English PD rule. That is, the task could not motivate them to recognize errors if they did not know which forms were correct. Thus her hypothesis that learners' competence was greater than the high frequency of gender errors in the communication task indicated was not supported. However, Martens noted the possibility that the story context of the GJ passage unwittingly weakened the focus on form, and she called for further research involving a more "focused and explicit" judgement task (p. 82).

Lightbown and Spada (1990) investigated the use of PDs in the speech of francophone learners in four Grade 5 and 6 intensive ESL classes. Speech was elicited from students at the end of their intensive course using the PCG described above in Martens' study. The PD data were analyzed two ways: 1) group accuracy rates for the use of *his* and *her* were calculated for the students in each class who used at least three PDs during the task; 2) the number of students who used both *his* and *her* were tallied. The results, presented in Table 3.2, show a difference in accuracy rates from one group to another.

What is particularly striking in the results is how few students in all groups, but particularly in Group 4, used enough PDs to be included in the accuracy analysis, and how few students used both *his* and *her* correctly at least once. Although the limited data did not permit Lightbown and Spada to carry out a full analysis of the developmental sequence, they

suggested that learners in Group 4 “may have been at a different level of development from the others” (p. 442) since they made fewer attempts to use PDs and since those attempts were less successful. They concluded that the observed differences between the classes may have been due to variations in the amount and type of form-focused instruction and corrective feedback offered by the four teachers within similar communicative language teaching

Table 3.2

Accurate use of possessive determiners by francophone ESL children; adapted from Lightbown and Spada (1990, p. 442)

Group	Mean accuracy rate	students with 3 or more uses	Number using both his and her correctly
1	74.00	17/23	8/23
2	62.90	11/25	4/25
3	56.00	19/28	9/28
4	42.00	6/25	0/25

situations. These differences suggested that some types of instruction may be more effective than others in contributing to the acquisition of PDs and other forms.

Referring to the subrule sequence Zobl (1984, 1985) had inferred from his data, Lightbown and Spada proposed a five-stage sequence describing the acquisition of PDs by francophone ESL students. This framework is presented in Table 3.3. The sequence was

Table 3.3

Acquisition sequence of possessive determiners by francophone ESL students (Lightbown and Spada, 1990:441, based on Zobl, 1985)

Stage	Description and examples
1	The use of definite articles rather than possessive determiners. e.g. She reads the book.
2	The use of a generalized possessive determiner for all persons, genders, and numbers, e.g. She reads your book.
3	The use of a third person determiner where third person is required, but an overgeneralization of only one form (usually the masculine) of the determiner, e.g. She reads his book.
4	Differentiated use of possessive determiners with some possessed nouns, although learners continue to have difficulty when the object possessed has "natural" gender, e.g. She reads her book to his brother.
5	The correctly differentiated use of possessive determiners with all types of nouns, including those with natural gender, e.g. She reads her book to her brother.

further adapted for use in the current study and the revised version is presented in Chapter 5.

It is important to keep in mind that Zobl's "developmental sequence" was based on accuracy scores obtained from cross-sectional data, not from longitudinal data. This is particularly important given that in L2 acquisition research, there are a number of unresolved issues regarding the nature of stages and sequencing. This is hardly unique to L2 acquisition,

however. For example, in developmental psychology, basic assumptions about stages, largely based on Piaget (1952 and elsewhere), include the following points: 1) the products of cognitive growth become interconnected and exhibit structures; 2) development is not merely quantitative in the sense that more of one behaviour than another is observed, but rather the behavioural changes are qualitative or exhibit discontinuities; 3) cognitive changes are not abrupt, and a stage can represent a period of continuous growth and change; 4) a number of closely interconnected developments occur concurrently within a stage (see Flavell, 1985, for discussion). However, as Flavell pointed out, these assumptions have been sharply criticized on a number of grounds, including the difficulty of testing for them. As a result, many cognitive scientists prefer to use the terms *developmental sequences* to indicate that “cognitive growth is not as strongly and clearly as stage-like a process as Piaget’s theory claims it is. It should be added, however, that a number of developmental psychologists still advocate some form of stage theory of cognitive development” (Flavell:300).

The use of the term *stage* in the current study to describe development takes this debate into consideration, and the term *developmental sequence* may more accurately reflect the underlying processes that are inferred. Flavell suggested that developmental sequences are only interesting if two cognitive entities (X and Y) are related to each other in an important way. He proposed five major types of sequential relationships: 1) addition (Y is added to X as growth occurs); 2) substitution (Y replaces X); 3) modification (Y is continuous with X and develops from X); 4) inclusion (X becomes coordinated with other cognitive entities to form Y); 5) mediation (X serves as a bridge to the subsequent

development of Y). The current study was not designed to tease apart sequential relationships such as these.

The studies reviewed in this chapter provide evidence that, while the acquisition of pronouns and PDs is systematic, children and adults have considerable difficulty acquiring these forms in a second language. Three of the studies focused on the problems that francophone learners have in sorting out the semantic distinctions of the English PD system. Zobl (1983, 1984, 1985) argued that learners break down the mature English PD agreement rule into subrules, which they apply systematically while respecting the constraints of markedness implications and the influence of the L1 rule. The variability which was evident in his data was attributed to the strength of these two factors. Martens' (1988) study indicated that most children did not know, or could not articulate, the target language PD rule. While this did not fully account for their poor performance on an oral production task, it helped to explain why they had trouble finding errors in a grammaticality judgement task. This, in combination with Lightbown and Spada's (1990) descriptive classroom-based study, suggests the possibility of a role for focus on form instruction for PDs. In particular, the way in which the learners' L1 may influence development is in need of further investigation.

The current study builds on this body of research by investigating the effects of increased salience and frequency of PDs on the acquisition of these forms by elementary school-age ESL learners. The subrule sequence, which Zobl (1985) proposed and Spada and Lightbown (1990) adapted, was operationalized as a developmental stage framework and

used to analyze the PDs produced during a production task. In the following section of this chapter, the research questions and hypotheses are presented.

3.2 Investigating the acquisition of possessive determiners through enhanced input

The present study investigated the acquisition of possessive determiners by young, French L1 learners of English in a classroom setting. The research questions and hypotheses of this study were formulated on the basis of the findings presented and the questions raised in the literature reviewed in Chapters 1-3. A basic assumption of the study is that input is necessary for L2 acquisition to proceed. As indicated in Chapters 1-3, the mechanisms which permit learners to make use of linguistic information available in the input are not well understood, however. Specifically, the role that conscious attentional processes may play in L2 acquisition is currently the subject of much theoretical discussion and empirical research. Some of this research is now being carried out in the L2 classroom, where studies show that child and adult learners can benefit from form-focused instruction offered within a pedagogical framework in which meaning is given the primary focus. Indeed, some research suggests that form-focused instruction may be necessary for the development of certain linguistic features to continue, while other research indicates that the rate of acquisition may be considerably speeded up when learners' attention is directed to language form. L1 influence may also be an important factor in determining L2 learning outcomes

Clearly, many questions remain about how to focus on form. One set of questions relates to whether and how explicit instruction can direct the learners' attention to linguistic

features without interfering with their ability to process input for comprehension and production. Other questions focus on the issue of whether exposure to language through reading is sufficient as a source of input for L2 acquisition. Still others are concerned with whether learners need help in noticing unfamiliar linguistic features, particularly if their background knowledge permits them to compensate for linguistic deficiencies by adopting, for example, top-down reading strategies.

In this study an implicit type of form-focused instruction was selected because of its presumed salience and it was provided in combination with an extensive reading program to one of the groups. The research questions are outlined below.

3.2.1 Research questions and hypotheses

The research questions investigated in this study are:

1. Can L2 learners benefit from typographically enhanced input in their acquisition of third person singular PDs?
2. Is typographically enhanced input more effective than unenhanced input?
3. Is typographically enhanced input more effective when combined with a “book flood”?

To investigate these questions, three treatment conditions were provided. Group E and Group E+ received a typographically enhanced input flood. This did not include explicit reference to the learners’ L1 nor was the pedagogical rule presented at any time to the learners. Instead, learners in these two groups read texts in which third person singular

personal pronouns and PDs were visually enhanced through enlargement, bolding, underlining, and italics. Although third person singular PDs were the primary linguistic features of this study, third person singular personal pronouns were also enhanced in order to increase the salience of the gender-marked pronominal system. For this reason, some reporting of personal pronouns will also be provided.

The difference between Groups E and E+ was that Group E+ was exposed to extensive reading and listening activities (a book flood) in addition to the typographically enhanced input. In order to ensure that all groups in the study were exposed to written input containing third person singular personal pronouns and PDs, Group U read unenhanced versions of the texts read by Groups E+ and E. The treatment conditions are described in more detail in Chapter 4.

The hypotheses tested in this study are listed below followed by a discussion of how they are related to the theoretical and empirical work on instructed SLA discussed above.

H1 Typographical enhancement of third person singular pronouns and possessive determiners will promote the acquisition of possessive determiners.

H2 Typographical enhancement of third person singular pronouns and possessive determiners in combination with extensive reading and listening activities will be more effective than typographical enhancement without extensive reading and listening activities in promoting the acquisition of possessive determiners.

H3 The effectiveness of typographical enhancement will still be evident one month after the two-week treatment period ends.

The study was designed to investigate the effects of typographical enhancement, a type of input manipulation considered to be more salient than input flooding and less salient than rule explanation and corrective feedback, on the acquisition of PDs. Typographical enhancement, proposed by Sharwood Smith (1981, 1991) and investigated by Doughty (1988, 1991) and Alanen (1995), is considered to be the "visual equivalent of stress and emphasis" in spoken input (Doughty, 1988:87-88). Furthermore, because the results of these studies indicated positive effects for enhanced input, it was expected that directing the learners' attention to the typographically enhanced forms in the present study would assist them in converting this input into intake (e.g. Schmidt, 1990 and elsewhere; Hulstijn, 1989; Tomlin and Villa, 1994). Thus it was predicted that:

H1 Typographical enhancement of third person singular pronouns and possessive determiners will promote the acquisition of possessive determiners.

It was further expected that if typographical enhancement increased the likelihood that learners would detect the target structures in the input, learners in Group E+ would have more opportunities to detect them than learners in Group E. Findings from a number of book

flood studies suggest that book-related activities can improve the quality of classroom input and have beneficial effects on classroom learning (e.g. Elley, 1991; Hafiz and Tudor, 1989, 1990; Lightbown, 1992a,b). If attention to linguistic form is necessary for the conversion of input to intake, and if learners' attention is drawn to forms that are typographically enhanced in the input, then book-related activities (stories read aloud by the teacher and books read individually by the students themselves), in which third person singular pronouns and PDs occur naturally and regularly in meaningful contexts, could be expected to provide additional opportunities for intake processes to operate. The nature of the relationship between typographical enhancement and input from books leads to the prediction that:

H2 Typographical enhancement of third person singular pronouns and possessive determiners in combination with extensive reading and listening activities will be more effective than typographical enhancement without extensive reading and listening activities in promoting the acquisition of possessive determiners.

Findings from previous SLA research carried out in instructional contexts indicate that follow-up posttests sometimes portray a different picture for the effects of instruction than immediate posttests. This may be because the comparison groups have "caught up" with the experimental groups (Harley, 1989) or because learners appear to have "forgotten" (White, 1991). While it is difficult to specify the amount of time that should elapse between the immediate and delayed posttests, a minimum of a month would seem to be both

reasonable and practical, given the constraints of school-based research. Furthermore, as indicated in the literature review, although other research investigating the effects of similar implicit input enhancement techniques (e.g. Doughty and Alanen) have obtained benefits for this treatment, they did not include delayed posttests. Thus, it is difficult to know whether the benefits were long lasting. The present study permitted an investigation of short and long-term effects.

It was expected that the effects of instruction would be powerful enough for differences among groups to be statistically significant one month later. First, if enhanced input was successful in getting learners to notice the target forms, the regular classroom input in which pronouns and PDs occurred frequently would sustain the effects of instruction for Groups E+ and E. This would be consistent with the findings of other L2 studies in which learners who continued to receive exposure to the target forms through regular classroom instruction after the instructional treatment ended, maintained their gains (e.g. White et al, 1991; Spada and Lightbown, 1993; Lyster, 1994b). Furthermore, the sustained high quality input available to Group E- through their continuing extensive reading and listening program was expected to maintain the predicted advantage for this group. For these reasons, it was also predicted that:

H3 The effectiveness of typographical enhancement will still be evident one month after the two-week treatment period ends.

The next chapter presents the methodology used to investigate the three hypotheses in this study.

Endnotes for Chapter 3

1. Gender distinctions disappear in French when the possessed object is plural. The plural form *ses* is used with both masculine and feminine possessed nouns.
2. Felix and Hahn examined ungrammatical substitutions only, not deletions. As Martens (1988) noted, the data for this study appear to be primarily responses to display questions asked by the teacher, rather than "natural language" (see Long and Sato, 1983, White and Lightbown, 1984, regarding the characteristics of teachers questions).
3. This process of learning by features, which Wode (1976) called decomposition, has also been observed in naturalistic contexts, in the L1 acquisition of dimensional expressions (Clark, 1971) and in the L2 acquisition of wh-interrogative pronouns (Felix, 1976).
4. Zobl (personal communication) reported that the subjects were university students. To the best of his knowledge, their previous (secondary level) ESL instruction had been based on the inductive audiolingual approach.
5. Zobl's determination of markedness was based on the order of difficulty (e.g. error rates) for *his* and *her*. He also cited linguistic evidence based on the distribution of masculine versus feminine forms (Zobl, 1985).
6. Martens noted that in this sequence, it is an empirical question whether gender or kinship carries more weight.
7. Martens noted that two correct uses do not imply correct use in all obligatory contexts.
8. Martens noted that only 12 students provided tokens of feminine forms on the oral production task, and of these, five students, all girls, overgeneralized the feminine. She added that although "one might speculate that female subjects were more 'tuned in' to the feminine forms", it was not possible to interpret these data (Martens, 1988:72).

Chapter 4

Methodology

4.0 Introduction

This chapter describes the procedures followed to investigate the role of typographical enhancement in the acquisition of English third person singular possessive determiners, *his* and *her*. The research methodology is presented in the following sections: Section 4.1, context; Section 4.2; participants; Section 4.3, instructional materials; Section 4.4, assignment of treatment conditions; Section 4.5, classroom observations; and Section 4.6, language measures.

4.1 Research context

4.1.1 Background

As indicated in Chapter 1, this research was conducted in the context of *intensive English as a second language* (ESL), an innovative approach to second language teaching that is adapted to the political context in which ESL is taught in Quebec (see Lightbown and Spada, 1994, for a full description of these programs). The popularity of intensive ESL, which began in 1976 in one school board, has increased considerably over the past ten years. This can be attributed, at least in part, to the parents' concern that their children are not developing adequate ESL skills due to the limited time available in the regular program. In 1992-93, when the data for this study were collected, intensive ESL was offered in 31 school boards to 153 different groups of elementary and early secondary school-age learners, the majority of whom were in grade 6. By the end of that academic year, 21,827 learners had

participated in intensive ESL instruction in Quebec. (Watts and Snow, 1993). Table 4.1 shows the number of groups by grade and school board.

Table 4.1

Number of intensive ESL groups by grade and school board during the 1992-93 academic school year (adapted from Watts and Snow, 1993:15)

Grade	School Boards	Groups
4	1	1
5	9	24
6	25	125
7/Sec. 1	2	3

The intensive model, which is considered to be "experimental", is not an official program of the Ministry of Education of Quebec (MEQ), but rather an expansion of the regular communicatively-oriented ESL curriculum set by the MEQ. The regular program is designed for a recommended 120 minutes a week in each of grades four, five and six (Gouvernement du Québec, 1981). This program, which was developed to replace a structure-based audiolingual syllabus, is organized around a set of functions and notions. It emphasizes the development of listening and speaking and places a priority on message over form. While it does not officially prohibit form-focused instruction, the program has been widely interpreted by teachers as doing so since there is no explicit mention of grammar points to be taught.

Although intensive programs vary somewhat from school board to school board, they virtually all supplement the regular two-hour per week program by adding more listening and speaking activities organized around themes relevant to the learners' everyday lives (e.g. families, food, clothing, holidays, sports, hobbies, and music). There are many songs, games, puzzles, surveys, interviews, discussions and outings.¹ Pair- and group work activities are common, as are rules requiring learners to speak English with the teacher and each other. As in the regular program, fluency is emphasized over accuracy, and relatively little time is devoted to the development of reading or writing processes.

In the school where the intensive ESL classes investigated in this study were located, learners study only English for five months of one academic year. The other five months of that year are devoted to intensive study, in French, of the other academic subjects that are required to complete the grade level.² Thus, the entire year involves intensive study, and three hours of homework are not uncommon. Since participation in intensive ESL is always optional, learners are generally enthusiastic about learning English and have the support and encouragement of their parents. As Lightbown and Spada (1994) noted, it is important to keep in mind the learners' enthusiasm for this special, alternative ESL program in evaluating its success.

The study was carried out over a five-month period from late January to June, 1993, in three intensive ESL grade six classes in a primary school located in a predominantly French-speaking community outside of Montreal. The school was selected for the study after a period of observation in classes taught by six intensive ESL teachers in the Montreal area: the three teachers in this school and three others in three different schools. The purpose of

the preliminary observations was to determine whether there were differences in the extent to which these six intensive program teachers provided form-focused instruction and reacted to learners' linguistic errors.

The observations extended over three and one half weeks in the third month of the five-month program. The observers (the investigator and an assistant) used a previously modified version of the Part A activity level analysis of the COLT (Communicative Orientation of Language Teaching) Observation Scheme (Spada and Fröhlich, 1995). In addition, the *reaction to form* feature of the verbal interaction section (Part B) was modified to allow for real-time coding of teacher feedback on error within the context of classroom activities.³ Feedback on error was defined, following Chaudron (1977), as "any reaction of the teacher which clearly transforms, disapprovingly refers to, or demands improvement of the learner's utterance." Each occurrence of a teacher response to learner error was coded as implicit or explicit. Errors of grammar, vocabulary, and pronunciation were coded separately. (See Appendix A for the classroom coding sheets).

The observations established that the six teachers were similar to each other in the way in which they responded to learner errors and in the extent to which they did so.⁴ All had a high tolerance for learner error. When they gave corrective feedback to learners on grammar and vocabulary, they were more likely to use explicit correction techniques involving repetition plus emphasis through word stress and rising intonation than they were to use implicit techniques such as calling on another learner or recasting the incorrect utterance in a way that did not involve emphasis. Once it had been established that the three teachers who taught in the same school were similar to each other in the ways in which they focused

on form, the advantages of situating the three treatment groups in that school became apparent. First, classroom observations and data collection would be easier than if the groups were spread out in different schools and school boards. Second, instruction in all groups would be based on the same core program. And third, the general socio-economic background of the groups would be similar.

The three teachers were trained ESL specialists with more than ten years of experience. They were all fluently bilingual in English and French; two were native speakers of French, and one was a native speaker of English.

4.1.2 School

In the winter of 1993, the school was the only one in Quebec devoted entirely to intensive ESL instruction, referred to in some school boards as the *bain linguistique* and in this school as the *cours intensif d'anglais*. There were six classes in the school: three classes began the year with five months of intensive ESL, while the other three began with the grade six academic French program, taught intensively in five months. At the end of January, all learners switched to the opposite program, changing teachers in the process since teachers taught in only one of the two programs.

The language of the classroom was English or French, depending on the program. However, outside the classroom (in the corridors, lunchroom, and school yard), the learners were encouraged to speak English with each other, the teachers (academic as well as linguistic), the principal, and the staff. Public address announcements to all classes and all whole-school activities, such as weekly assembly meetings, outings, and the year-end school

trip, were carried out in English.⁵

In each ESL class, learners sat in groups of six around five rectangular tables. The physical arrangement of the room was conducive to pair and group work, and the teachers encouraged oral interaction through their choice of activities. The intensive ESL program was organized thematically and emphasized the development of oral skills and vocabulary, as did intensive programs in most other school boards in Quebec. It was loosely based on a set of materials assembled and developed in 1991 by the three ESL teachers who participated in the study, along with a colleague in the school board. There were five student workbooks, with accompanying teacher's guides, which corresponded roughly to the five months of an intensive session. The workbooks set the themes and a portion of the activities of the program. While they do not reflect a coherent approach to literacy (see Maguire, 1992), the workbooks are typical of the material used in many intensive ESL classrooms. Vocabulary-building exercises, song lyrics, jokes, riddles, short reading texts, and interaction activities in the form of to-be-completed dialogues predominated. There were also puzzles and games. Written activities generally involved answering questions, filling in blanks, and providing missing dialogue lines. Each workbook covered several themes and included material related to the holiday celebrations of the fall and winter sessions. Much of the material was assigned for homework and taken up in class the next day.

The teachers supplemented the workbooks with a large number and variety of in-class activities: making wall posters to illustrate new vocabulary items; reading articles in an ESL magazine; practising tongue twisters; playing board and computer games; watching thematically relevant videos; preparing and presenting short skits; and free reading. Learners

in all groups were encouraged to order books every month from one or more of four book clubs. Teachers guided their selections.

In principle, free reading in each class occurred under two different conditions. In the first, learners chose a book or magazine from the classroom collection to read whenever they finished an assigned task ahead of other learners. In the second, teachers scheduled reading periods of from twenty to thirty minutes duration once or twice a week. In reality, however, the scheduled reading periods were often dispensed with when other activities took longer than expected to complete, and some weeks they were not scheduled at all. As a result, the learners who completed their other tasks quickly had more opportunities each week to read in class than those who worked more slowly.

Explicit form-focused activities generally involved vocabulary and pronunciation (e.g. tongue twisters). Other activities that focused on language tended to be implicit, involving practice and repetition of songs, poems, and dialogues. Teachers rarely presented pedagogical rules or used metalanguage. They did occasionally give feedback on form through repetition of the learner's utterance, with or without stress or rising intonation. In general, however, they avoided "grammar" and could be quite articulate in explaining that they wanted their learners to learn English "naturally", just as children learn their L1.

For their homework every night, the children finished tasks they had begun in class, did assignments from their workbooks, practised tongue twisters and memorized poems. In addition, everyone was expected to watch English television for thirty minutes and to read an English book or magazine for fifteen minutes every night of the five-month session. The

television homework was regularly taken up in class, but the reading homework was virtually never discussed.

The children worked hard, but it would appear that they had fun learning English. The principal and teachers made every effort possible to reduce the stress of studying English intensively and to make the experience pleasant. During the early weeks, teachers changed activities frequently, and throughout the session, they built variety into each lesson along with a substantial number of routines. When learners seemed tired, teachers put aside an activity in favour of a song or game involving physical movement. Learners never worked on an activity because they knew they were going to be tested on the material; in fact, outside the context of this study, learners were not formally tested at any time during their five months of intensive ESL. Two physical education periods per week were scheduled for each class, and there was a mid-morning recess break every day.

Learners were expected to become more and more responsible for their learning and behaviour, in school and during outings and trips, as the year progressed. One important incentive was the "learner of the week awards" which were given for effort as well as for progress and announced at the weekly assembly meeting. Ability and willingness to function in English and being responsible for one's own behaviour were prerequisites for permission to participate in the much anticipated end-of-year activity, a school trip to Boston in June for all one hundred eighty learners in the school..

4.2 Participants

The intact classes taught by the three teachers described above provided the

participants for the study. The 86 learners were in the second half of grade 6 and were 12 or 13 years old. All were francophone Quebecers and reported that they spoke French at home. In contrast to some other school boards, the intensive ESL program did not cater to the academic elite of the district. The minimum requirements for participation in the full-year program sought to ensure that students were motivated and mature enough to put in the extra homework hours and abide by the school regulations requiring the use of English; that they had the support of their parents; that they were in sufficiently good academic standing in the two academic subjects required for promotion (French language arts and mathematics) to pass Grade 6; and that they were not "bilingual", that is, their Grade 5 ESL teacher considered them to be at the expected proficiency level for students whose primary exposure to English is in the classroom. Beyond these criteria, learners were selected to participate in the intensive program on a first-come-first-served basis.

Class lists were prepared by the principal, in collaboration with the three academic and three ESL teachers. Their aim was to form groups that were roughly equivalent in terms of gender balance and academic ability, with consideration given to classroom management issues.

While there were 30 learners in each class, the test results of three learners (all girls) who participated in the study were not included in the analyses on the basis of high performance on oral and written measures at the immediate pretest. Data for a fourth learner (a boy) were removed because of unpredictable behaviour resulting from hyperactivity and the medication taken to regulate it. Thus, there were 27 participants in Group E+; 30 participants in Group E; and 29 participants in Group U. Furthermore, one subject in Group

U was absent for two of the immediate pretests and was eliminated from the analyses of those measures.

There were more girls than boys in each group. Table 4.2 shows the number of boys and girls after the removal of participants.

Table 4.2

Number of boys and girls in each group

	Boys	Girls
Group E+	11	16
Group E	13	17
Group U	11	18

4.3 Design

The study is quasi-experimental in nature since the groups consist of intact classes with no random assignment to treatment groups, and it follows a pretest/posttest, comparison group design. Posttests were immediate and delayed; participants in each of three treatment groups were tested the last school day before the treatment period began, the day after the treatment period ended, and again five weeks later.

4.4 Research schedule

The study was conducted over a period that corresponded to the first nineteen weeks of the twenty-week intensive ESL session. Throughout the session, the teachers carried on with their usual intensive program. The teacher of Group E+ had to make some adaptations

to find time for the book flood. She did this by cutting short the morning homework corrections and by eliminating a variety of activities from the core program that all three teachers used. Figure 4.1 shows the research schedule.

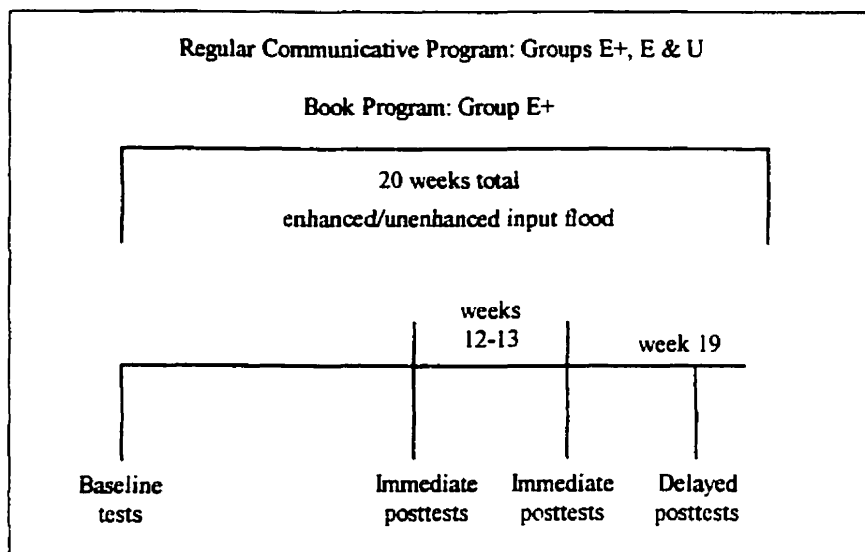


Figure 4.1. Research schedule

4.5 Treatment materials

As indicated in Chapter 3, there were three treatment conditions. Group E received input in which all third person singular personal pronouns and possessive determiners were typographically enhanced; Group E+ received extensive reading and listening activities (e.g. a book flood) in addition to typographically enhanced input; Group U received input that was typographically unenhanced for the target forms. The treatment materials are described in more detail below.

4.5.1 Enhanced/unenhanced input materials

Two versions of a ten-hour instructional package of reading activities were designed for the study. (A sample of the instructional materials can be found in Appendix B.) Group E+ and Group E received a set of materials in which all third person singular pronouns and possessive determiners were enhanced visually on the page, as well as through tasks that focused the learners' attention on the meanings of these forms. They were typographically enhanced through enlargement and different combinations of the following techniques: bolding, italics, and underlining. Possessive determiners, the target features of the study, were always enlarged more than subject and object pronouns in order to increase their visual salience. The reason for enhancing subject and object pronouns as well as possessive determiners was to present the third person singular forms as a system and to increase the salience of the gender distinctions overall. The kind of typographical enhancement was varied from activity to activity to maximize the novelty of the technique and to increase the likelihood that learners would attend to the forms. However, care was taken not to make the enhancement so salient that it would cause learners to become irritated and distracted while reading. In addition, third person singular pronouns and possessive determiners were added to the texts whenever it was possible to do so.

Group U received versions of the same set of texts in which third person singular pronouns and possessive determiners were not typographically enhanced, and the learners did parallel tasks that provided general comprehension practice but did not focus their attention specifically on pronouns and possessive determiners. To account for the possibly distracting

effect of enhancement, all past-tense -ed endings were enhanced for Group U. No analyses related to past-tense verb forms were carried out.

Overall, the enhanced and unenhanced materials (texts and related activities) contained 1.49 times more tokens of the feminine possessive determiner *her* than of the masculine *his*. This uneven distribution of masculine and feminine forms was intentional; Zobl (1985) had proposed that *her* is more difficult than *his* and had pointed out that feminine pronouns are generally less frequent in the input. Martens (1988) had found that the participants in her study overgeneralized masculine forms in an oral production task and that fewer than half attempted to use any feminine forms at all (see discussion in Chapter 3). The intent of increasing the frequency of *her* in the instructional material was to provide more opportunities for learners to encounter this form..

All enhanced and unenhanced texts were based on stories, fables and poems written for English L1 children. Several short texts were grouped together, along with accompanying tasks, to make ten theme-based, sixty-minute activities. The materials were typed on a word processor, laser printed, illustrated, and photocopied. The activities were handed out to learners during each treatment session, and texts and tasks were collected immediately afterward. This was done to control time-on-task. Learners were permitted to use dictionaries during the activities if they wished since this was the normal procedure in their ESL class.

A total of twenty activities (ten enhanced and ten unenhanced) were created. While the teachers were not directly involved in the development of the treatment materials, they were consulted several times regarding the appropriacy of the topics and the level of

difficulty of the texts and tasks. A step-by-step teacher's guide was prepared, and, after teachers had read through the guide and the materials, they were given a one-hour training session together on how to implement the treatment.

The teacher's guide contained the following instructions with respect to the typographical enhancement:

In introducing Activity 1, you should mention that some words in the stories they will be reading over the next two weeks are highlighted in different ways (i.e. they may be larger, darker, italicized and/or underlined). Tell the learners the following: 'These are words you have trouble with and we want you to notice how they are used.' Beyond this, do not volunteer any information about the highlighted words. If children ask questions about the highlighted words (and they probably will), answer their questions without giving long explanations or 'rules'. Make a note of the questions that are asked about the highlighted structures, both during and after the activities, and of your responses.

The total treatment period was planned to extend over two weeks (ten school days), with the activities taught in sequence, one hour a day, for a total of ten hours. Once the treatment period was under way, however, it became apparent that the sequence of ten activities would take considerably more than ten hours to teach (i.e. Activities 1, 2, and 3 had taken approximately one and a half hours each).⁶ Since the teachers were reluctant to devote more than the ten agreed-upon hours to this project, and since the researcher felt that ten hours of exposure to the treatment material was sufficient, the researcher and the teachers agreed at the end of the third day to delete three activities and to shorten one of them. The remaining activities were taught as planned. With the adjusted plan, the total treatment period was the same as originally intended, that is, ten hours per group, taught on seven different days spread out over a period of two weeks. During this period, the remainder of

the class time was devoted to the regular intensive ESL program in all three classes. The ratio of tokens of *her* to *his* in the material taught was 1.53.

The researcher was present in the school on three of the seven days and, although it was not her original intention to do so, taught one of the activities to each of the three groups on the second day.

4.5.2 Materials for book flood (intensified exposure to books)

A book flood, consisting of extensive reading and listening activities, was developed to increase learners' exposure to the target linguistic forms. It was expected that if typographical enhancement increased the likelihood that learners would pay attention to third person singular PDs in the input, then a flood of story activities would provide additional opportunities to encounter these forms, thereby promoting intake.

For this reason, in addition to the 10 hours of enhanced input, Group E+ was exposed to a supplemental book program extending over the entire five-month intensive ESL session.⁷

This book flood consisted of 2-3 hours per week of in-class pleasure reading and listening to stories read aloud by the teacher above and beyond the reading activities that all three teachers included in the regular, on-going intensive ESL program. Teachers in all three groups kept a log of all reading activities carried out in class. The teacher of Group E+ and the researcher monitored these records and consulted with the other teachers to ensure that the book flood conditions were being met for Group E+. This permitted the researcher to see that learners in Group E+ were spending an average of 30 minutes more each day participating in book-related activities than learners in Group E and Group U. Overall, then,

their exposure to input from stories was indeed greater than that of the other two groups, both in duration (5 months versus 2 weeks) and total number of hours (about fifty additional hours).

For the book flood to provide Group E+ with opportunities for pleasure reading in English, it was important to find books that were appropriate to the interests, L2 proficiency, and L2 reading ability of twelve-year-old ESL learners. This was a particular challenge during the early weeks of the session in light of the mismatch between the books they liked to read in French (mystery stories, including translations of novels by Stephen King) and the books they were capable of understanding in English (picture books for pre-schoolers), and considerable attention was paid to the selection of stories for the book flood. An additional challenge was to find enough books so that everyone could have a choice at all times. The researcher and the teacher worked closely together to assemble a collection of books that could be read to the class and that learners could read on their own, starting on the second day of the intensive session.

4.5.2.1 Selection of books

Several criteria were used in the selection of the books. These criteria included age-appropriate topics, simple story lines, clear illustrations, repetitions, and variety. The criteria are detailed in Appendix C.

The books for the book flood came from a number of different sources. The teacher already had a substantial classroom collection consisting of several hundred books and dozens of back issues of three children's magazines, *Ranger Rick*, *National Geographic World*, and *Chickadee*. The majority of the teacher's books were chapter books, suitable for

the last month or two of the intensive session. While she also had some picture books and early reading books, many more were needed for story time and free reading periods during the first three months the book flood. The need for very easy picture books to be used in the first weeks of the session was especially acute.

Working with the guidelines described in Appendix C, and in close collaboration with the teacher, the researcher purchased approximately 200 books from a variety of sources. New books came from book stores and publishers, and used books stretched the budget considerably. The book collection was supplemented with a large number of library books which the researcher borrowed and took to the school. The community library in the school had a small number of appropriate English titles which the learners could check out. In addition, learners bought their own books from several book clubs.

4.5.2.2 Book flood activities

Book flood activities were of three basic types: free reading, which the teacher called DEAR (Drop Everything And Read), when the learners read silently on their own; story time, during which the teacher read to the learners; and shared reading, when five or six learners read individual copies of the same chapter book together. Each of these activities is described in more detail below.

The tasks that were associated with the three types of reading activities primarily involved speaking since the emphasis in the on-going intensive ESL program was on the development of oral-aural skills. Furthermore, since writing activities were relatively rare in the CIA program as it was already set up, the researcher decided not to introduce an

additional variable by building writing activities into the book flood.

DEAR Most mornings began with a DEAR period, which lasted between ten and thirty minutes - the maximum period of time before learners became distracted. Learners knew when they saw the word *DEAR* on the blackboard to get themselves organized, take out a book (or find a new one), and start reading quietly in their seats. They also had the option of reading books with cassettes, which they listened to on personal cassette recorders they had brought from home. During this time, the teacher was often reading a children's book in order to select the next stories to read aloud to the class. She also circulated to see what the learners were reading and to help individuals who were off-task find new books if they had become discouraged with, or disinterested in, their current ones. Guiding learners in their selection of books was a key feature of the book flood since it was important that the input be comprehensible.

The learners had no follow-up tasks associated with the DEAR period other than to record on their individual reading record sheets the title, author, number of pages, date, assessment of the level of difficulty, rating of its interest value, and whether or not they had finished the book. These sheets were kept in the class in folders provided for that purpose. Although reading done at home was not differentiated on the learners' sheets from reading done in school, the teacher kept a careful record of the date and duration of each DEAR period.

Story time Story time lasted between fifteen and thirty minutes, sometimes following immediately after a short DEAR period. The teacher sat on a high stool, and the

learners pulled their chairs up close in front of her. She always prepared the learners for the story by asking questions about the topic, showing them the book cover and eliciting predictions about what the story would be about. In each case, she built on their experiences, interests, and feelings, at the same time building up the vocabulary they would need to understand the story.

Reading the story included frequent pauses to show and discuss the illustrations, predict what would come next, verify learners' understanding and interest, and relate the events of the story to their lives. The teacher asked learners to summarize previous chapters of a chapter book before continuing with it the next day.

The teacher found that the best books for story time were humorous, with authentic-sounding language, including slang and repeated refrains. Learners sang the song in Munsch's (1986) Love you forever each time it was repeated; they joined in with the repeated back and forth arguing ("did not", "did too") of the children in *Monsters in the School* (Godfrey, 1991); they spontaneously reported that they were having a "terrible, horrible, no good, very bad day" after hearing about Alexander in the book by that title by Viorst (1972). They especially liked to hear about children complaining and getting into predicaments. If necessary, the teacher paraphrased complex syntactic structures and unfamiliar key vocabulary.

If the books were short, the teacher often read two or three books at story time. If the picture book was long, she would read only one. Later in the session, when she read chapter books, she read several chapters at a time; however, before reading for longer than twenty minutes, she always checked to see that the majority of the learners wanted her to continue.

At the end of every story time, the teacher asked the learners how they had liked the story and how much difficulty they had had in understanding it. These whole-class discussions about what made a book interesting and easy to follow helped her in selecting the next book to read and increased the likelihood that learners would be able to select enjoyable, comprehensible books to read during DEAR periods and at home. When she finished reading a book, she invited learners to read it on their own, either during DEAR period or at home, and she showed them where in the classroom they could find it. The teacher also asked the learners whether they wanted to hear more of that type of book, or others written by the same author. For the sake of variety, however, even when learners wanted to hear more of the same, she usually read something different first. For example, after finishing a chapter book that had taken four story time periods, she read several short books that could each be completed in one session.

Shared reading One shared reading project, extending over seven consecutive days and taking approximately sixty minutes per day of class time, was done in the tenth and eleventh weeks of the session, immediately before the enhanced input treatment period.⁸ Five different Shared Reading sets from Scholastic Press were used: 1) The Case of the Marmalade Cat (Heneghan, 1991); 2) Project Disaster (McNicoll, 1990); 3) The Snake that Went to School (Moore, 1987); 4) Rich Mitch (Sharmat, 1983); 5) Going Bananas (Wilson, 1989). Each set contained seven books, a cassette recording of two chapters of the book read aloud by a child narrator, and a teacher's guide that included a summary of the book, comprehension questions for each chapter, and suggestions for a variety of tasks related to the

book (see Holdaway, 1979, regarding shared reading in L1).

The researcher adapted the five teacher's guides to make five different student guides that were given to each learner once the books had been selected. The activities in each student guide were organized by days and broke the book up into chunks of two or three chapters each which the learners were directed to read either in class or at home. The guide provided questions to help focus the learners during their reading or, on two days, directed them to make up their own questions to ask the others in their group next day; learners then discussed with their group the questions related to the chapters they had already read, and moved on to read the next set of chapters. The final activity was a group skit of two key scenes in the book.

The Shared Reading project had a number of benefits. First, it provided support for the learners, both through the structure of the activity and through the contributions of the other members of their group. The teacher noted that before the Shared Reading project, few individuals had attempted to read chapter books on their own although she had read several to the entire class during story time; after the project, most learners had the confidence to do so. The learners also reported that the project bolstered their self-confidence. As one child wrote when asked by the teacher to evaluate the activity, "If you read alone, you don't understand one chapter, you don't understand all the book. But if you are with a partner, you can discuss about the book."

A related benefit was an increased sense of responsibility to the group. Learners had to understand their chapters in order to participate in the group discussions. For their skits, as well, they had to agree on what scene in the book to portray and who would take what part.

Then they had to make clear to others in their larger group what they were doing. This duty not to let the group down led in turn to a greater sense of independence and resulted in each learner developing a sense of what he could understand by himself. The teacher was convinced that as a result of the project, the learners were better able to choose appropriate books to read on their own. This is consistent with cooperative learning theory, which holds that academic achievement is enhanced when learners work cooperatively (see, for example, Johnson et al., 1984; Slavin, 1983; Abrami et al., 1993).

4.6 Assignment of treatment conditions

The assignment of teachers to treatment conditions was done without the researcher's intervention. Several weeks before the study began, the researcher explained the three treatment conditions to the principal of the school and the three participating intensive ESL teachers. The teachers then consulted with the principal and each other, chose the treatment conditions for their groups of learners, and met with the researcher to explain their choices.

The opportunity to select the instructional treatment condition was especially important in the case of the teacher of the book flood group (Group E+), who would be required not only to implement the two-week enhanced input treatment, but also to adjust an already full program to accommodate an average of 30 minutes a day of book-based activities over the entire five-month intensive course. The principal knew that one of the three teachers had often expressed a desire to introduce more reading activities into the intensive program and had even asked for some guidance in this area. Since this teacher was interested in collaborating with the researcher in developing the book flood program, she was a natural

choice to implement it and was encouraged by the principal to do so.

The teachers' cooperation was enlisted in a second important aspect of the research, as well. At the outset, they were informed that this was an input enhancement study, and that the linguistic forms to be enhanced were the third person singular personal pronouns and possessive determiners. The first advantage of giving the teachers this information was that they could be consulted in the development of the materials. The second was that it motivated them to participate in the study since they were aware that their students had persistent problems with *his* and *her*. The disadvantage was that, knowing the purpose of the study, they might have decided to focus on the target structures, either through rule explanations or corrective feedback, outside of the treatment period, even though this was not their normal practice. For this reason, the teachers were asked (and they agreed) not to "teach the rule" about third person singular pronouns or possessive determiners at any time during the semester, and to continue to be as tolerant of learners' pronominal errors as they had always been. They were told, however, that if learners asked questions about pronouns during the two-week treatment period, they could answer them. Since teachers were wearing microphones as they taught the enhanced/unenhanced packages of material, such questions, and the answers given, were available for examination. In fact, very few learners asked about pronouns or PDs at all. The most explicit reference to the target forms made by the learners were several requests for confirmation that "*his* is for boys, and *her* is for girls".

4.7 Classroom observations during study

Throughout the study, the researcher spent between one half and two days per week

in the school. During the first month, when the teachers were introducing the learners to intensive ESL, school visits were for the purpose of helping the teacher of Group E+ set up and manage the book flood. After that, equal time was spent observing in each of the three classrooms. There were several purposes motivating the observations: 1) to see how the teachers responded to learner errors and whether they differed among each other in amount and type of focus-on-form instruction they offered; 2) to understand as much as possible about the CIA program to help with the interpretation of the results; 3) to ensure that the learners felt comfortable with the researcher so that they would be relaxed during the testing periods (learners were not normally tested in this program); 4) to make Groups E and U feel that they were valued participants in the study; this was important since all teachers and learners knew that Group E+ was involved in a special book project and that books had been purchased specially for them; 5) to verify that the treatment conditions were being implemented as intended. A journal was kept of each classroom observation, with notes that included information about most of the categories of Part A, as well as the "reaction to form/message" section of Part B of the Communicative Orientation of Language Teaching (COLT) observation scheme (for information about COLT, see Spada and Fröhlich, 1995).

4.8 Measures

4.8.1 Baseline tests

On the second day of the intensive ESL program, before the book flood treatment began, two baseline measures were administered to the three groups to establish that there were no initial differences among them. The first was a twenty-item multiple choice global

listening comprehension test. This instrument was adapted from the Test de Classement (3ème année) for English developed by the Commission scolaire Baldwin-Cartier. Since the test had been administered to over 1500 intensive ESL learners and has been shown to discriminate among them, it also permitted a baseline comparison of the participants in this study with a large number of comparable intensive program learners.

The test was in two parts. In the first part, learners heard 14 two-line tape-recorded dialogues and selected from among four pictures in their test booklets the one that corresponded most closely to the dialogue they had just heard. In the second part, they heard four questions and, after each one, selected a response from among the four that were printed in their test booklets. A sample item from the Baldwin Cartier Test is in Appendix D.

The second baseline test, an initial multiple choice test focusing on pronouns and possessive determiners, is described in Section 4.8.2.2.

4.8.2 Measures of second language development

To determine the effects of typographically enhanced input, with and without extensive reading and listening, on the development of third person singular pronouns and PDs, three written tests and one oral test were administered. There was one version of each written measure. Samples of them are included in Appendix D. It was expected that on each measure, the performance of learners in all groups would improve after the two-week treatment period, but that learners in Group E+ would outperform learners in Group E, who would in turn outperform learners in Group U on these tests. At each testing session, the investigator was assisted by two experienced classroom researchers. They followed identical

procedures, which included going over instructions and examples carefully and ensuring that learners worked individually. Learners were not permitted to use dictionaries, but the researchers answered all questions about vocabulary except those that involved pronouns or PDs.

The tests are described below in the order in which they were administered at each test session. The written tests were sequenced such that learners proceeded from the passage correction task, which was the least direct of the measures in the way in which it drew the learners' attention to pronominal forms, to the truth value task and the multiple choice test, which did so more explicitly.

The oral production task was administered to students individually after the written tests were completed, following the morning recess period. Thus for all learners, there was a break between the written and oral tests; this break ranged from a minimum of 20 minutes to a maximum of three hours. The order in which groups were tested was determined by the school schedule (e.g. gym periods) and preferences of the three teachers. The order in which individuals were tested was determined by their teachers, but was usually alphabetical by last name.

4.8.2.1 Grammaticality judgement tests

Two types of grammaticality judgement tests, a passage correction task and a truth value task, were developed for this study (see Birdsong, 1989; Chaudron, 1983; and Ellis, 1991, for critical discussions of the different types of grammaticality judgement tests). Both contextualized the target forms within coherent discourse.

Passage correction task A passage correction (PC) task was developed to measure the extent to which learners could identify and correct deviant uses of third person singular subject and object pronouns and PDs. The same version of the task was administered at the pretest, immediate posttest, and delayed posttest. Following Birdsong (1989:102), test items will be called *well formed* or *deviant*, and participants' judgements will be called *grammatical* or *ungrammatical*.

The task was based on a Canadian National Film Board animated video entitled *George and Rosemary*. The key events of the story were summarized in fourteen short paragraphs, each of which was illustrated by a frame from the video. The summary contained 33 deviant forms. Of these, 24 involved third person singular pronoun and PDs and nine were distracters involving other parts of speech. There were also 40 tokens of well-formed third person singular pronouns and PDs. The contexts required for the deviant forms and the well-formed tokens are shown in Table 4.3.

Learners watched the video and immediately afterward, they were given the summary. They were told that the written story contained "a lot of errors". Although they did not know how many errors the summary contained, they were told that there was a maximum of one error in each sentence, that some sentences had no errors, that no sentence had too few or too many words, and that there were no spelling errors.

Table 4.3

PC task: contexts required for deviant third person singular pronouns and possessive determiners and well-formed tokens supplied

	Context- deviant forms	Well-formed tokens
Subject pronouns		
he	0	20
she	1	9
Object pronouns		
him	3	2
her	4	0
Possessive determiners		
his	8	6
her	8	3

Learners were asked to read the story carefully, to put an X on any incorrect word they found, and to write the correct word above it. The instruction to correct each deviant form was intended to provide more information about what learners knew about the target forms than would be obtained if they were asked only to cross them out.⁹ Since the study involved instruction in the target forms, the additional requirement was considered to be reasonable. For example, the following paragraph appeared in the summary, accompanied by an illustration of a man looking through binoculars:

On warm and sunny days, George liked to sit on his front porch and watch a people pass by. But there was a more important reason for his outdoor activities - he had a passion for her neighbour, Rosemary Harris. She lived alone with your goldfish.

The context established in the video required learners to change *her* neighbour to *his* neighbour and *your* goldfish to *her* goldfish. In addition, there is one distractor error in the paragraph, namely *a* people.

An earlier version of the PC task was pilot tested with a group of grade 6 intensive ESL learners in a different school board.

Truth value task Martens (1988) expressed concern that the story context of her passage correction task could have weakened the focus on form for learners in her study, and she suggested that future researchers might find a more focused and explicit grammaticality judgement task to be informative. In this study, a truth value task was administered at the immediate pretest and immediate posttest. The same version was used each time. Learners read a story entitled *Two Babies Are Enough* in which twenty-six true/false statements commenting on the story line were interspersed at regular intervals. In order to respond correctly, learners had to understand the personal pronouns and PDs in both the true/false statements and the text.

The following paragraph comes from the test. Learners were required to circle *true* or *false* after each statement.

I always have to do my homework right after school. But Paul and Betsy can do anything they want. It's not fair! Mom and Dad always help him with his homework, and they always put her pictures on the fridge.

15. Mark does his homework after school. True False

16. Mark's parents help with Paul's homework. True False

17. Mark's parents put Paul's pictures on the fridge. True False

The breakdown of the pronominal forms that were tested in the true/false statements is shown in Table 4.4. Of the twenty-six statements that appeared, one was used as the example and two others were distractors that did not measure knowledge of pronouns or PD. However, the total number of items tested was greater than 23 since in the case of nine statements, redundant information about gender was carried by two or more pronominal forms. An instance of such redundancy occurred in the text presented above (Mom and Dad always help *him* with *his* homework).

An earlier version of this test was piloted with the same grade 6 intensive ESL learners who served as the pilot group for the PC task. Although it was found to discriminate among learners in the pilot, in the experimental study, almost all the learners did well on this measure at the pretest, and there was a ceiling effect at the immediate posttest. The redundancy shown in Table 4.4 may have contributed to making the task easier. Because of the ceiling effect, the test was not administered at the delayed posttest.

Table 4.4

Pronouns and possessive determiners tested in truth value task

	One cue	Redundant cue
Subject pronouns		
he	4	3
she	6	3
Object pronouns		
him	1	3
her	3	1
Possessive determiners		
his	3	5
her	2	6

4.8.2.2 Multiple choice test

Two versions of a multiple choice test were developed to assess the learners' ability to recognize correct pronouns and PDs when they were presented along with several distracter items. The distracters included forms that learners in other intensive ESL groups had been known to produce in similar contexts. No items were provided in which the correct answer was not a third person singular pronoun.

Initial pretest version The initial pretest version was administered once, as a baseline measure on the same day as the Baldwin-Cartier *Test de classement*. It included all first, second and third person singular and plural pronouns and PDs. This pretest was piloted

in a neighbouring school board with one grade 5 and one grade 6 regular (non-intensive) ESL class. Learners in these classes were participating in an enriched music program. The school is in a comparable community and has selection criteria similar to those of the school where the research was carried out.¹⁰

Immediate pretest, immediate posttest, delayed posttest version The pretest was revised, and the revised version of the multiple choice test was used in the immediate pretest and in the immediate and delayed posttests. This version, which was used for the three testing sessions, was limited to third person singular pronoun and PD forms. It consisted of 24 fill-in-the-blank sentences, or pairs of sentences, each accompanied by a contextualizing picture, and had four choices per test item. In each sentence, the correct item was a third person singular pronoun or PD although the distracters included plurals and first and second person pronouns. Two examples are shown below.

(picture of a little boy kissing a little girl)

20. The boy is kissing ____.

a) her b) them c) he d) him

(picture of a man in a chair with a dentist standing next to him)

22. The dentist told Harry to open ____ mouth.

a) the b) her c) your d) his

Table 4.5 shows the breakdown of pronominal forms that constitute the correct answers to the 24 test items.

Table 4.5

Third person singular pronoun and possessive determiner forms tested in the 24-item multiple choice test

	Instances
Subject pronouns	
he	1
she	1
Object pronouns	
him	3
her	3
Possessive determiners	
his	8
her	8

4.8.2.3 Oral production task

A picture description task was designed to provide contexts in which learners could use third person pronouns and PDs in their oral production. The task was administered to each learner individually, one picture at a time, and the interviews were tape-recorded, transcribed, verified, and coded for grammatical and ungrammatical use. Three different picture sets were used in the picture description task (see Appendix D for copies of all pictures used in this task.).

Picture Set A consisted of five pictures of a pair of twins (a boy and a girl), on their birthday. The pictures were drawn for use in this research. After discussing the first picture with each learner and establishing the birthday context, the interviewer instructed the learner to describe what the boy and girl did on their birthday.

Picture Set B consisted of four large cartoons from the *For Better or Worse* series (Johnston, 1977, 1985). One of the captions was slightly modified from the original. Each cartoon shows a child with one or two parents in the midst of a problem or predicament. For each picture, the interviewer asked the learner one of the following questions: "What is the problem?"; "Can you tell me what's happening here?"; or, if the learner was laughing, "Why is this cartoon funny?"

Picture Set C consisted of six additional *For Better or Worse* cartoons. The procedure and questions were the same as for Picture Set B.

The picture sets were used in the following combinations: pretest, Set A; immediate posttest, Sets A and B; delayed posttest, Sets B and C. Picture Set B was added at the immediate posttest in order to add interest to the task and to provide a greater number of opportunities for learners to use pronouns and PDs. Picture Set A was retained to permit a direct pretest/posttest comparison. Because the *For Better or Worse* cartoons were successful in eliciting the target forms, and because learners seemed to enjoy them more than the *Birthday Party* pictures, which had already been used twice, Picture Set A was replaced by Picture Set C at the delayed posttest.¹¹

4.8.2.4 Independent measure of general abilities in English

At the time of the delayed posttests, a global listening comprehension test developed by the Ministère d'Éducation du Québec (MEQ Test) was administered to learners in all three groups to obtain an independent measure of their general abilities in English. The test was developed for regular program learners in Secondary 3 (Grade 9) and has been used with hundreds of intensive program learners over the years (see Spada and Lightbown, 1989). The format of the MEQ test is multiple choice; there are four choices for each of the 53 items. While the tasks vary in each of the six sections, all require the learner to listen to recorded English statements, questions, or descriptions and to select the best picture, statement, or response written in English or French in their test booklets. (See Appendix D for a sample item from the MEQ test).

4.8.3 Enhancement activities questionnaire

During the first posttesting session immediately after the enhanced/unenhanced treatment period, learners completed a short questionnaire in French designed to investigate three aspects of the instructional treatment materials: the interest level of the activities; the level of difficulty of the texts; learners' reactions to the typographical enhancement. No quantitative analyses of these data were undertaken, but some of the findings are discussed in Chapter 6.

This completes the description of the research methodology used to investigate the role of typographical enhancement in the acquisition of third person singular PDs by children

learning ESL in an intensive program. The next chapter will present the analyses and results of the measures described here.

Endnotes for Chapter 4

1. The Ministry of Education of Quebec prohibits the teaching of curricular subjects such as maths, science, and social studies in English as a second language. For this reason, although most materials used in intensive ESL classes aim to be interesting and entertaining, concerns have been raised as to whether they are sufficiently challenging intellectually and academically (Weary, 1987). This is in contrast to French immersion, in which some or all of the curricular subjects are taught in the second language (for information about immersion programs, see Genesee, 1987).
2. Other intensive models are offered in different school boards. These are outlined in Watts and Snow, 1993.
3. Part B of the coding sheet is intended to be used with a recorded lesson.
4. This comparison of instructional features was not statistically analyzed since the amount of time spent in each teacher's classroom was not recorded precisely, and the activities that were observed in each class were not identical.
5. The researcher was granted the right to speak French on the second day of the session, when the students' comprehension skills were weak, in order to explain the research project to them and to give instructions for the baseline test and initial pretest. She was also permitted at later dates to give instructions in French for other tests if she felt it was necessary.
6. During the development of the materials, the teachers were consulted on the amount of class time that would be required for each multi-part activity, and on the basis of the teachers' suggestions, ten one-hour activities were developed. However, since these activities differed from those with which the teachers were familiar, they underestimated the time needed to complete them.
7. Due to time constraints, the teacher of Group E+ did not implement any book flood activities on the days that the input enhancement activities were carried out.
8. Due to time constraints, DEAR and Story Time were suspended during the shared reading project.
9. An alternative method for investigating the learners' knowledge of the target forms, namely interviewing them about the forms they had crossed out as Martens (1988) had done, was rejected because it risked increasing the explicitness of the treatment, thereby compromising the study.
10. Several changes were made after the pilot test: some items were reworded; the number of distracters was increased from three to four; and the format was changed slightly.

11. Picture Set A was piloted informally with adult native speakers of English and formally with ten grade 6 children (5 boys and 5 girls), all native speakers of English, in a French immersion class near Montreal. It was found to reliably elicit third person singular and possessive determiner forms with adults and children. Twelve For Better or For Worse cartoons were also piloted with the same children, and 4 were selected for Picture Set B because they elicited the target forms and because the grade 6 children found them funny. The six cartoons making up Picture Set C were selected from among the remaining 8 and from the books from which pilot set was taken (Johnston, 1977, 1985).

Chapter 5

Analyses and Results

5.0 Introduction

The chapter is divided into two main sections. Section 5.1 presents the results of the paper and pencil tests. Section 5.2 presents the results of the oral production measure. The second section is further divided into two subsections which correspond to the quantitative and qualitative analyses of the oral data. All analysis of variance (ANOVA) tables are presented in Appendix E. Discussion of the results is reserved for Chapter 6.

The analyses presented here examine within-subject and between-subject effects of the experimental treatment. There were several reasons for using a split-plot design. First, H 1 and H 2 predicted differences in performance among groups in relation to the treatment differences. In order to use post-hoc measures to determine whether significant differences were obtained between the predicted groups at each testing time, it was necessary to use one-way analysis of variance (ANOVA) and analysis of covariance (ANCOVA) procedures using immediate pretest scores as the covariate. Second, H 3 predicted that treatment differences would be maintained over time. Repeated measures ANOVAs permitted comparisons to be made between results at the immediate and delayed posttests on the written measures. However, repeated measures analyses could not be used on the oral data since different picture sets were used at the three test sessions. For this reason, the oral data were analyzed qualitatively, by means of a stage development framework, to examine development over

time.

In order to test for differences in rate of acquisition, trend analyses were carried out on dependent measures. The objective was to examine the groups for different patterns of learning (linear and quadratic trend) across the three testing sessions. For example, a set of data for which there is a significant positive linear and a negative quadratic trend shows a pattern of acquisition in which learning is greatest initially and slows over the second acquisition period. This would stand in contrast to a pattern which shows simply a positive linear trend and no quadratic trend, which would indicate a steady rate of learning over the measurement period. In the context of the current study, a trend showing a boost at the immediate posttest, followed by a leveling off at the delayed posttest, would indicate an effect for the pedagogical intervention used with that group.

Immediate and delayed posttest results were considered to be statistically significant at $p < .05$. However, when multiple one-way ANOVA and ANCOVA comparisons were made, the level of significance was lowered to $p < .01$ to account for the probability of a type-I error. Pretest results were considered to be significant at $p < .10$.

5.1 Paper and pencil tests

This section presents the results of the baseline tests and the three written tests that were used to determine the effects of typographically enhanced input, with and without extensive reading and listening, on the learners' acquisition of third person singular PDs.

5.1.1 Baseline tests

Listening comprehension test The 20-item Baldwin-Cartier *Test de classement* was

administered as a baseline measure to establish that there were no initial differences among the three treatment groups at the outset of the study. The mean scores of the three groups are presented in Table 5.1. Although the mean for Group U is higher than the means for Groups E+ and E, an ANOVA indicated that the differences are not significant [$F(2, 83) = 1.93$; $p = .15$] (Table 5.2, Appendix E). Thus the groups are considered to be at comparable levels of proficiency at the beginning of their five-month intensive ESL program.

Table 5.1

Mean scores in percent and standard deviations by group on Baldwin Cartier *Test de classement*

Group	N	Mean	SD
E+	27	33.15	8.68
E	30	35.17	12.21
U	29	39.66	16.09

5.1.2 Grammaticality judgement tests

5.1.2.1 Passage correction task

As indicated in Chapter 4, one version of the Passage Correction (PC) task was administered three times - at the pretest and both posttests. At each testing session, learners watched the short cartoon and then completed the task on which it was based. The task measured the learners' ability to identify the deviant target forms and to provide grammatical and contextually appropriate corrections for them. For example, the following sentence

appeared in the passage:

George took off your slippers.

The context established in the video required learners to change *your* to *his*. The item was only counted as a grammatical correction if *your* was crossed out and replaced with *his*.

The PC task included a total of 24 deviant third person singular pronouns and PDs and nine distracter items. Learners' corrections of all deviant target forms were coded in terms of grammaticality. To be counted as grammatical, a correction had to be a contextually appropriate pronoun or PD.

Incorrect spellings were coded as ungrammatical. Some learners in all three groups wrote *is* in one or more contexts requiring *his*. At the immediate pretest, 5 learners made this error (two from Group E+, three from Group E, two from Group U); at the immediate posttest, there were seven such learners (three from Group E+, two from Group E, and two from Group U); at the delayed posttest, there were three (one from Group E+ and two from Group E). Furthermore, at the delayed posttest, one learner from Group E wrote *he's* in contexts requiring *his*. Some would consider incorrect spellings to be grammatical (see, for example, Bissex, 1980; Chomsky, 1971). However, since spelling errors occurred rarely and to a similar extent in all three groups, a decision was made not to code them separately.

Three learners (one in Group E at the pretest and two in Group U at the delayed posttest) each replaced one deviant pronoun with a contextually appropriate proper noun. These changes were not coded as grammatical since the deviant form was considered to have established a context for the use of a pronoun.

Learners who crossed out a deviant form almost always attempted a correction. While it could be argued that crossing out a deviant form indicates sensitivity to its ungrammaticality, only 15 deviant forms were crossed out but not corrected by learners in the three groups at all three test administrations. For this reason, no analyses were carried out on the crossed-out-but-uncorrected forms.

Third person singular pronouns and possessive determiners The first analysis included all 24 deviant third person singular personal pronouns and PDs. The mean scores and standard deviations for grammatical corrections of deviant test items by group and time are shown in Table 5.3. Figure 5.1 presents the mean scores visually. The means are in the order predicted by the hypotheses: Group E+ outperformed Group E and Group U at all three test administrations, and Group E outperformed Group U on the immediate pretest and immediate posttest. Although the means for Groups E and U at the delayed posttest are identical, the lower standard deviation for Group E indicates less within group variability.

Table 5.3

Passage Correction Task - Mean out of 24: grammatical corrections of deviant third person singular personal pronouns and possessive determiners

Pretest

Group	N	Mean	SD
E+	27	5.70	5.32
E	30	4.10	4.21
U	28	3.86	4.28

Immediate Posttest

Group	N	Mean	SD
E+	27	13.44	6.06
E	30	10.03	5.93
U	29	8.10	6.90

Delayed Posttest

Group	N	Mean	SD
E+	27	15.52	5.78
E	30	13.83	6.61
U	29	13.83	7.31

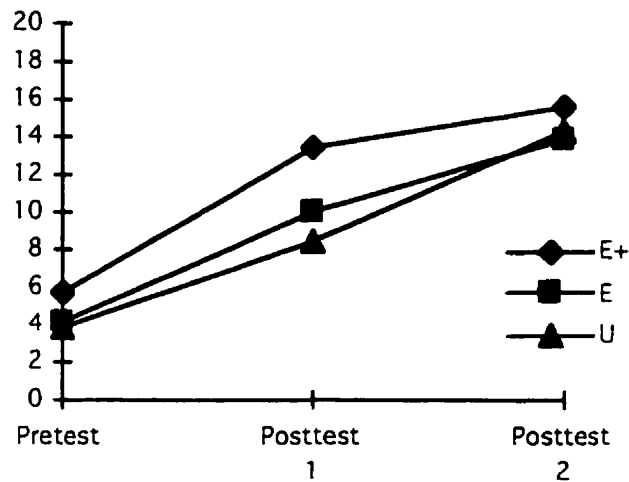


Figure 5.1. Mean scores for third person singular pronouns and possessive determiners, passage correction task.

An ANOVA showed that the only significant difference among groups was at the immediate posttest [$F(2,83) = 5.11$; $p = .01$]. Post hoc Tukey procedures showed that the difference was between Groups E+ and U (Table 5.4, Appendix E). An analysis of covariance (ANCOVA), using pretest scores as the covariate, was carried out to investigate whether the differences could be attributed to the stronger performance of Group E+ on the pretest. The results of the ANCOVA showed no significant differences at the immediate or delayed posttests ($p < .01$) (Table 5.5, Appendix E).

Repeated measures ANOVAs showed significant effects for time from pretest to delayed posttest [$F(2,164) = 191.40$; $p = .00$]. There was also a significant interaction between group and time [$F(4,166) = 2.55$; $p = .04$]. Furthermore, mean scores for all groups increased significantly between the immediate and delayed posttests. Increases were

significant at $p < .05$ for Group E+ and at $p < .00$ for Groups E and U (Table 5.6, Appendix E).

Third person singular pronouns As indicated in Chapter 3, while PDs were the primary linguistic features of this study, personal pronouns were also enhanced. On the PC task, personal pronouns were analyzed separately from PDs, and the results are reported here. As can be seen in Table 5.8, Group E+ outperformed Groups E and U at the immediate posttest. Group E+ gained the most and Group U the least from the immediate pretest to the immediate posttest. From the immediate to delayed posttests, however, this order is reversed. That is, Group U gained the most, and Group E+ gained the least. These trends are presented visually in Figure 5.2. ANOVA procedures showed a difference approaching significance (where $p < .01$) at the immediate posttest [$F(2,83) = 4.13$; $p = .02$]. Post hoc Tukey procedures revealed that these differences were between Groups E+ and E and Groups E+ and U (Table 5.9, Appendix E). An ANCOVA showed no significant differences at the immediate posttest: [$F(2,81) = 3.11$; $p = .05$] ANCOVA procedures also showed no significant between-group differences at the delayed posttest [$F(2,81) = 0.40$; $p = .67$] (Table 5.10, Appendix E).

Repeated measures ANOVAs showed that mean scores for all groups increased significantly between the immediate and delayed posttests. Increases were significant at $p < .05$ for Group E+ and at $p < .001$ for Groups E and U (Table 5.11, Appendix E).

Table 5.8

Passage correction task: grammatical corrections of deviant third person singular personal pronouns, mean out of 8

Pretest

Group	N	Mean	SD
E+	27	1.67	2.11
E	30	0.63	1.27
U	28	1.39	2.17

Immediate Posttest

Group	N	Mean	SD
E+	27	4.19	2.54
E	30	2.60	2.27
U	29	2.55	2.43

Delayed Posttest

Group	N	Mean	SD
E+	27	5.04	2.56
E	30	4.27	2.89
U	29	5.10	2.57

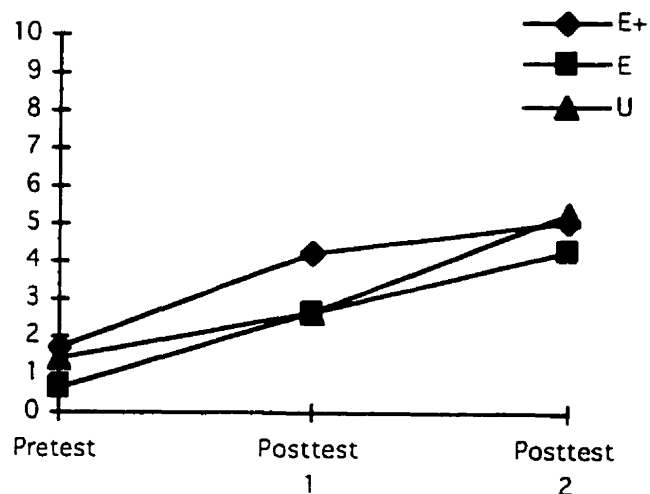


Figure 5.2. Mean scores for third person singular pronouns, passage correction task.

Possessive determiners Sixteen of the 24 deviant forms in the PC task involved contexts for third person PDs. There were eight contexts for *his* and eight contexts for *her*. One context for *his* and two contexts for *her* involved the kinship-different-gender domain.

When mean scores were compared between groups at each posttest, they were found to be in the order predicted by the hypothesis. That is, Group E+ outperformed Group E, which in turn outperformed Group U. Group means and standard deviations for grammatical corrections in contexts for *his* and *her* are shown in Table 5.12. Trends for *his* and *her* are presented visually in Figures 5.3 and 5.4.

Table 5.12

Passage correction task: grammatical corrections of deviant possessive determiners, contexts for *his* and *her*, mean out of 8

Pretest

Group	N	His	SD	Her	SD
E+	27	1.63	2.10	2.41	1.91
E	30	1.40	1.85	2.07	2.24
U	28	0.66	1.40	1.72	1.94

Immediate Posttest

Group	N	His	SD	Her	SD
E+	27	4.85	2.37	4.41	2.26
E	30	3.87	2.08	3.57	2.33
U	29	2.97	2.81	2.59	2.43

Delayed Posttest

Group	N	His	SD	Her	SD
E+	27	5.78	1.99	4.70	2.20
E	30	4.90	2.50	4.67	2.37
U	29	4.69	2.78	4.03	2.73

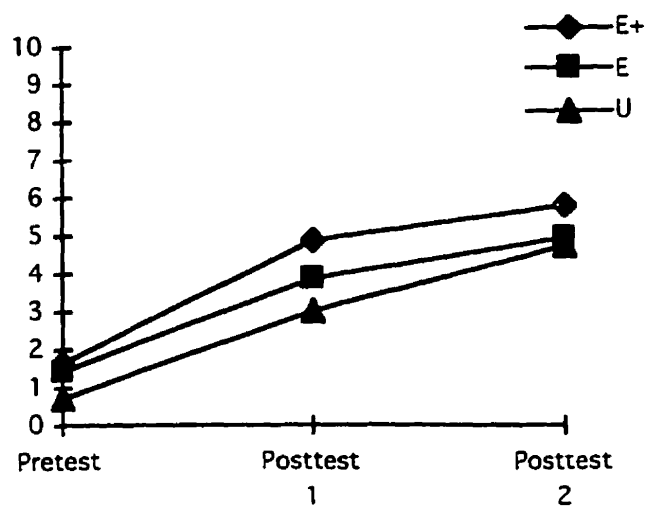


Figure 5.3. Mean scores for *his*, passage correction task

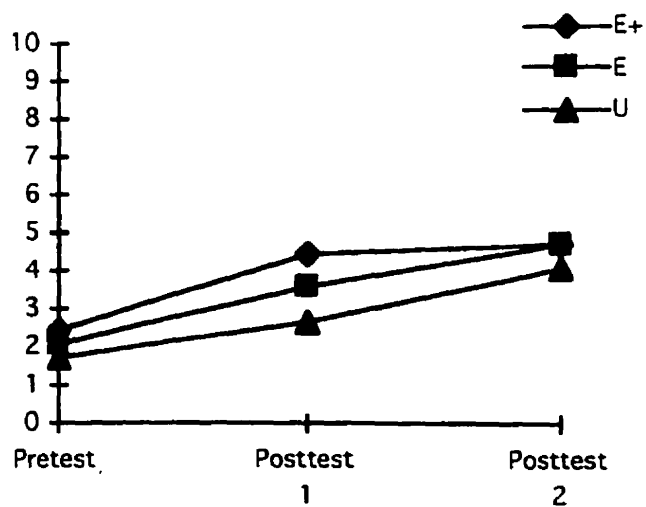


Figure 5.4. Mean scores for *her*, passage correction task

An ANOVA revealed a difference approaching statistical significance at the immediate posttest when $p < .01$ for *his* [$F(2,83) = 4.20$; $p = 0.02$.)] and for *her* [$F(2,83) = 4.25$; $p = 0.02$]. Post hoc Tukey procedures showed that in both cases, the differences were between Groups E+ and U. Results of the ANOVA are presented in Tables 5.13 and 5.14 (Appendix E).

When ANCOVA procedures were carried out on the immediate posttest data using the immediate pretest scores as the covariate, differences were not significant in the case of *his* [$F(2,82) = 2.42$; $p = .10$] (Table 5.15, Appendix E), and approaching significance in the case of *her* [$F(2,82) = 3.61$; $p = .03$] (Table 5.16, Appendix E). A Tukey post hoc test showed that this difference was between Group E+ and Group U. ANCOVA procedures carried out on the delayed posttest scores showed no significant between-group differences.

Repeated measures ANOVAs showed that for *his*, mean scores for all groups increased significantly between the immediate and delayed posttests. Increases were significant at $p < .05$ for Group E+ and at $p < .00$ for Groups E and U. However, for *her*, increases were significant for Groups E and U at $p < .00$, but not significant for Group E+ ($p = .47$) (Tables 5.17, 5.18, Appendix E).

Trend analyses were carried out on the passage correction task (Table 5.19, Appendix E). The polynomial contrasts were adjusted to compensate for the fact that the testing intervals were not equally spaced. These analyses show that certain aspects of the treatment initially boosted learning for all three groups. However, while all groups have significant linear trends, the quadratic trend is much more pronounced for Groups E+ and E than for

Group U, suggesting that the immediate treatment effects were strongest for the two enhanced input groups.

The number of learners in each group who correctly corrected all three items in which the natural gender of the possessor differed from the natural gender of the possessed kinship term is shown in Table 5.20. These data are of interest because they suggest that the learners may have been systematically applying the English PD agreement rule.

Table 5.20

Passage correction task - number of learners correctly correcting deviant forms in PD contexts (3 contexts for kin-different and 2 contexts for body parts)

Group	N	Pretest	Immediate posttest	Delayed posttest
Kin-different				
E+	27	1	8	10
E	30	1	9	12
U	29*	0	6	7
Body parts				
E+	27	1	5	4
E	30	1	5	8
U	29	0	0	5

*N=28 at pretest

The PC task included ten well-formed third person singular PDs, seven involving *his* and three involving *her*. In order to determine the extent to which learners made changes to well-formed PDs versus deviant ones, the number of learners demonstrating each type of behaviour was calculated. The results, which are presented in Table 5.21, indicate that few learners made changes to well-formed PDs while most learners in each group attempted to correct deviant forms. At all three test sessions, almost twice as many learners in Group U made changes to already-correct forms compared to learners in Group E+. In contrast to the analyses discussed previously, in which only grammatically correct and contextually appropriate corrections were counted, this analysis included correct and ungrammatical changes, as well as the few instances in which forms were crossed out, but not corrected.

Table 5.21

Passage correction task - number of learners in each group making one or more changes to well-formed and deviant possessive determiners

Group	N	Immediate Pretest		Immediate Posttest		Delayed Posttest	
		Well formed	Deviant	Well formed	Deviant	Well formed	Deviant
E+	27	6	26	7	27	3	27
E	30	8	27	10	30	11	30
U	29*	11	25	14	27	7	28

*N=28 at pretest

5.1.2.2 Truth value task

This task was designed to focus learners' attention on third person singular PD forms more narrowly than the PC task. It was administered twice. At the immediate pretest, 34 out of 86 learners, or 40% of the total number of learners in the three groups, had scores of 80% or higher. At the immediate posttest, 60 out of 86 learners scored at 80% or higher on this measure. Clearly this task was too easy for the learners in this study and could not serve as a reliable indicator of further growth. For this reason, the test was not administered again at the delayed posttest and no statistical analyses of the results were undertaken.

5.1.3 Multiple choice test

5.1.3.1. Initial pretest

As indicated in Chapter 4, a multiple choice test was administered at the same time as the Baldwin-Cartier *Test de classement* as an initial pretest at the beginning of the five-month intensive ESL session (see 5.1.1). It included pronouns and PDs in all persons and cases, with plural as well as singular forms. Results from a pilot version of this test had confirmed that francophone children in grade 6 have considerable difficulty with personal pronouns and PDs. The revised version of the test was administered to the three groups in this study. The group means and standard deviations are shown in Table 5.22. An ANOVA showed no significant differences among the groups [$F(2,83) = 0.08$; $p = .92$]. The results of the analysis are presented in Table 5.23 (Appendix E).

Table 5.22

Multiple choice test, initial pretest- group means out of 42

Group	N	Mean	SD
E+	27	20.26	4.88
E	30	19.77	5.02
U	29	20.21	5.58

5.1.3.2. Immediate pretest, immediate posttest and delayed posttest scores: third person singular pronouns and possessive determiners

The 24 multiple choice items on the immediate pretest and immediate and delayed posttests were restricted to third person singular forms of the personal pronouns and PDs. The mean scores and standard deviations are shown in Table 5.24. This information is represented visually in Figure 5.5. The higher scores obtained by Group E+ at all three test administrations and the lower SD at both posttests suggests an advantage for this group over Groups E and U. However, ANOVA procedures revealed that the only statistically significant difference was at the immediate posttest [$F(2,83) = 4.84$; $p = .01$]. Post hoc Tukey procedures showed that the significant difference was between Groups E+ and U. The results of these analyses are presented in Table 5.25 (Appendix E). An ANCOVA revealed that when the pretest scores were used as the covariate, the immediate posttest results were no longer significant [$F(2,81) = 2.95$; $p = .06$]. There were also no significant differences at the delayed posttest [$F(2,81) = 0.86$; $p = .43$] (Table 5.26, Appendix E).

Table 5.24

Multiple choice test; group scores out of 24

Pretest

Group	N	Mean	SD
E+	27	14.52	5.83
E	30	12.87	6.02
U	28	12.07	4.79

Immediate Posttest

Group	N	Mean	SD
E+	27	19.67	3.67
E	30	16.57	5.73
U	29	15.41	5.98

Delayed Posttest

Group	N	Mean	SD
E+	27	20.37	3.84
E	30	18.50	5.69
U	29	19.03	5.36

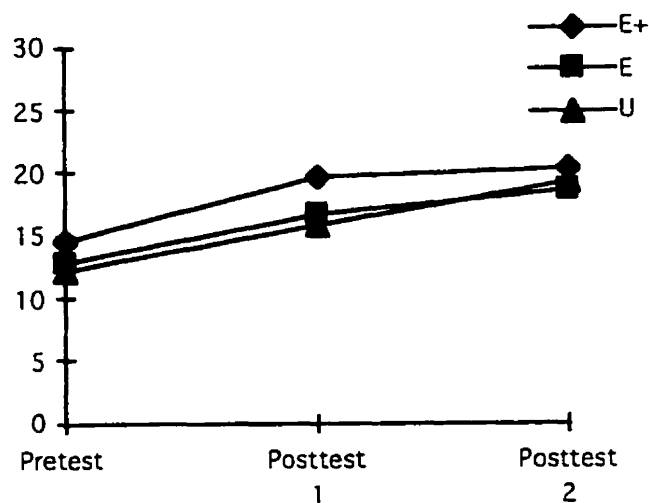


Figure 5.5. Mean scores for multiple choice test

The high mean scores suggest that the multiple choice test was too easy for the learners following the treatment period. At the immediate posttest, Group E+ was approaching the maximum of 24, and this group gained only 0.63 points between the immediate and delayed posttests, as compared to Group E, which gained 1.93 points and Group U, which gained 3.62 points. Seven learners in Group E+, four in Group E, and six in Group U had scores of 23 or 24 at the immediate posttest. By the delayed posttest, eleven learners in Group E+, ten in Group E, and ten in Group U had scores of 23 or 24. Repeated measures ANOVA procedures showed significant effects for time from the immediate pretest to the delayed posttest [$F(2,164) = 99.30; p = .00$]. There was no significant interaction between-group and time [$F(4,164) = 1.90; p = .11$] (Table 5.27, Appendix E). Gains between the immediate and delayed posttests were not significant for Group E+ [$F(1,26) =$

1.85; $p = .19$] although they were significant for Group E [$F(1,29) = 10.17$; $p = .00$] and for Group U [$F(1,28) = 24.71$; $p = .00$] (Table 5.28, Appendix E).

A trend analysis showed that Group E+ experienced the greatest initial boost from the treatment (Table 5.18, Appendix E). However, because of the ceiling effect, no further statistical analyses were carried out on these data.

5.1.4 Effects of the treatment: performance on paper and pencil tasks

The data presented in this section show that the only differences at or approaching significance were between Group E+ and Group U, rather than between Group E and Group U, as predicted by Hypothesis 1, or between Group E+ and Group E, as predicted by Hypothesis 2. These differences were not significant when pretest results were taken into account. Furthermore, significant differences at the delayed posttest, as predicted by Hypothesis 3, were not found. These data were obtained in the paper and pencil tasks. It is perhaps more interesting to look at the oral data, which were analyzed quantitatively and qualitatively.

5.2 Oral production measure

An oral picture description task was administered to each learner individually. Three different picture sets were used in the following combinations: Set A was used at the immediate pretest; Sets A and B were used at the immediate posttest; Sets B and C were used at the delayed posttest. The analyses of the oral data took into account the contexts that each

learner established within each utterance for the use of third person singular personal pronouns and PDs. Each of the target forms was coded for grammaticality, that is, whether or not it was supplied, and if so, whether it was used correctly or incorrectly in context.¹ In addition, each context requiring a PD was coded according to whether the possessed entity was inanimate, animate, or a body part. Two subcategories were established for coding animate entities: kinship terms, same gender (kin-same), referring to instances when the natural gender of the possessor and the grammatical and natural genders of the possessed entity were the same (e.g. *his* father, *her* mother), and kinship terms, different gender (kin-different), referring to instances when they were different (e.g. *her* father, *his* mother).² See Appendix F for the coding sheet that was used in this analysis.

For each of the target forms, quantitative analyses were carried out on the oral production data at the immediate pretest, immediate posttest and delayed posttest. These consisted of frequency counts and accuracy ratios. It became apparent that for PDs, a qualitative analysis was also needed in order to provide a more precise picture of the learners' acquisition of these forms. To do this, an analysis of PDs in terms of developmental stages was conducted on these data. These two types of analyses provide different, but complementary, information about the use of PDs by learners in each group at three different points in the study.

5.2.1. Quantitative analyses

Frequency of use

The first analysis was carried out to determine whether the three treatments had different effects on the number of personal (subject and object) pronouns and PDs that learners used to describe Picture Set A. The number of grammatical and ungrammatical target forms that learners produced immediately before and after the two week enhanced/unenhanced input treatment period are compared in Table 5.29. This table shows that learners in all groups produced more personal pronouns and PDs at the immediate posttest and that the increase in grammatical forms was greater than the increase in ungrammatical forms.

Group E+ showed the greatest increase in grammatical subject and object forms. The increased use of grammatical and ungrammatical forms is shown graphically in Figure 5.6. ANCOVAs using pretest frequencies as the covariate revealed that at the immediate posttest, the groups were not significantly different with respect to the number of grammatical forms used [$F(2,82) = 2.04$; $p = .14$]. There was also no significant difference with respect to ungrammatical forms [$F(2,82) = 1.90$; $p = .16$] (Tables 5.30, 5.31, Appendix E).

Group E+ also showed the greatest increase in grammatical PD forms. The increased use of grammatical and ungrammatical forms is shown graphically in Figure 5.7. An ANCOVA, using pretest frequencies as the covariate, revealed that at the immediate posttest, when multiple comparisons were taken into account ($p < .01$), the greater number of grammatical personal pronouns used by Group E+ was not statistically significant [$F(2,82) =$

3.64; $p = .03$] (Table 5.32, Appendix E). Results of an ANCOVA for ungrammatical uses showed no significant differences among groups [$F(2,82) = 1.09$; $p = .34$] (Table 5.33, Appendix E).

A similar comparison was made for frequencies of grammatical and ungrammatical personal pronouns used to describe Picture Set B, which was used at the immediate and delayed posttests. The mean frequencies are presented in Table 5.34, and the information is presented graphically in Figure 5.8 and Figure 5.9. ANOVA procedures show a significant between-group difference in the number of grammatical subject and object pronouns used at the immediate posttest ($p = .00$). However, these differences disappeared when the immediate posttest scores were used as the covariate. ANCOVA procedures showed no significant between-group differences at the delayed posttest ($p < .01$) (Tables 5.35-5.38, Appendix E).

Table 5.29

Mean number of grammatical and ungrammatical uses of third person singular subject and object pronouns and possessive determiners used with Picture Set A at immediate pretest and immediate posttest, picture description task

Grammatical Uses

Subject and Object Pronouns

Group	Pretest	Immediate Posttest	Gain Scores
E+	1.85	5.11	3.26
E	1.20	2.93	1.73
U	3.34	5.90	2.56

Possessive Determiners

Group	Pretest	Immediate Posttest	Gain Scores
E+	2.11	8.48	6.37
E	2.30	5.47	3.17
U	1.62	5.86	4.24

Ungrammatical Uses

Subject and Object Pronouns

Group	Pretest	Immediate Posttest	Gain Scores
E+	1.33	2.37	1.04
E	0.67	1.73	1.06
U	1.45	1.38	-.07

Possessive Determiners

Group	Pretest	Immediate Posttest	Gain Scores
E+	3.11	3.19	0.08
E	2.73	4.20	1.47
U	3.03	4.10	1.07

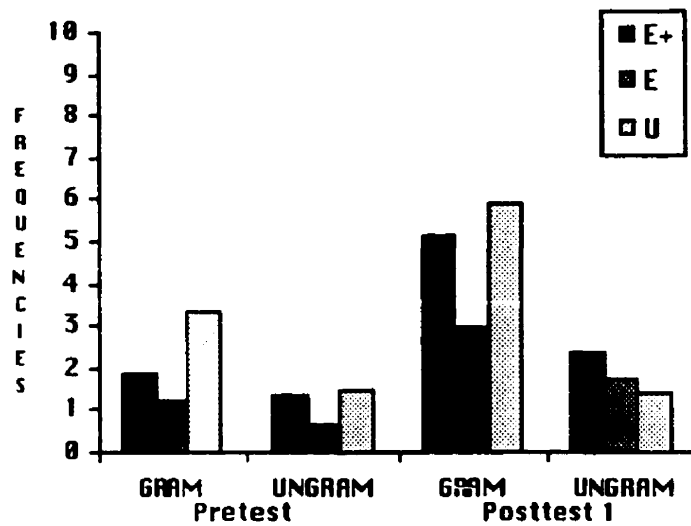


Figure 5. 6. Mean number of grammatical or ungrammatical subject and object pronouns, Picture Set A

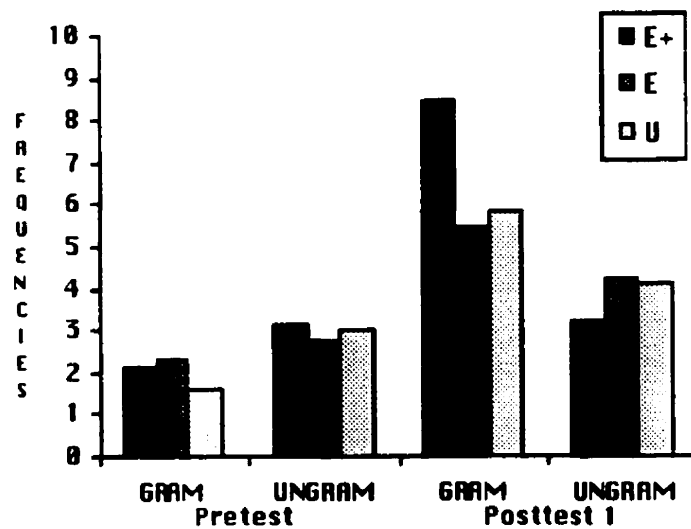


Figure 5. 7. Mean number of grammatical or ungrammatical third person singular possessive determiners, Picture Set A

Table 5.34

Mean number of grammatical and ungrammatical uses of third person singular subject and object pronouns and possessive determiners used with Picture Set B at immediate posttest and delayed posttest, picture description task

Grammatical Uses

Subject and Object Pronouns

Group	Immediate posttest	Delayed Posttest	Gain Scores
E+	9.37	12.33	2.96
E	4.07	7.00	2.93
U	10.48	10.83	0.35

Possessive Determiners

Group	Immediate posttest	Delayed Posttest	Gain Scores
E+	5.85	6.07	0.22
E	4.77	5.67	0.90
U	5.03	5.86	0.83

Ungrammatical Uses

Subject and Object Pronouns

Group	Immediate posttest	Delayed Posttest	Gain Scores
E+	2.52	1.48	-1.04
E	1.03	1.53	-0.50
U	2.24	1.24	-1.00

Possessive Determiners

Group	Immediate posttest	Delayed Posttest	Gain Scores
E+	4.81	4.85	0.04
E	5.10	4.57	-0.53
U	5.55	4.24	-1.31

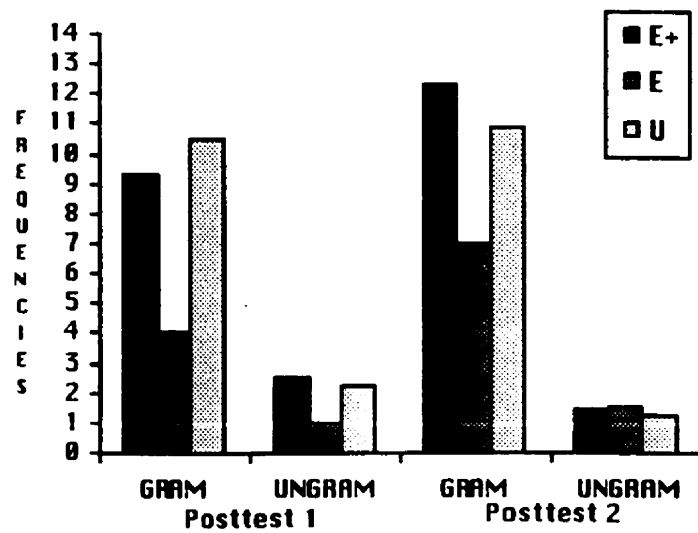


Figure 5. 8. Mean number of grammatical or ungrammatical subject and object pronouns, Picture Set B

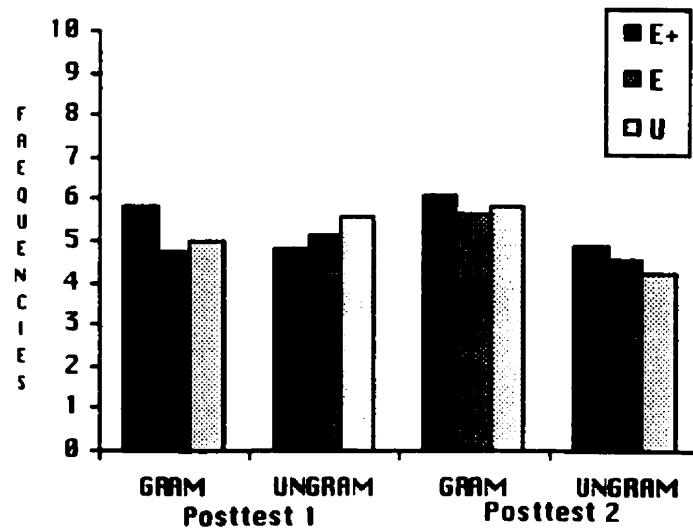


Figure 5. 9. Mean number of grammatical or ungrammatical third person singular possessive determiners, Picture Set B

Accuracy ratios

The most striking characteristic of the oral production data was the enormous variability in the use of personal pronouns and PDs. It was frequently the case that learners referred to one person or thing using both grammatical and ungrammatical third person singular target forms in a single picture description. In the case of PDs, learners often used *his* and *her* along with zero forms or the developmentally earlier forms *the* and *your*. In the following examples from the immediate posttest, each form that was coded is underlined.

- a) In a context for *he*, this learner began with *she* and switched to *he* during the description:

Learner Uh, the, the boys, uh, fell down, and uh, uh she's hurt and uh arrive at home and he said "Mom" and uh say... he said "Mom" nothing and uh, he uh he, he, he cry and uh, "I fell down." (crying voice)

- b) Another learner used *her* in a context for *his* after using *his* correctly:

Learner He go in the..in his room to said "Goodnight" and the snake is beside her bed.

- c) This learner used both *your* and *her* in the same sentence in a context for *her*.

Learner Ok, the, the girl ah make up ah in her face and ah not just in your face and ah all her body.

d) Sometimes learners revealed that their hypotheses about *his* and *her* were exactly reversed, as in this example. Note that the learner did not pick up on the interviewer's unintended cue:

- | | |
|-------------|--|
| Interviewer | So what is the girl doing to celebrate <i>her</i> birthday? |
| Learner | Go at the zoo with <u>his</u> big sister and <u>his</u> father and they look the giraffe. |
| Interviewer | Okay, good. And what does the boy do? |
| Learner | Uh, in <u>her</u> hand <u>he</u> has a balloon and <u>he</u> go uh at the stadium with the Expo. |
| Interviewer | Who is he with? |
| Learner | With <u>her</u> little brother and <u>the</u> mother. |

Accuracy ratios offered one way to describe this variability. They were calculated by dividing the number of grammatical uses by the total number of obligatory contexts that an individual established during the task (i.e. the sum of the total number of grammatical and ungrammatical uses and omissions). In this study, only those learners who established one or more contexts for a particular form were included in the group accuracy ratio calculations for that form. For this reason, the N values vary in the tables below.

Data were combined from Picture Sets A and B at the immediate posttest and from Picture Sets B and C at the delayed posttest. Before these data were combined, one-way ANOVAs were carried out separately on the accuracy data for Picture Sets A and B at the

immediate posttest and for Picture Sets B and C at the delayed posttest. In cases where between group accuracy ratios were different (that is, significant in the case of one picture set and non-significant in the case of the other set), the differences could be attributed to the different opportunities for masculine and feminine forms that are inherent in the pictures sets.

Specifically, while the numbers of male and female parents and children are equally balanced in Picture Set A, this is not the case with Picture Sets B and C. Picture Set B depicts four males (two of them children) and six females (2 of them children). Picture Set C shows two male and five female adults and eight children. Five of the children are clearly identified as boys, while the three others were considered by the researcher to be androgynous. Two factors appear to have contributed to increasing the effect of the gender imbalance in Picture Set C. First, most learners assumed that the more androgynous children were boys. Second, learners overwhelmingly described the problems represented in the cartoons from the perspective of the child or children involved. As a result, learners created more contexts for masculine pronouns and PDs than for feminine forms in Picture Set C, but not in Picture Set B, where the gender of the children was apparently not ambiguous. This outcome was not anticipated although it could perhaps have been foreseen if Picture Set C had been pilot tested as were Picture Sets A and B. Nonetheless, most analyses were carried out on the combined data since the combined sets at the two posttests resulted in a larger data base, and the same pictures were used to elicit data from all three experimental groups.

Subject and object pronouns Accuracy ratios for third person singular personal pronouns (subject and object) were calculated separately from PDs. Furthermore, because

the task provided many opportunities for learners to use subject pronouns, and few contexts for object pronouns, subject and object pronouns were analyzed separately. Table 5.39 shows a pattern of increasing accuracy and use of subject pronouns for all groups from pretest to delayed posttest. By the delayed posttest, subject pronoun accuracy ratios were above 80% for learners in all three groups. The increases were greater between the immediate and delayed posttests than between the pretest and immediate posttest. ANOVA procedures carried out on these data revealed no significant differences among the groups at any of the test administrations: pretest [$F(2,60) = 0.43$; $p = .65$]; immediate posttest, [$F(2,81) = 1.14$; $p = .32$]; delayed posttest [$F(2,83) = 1.68$; $p = .19$] (Table 5.40, Appendix E).

Table 5.39 shows a different pattern for object pronouns. First, these forms were not used by all learners although the number of learners who used them increased at each test administration. Second, accuracy decreased from the immediate to delayed posttests for Groups E+ and E. However, since the picture description task was not designed to elicit third person singular object forms, the decrease, along with the fact that learners used many more subject pronouns and PDs than object pronouns during their picture descriptions, may say more about the task and about the pictures in each picture set than about learners' ability to use object pronouns. ANOVA procedures are reported in Table 5.41 (Appendix E) and are summarized here: pretest [$F(2,14) = .05$; $p = .95$]; immediate posttest, [$F(2,27) = 1.52$; $p = .24$]; delayed posttest [$F(2,49) = 1.99$; $p = .15$]. Since these forms were not the target features of the study and no differences were apparent, no ANCOVAs were carried out on subject or object pronouns.

Table 5.39

Accuracy ratios for personal pronouns in picture description task

Pretest

Group	N	Subject pronouns	N	Object Pronouns
E+	21	.61	6	.60
E	18	.52	6	.67
U	24	.63	5	.58

Immediate Posttest

Group	N	Subject pronouns	N	Object Pronouns
E+	27	.70	13	.69
E	28	.60	6	.42
U	29	.67	11	.77

Delayed Posttest

Group	N	Subject pronouns	N	Object Pronouns
E+	27	.89	23	.49
E	30	.82	12	.38
U	29	.90	17	.70

Possessive determiners Accuracy ratios were calculated for PDs in two ways: according to gender and according to domain.

Gender As noted in Chapter 3, Zobl (1985) and Martens (1988) found that learners overgeneralized *his* more than they overgeneralized *her* and speculated that they may have found the feminine form more difficult than the masculine. In the context of the current study, this suggests that a group with high accuracy ratios for both *his* and *her* would be developmentally more advanced than a group with a similarly high accuracy ratio for *his* and a lower ratio for *her*.³

Table 5.42 shows a pattern for all groups of increasing accuracy on *his* from the pretest to the immediate and delayed posttests. A different pattern is shown for *her*: learners in all three groups increased in accuracy immediately after the two-week treatment period; however, Groups E+ and E fell back to pretest levels at the delayed posttest while Group U remained at the immediate posttest level. Figure 5.10 represents this information visually.

ANOVA procedures carried out on these data revealed differences approaching significance in accuracy with respect to *his* at the pretest [$F(2,66) = 4.01$; $p = .02$]. Tukey post hoc comparisons showed that these differences were between Groups E and U. At the immediate posttest, differences were also approaching significance [$F(2,83) = 4.17$; $p = .02$]. Tukey post hoc procedures showed that the differences were between Groups E+ and U. These results indicate an initial advantage for Group E with respect to accuracy on *his*. There are no significant differences in accuracy with *his* at the delayed posttest [$F(2,83) = 1.64$; $p = .20$] (Table 5.43, Appendix E). ANCOVAs using pretest scores as the covariate

showed no significant differences at the immediate or delayed posttests ($p < .01$). No differences were significant for *her* on any of the test administrations: pretest [$F(2,64) = 0.21$; $p = .81$]; immediate posttest [$F(2,83) = 0.43$; $p = .65$]; delayed posttest [$F(2,83) = 2.63$; $p = .08$] (Table 5.44, Appendix E).

Table 5.42

Accuracy ratios for his and her in picture description task

Pretest

Group	N	HIS	N	HER
E+	20	.23	21	.44
E	25	.35	22	.48
U	24	.07	24	.39

Immediate Posttest

Group	N	HIS	N	HER
E+	27	.56	27	.59
E	30	.34	30	.54
U	29	.30	29	.64

Delayed Posttest

Group	N	HIS	N	HER
E+	27	.67	27	.44
E	30	.59	30	.50
U	29	.50	29	.65

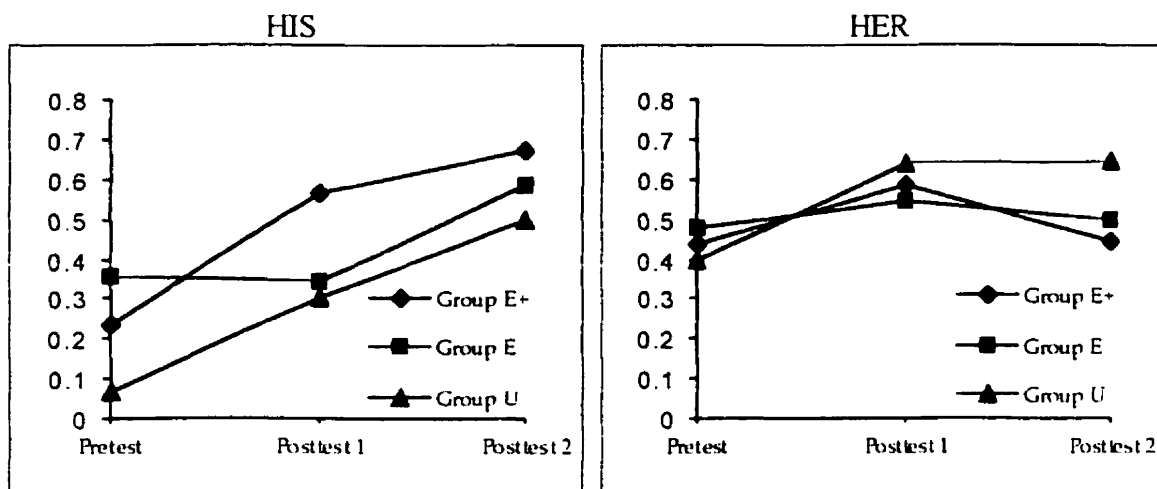


Figure 5.10. Accuracy ratios for *his* and *her* in picture description task

When accuracy ratios for *his* and *her* were compared, learners in all groups were found to be more accurate on *her* than on *his* at the pretest. This was the case for learners in Groups E and U at the immediate posttest, and for those in Group U at the delayed posttest. One explanation for this finding at the immediate posttest may be found in the higher frequency of *her*, as compared to *his*, in the enhanced and unenhanced input treatment materials (see Chapter 4). It is possible that learners in Groups E and U were more affected than those in Group E+ by this imbalance due to Group E+'s exposure to an additional flood of rich, presumably gender-balanced input through the book program. The fact that the accuracy rates for *his* and *her* are similar for Groups E+ at the immediate posttest offers some support for this argument. It is noteworthy that the greater accuracy on *her* shown by all groups at the immediate pretest contradicts Zobl's and Martens' claim referred to above.

Domain Zobl (1984, 1985) found learners to have more difficulty with possession involving kinship entities than with possession involving inanimate entities and body parts. In this study, accuracy ratios were calculated for each of the following domains: 1) inanimate entities; 2) possessed kinship, same gender; 3) possessed kinship, different gender; 4) body parts. The purpose was to determine whether any group was significantly more accurate in the domain that was presumed to be the most difficult, namely kinship, different gender.

Table 5.45 shows an overall pattern of increased accuracy for all groups in the four domains across the three test administrations. Figure 5.11 represents this information graphically.

Table 5.45

Accuracy ratios for third person singular possessive determiners in four domains in picture description task

Pretest

Group	N	Inanimate	N	Kin- same	N	Kin- diff.	N	Body parts
E+	10	.47	12	.35	15	.42	20	.26
E	13	.50	11	.50	13	.37	23	.42
U	14	.49	9	.34	16	.40	25	.18

Immediate Posttest

Group	N	Inanimate	N	Kin- same	N	Kin- diff.	N	Body parts
E+	23	.75	25	.70	25	.64	27	.48
E	23	.56	25	.67	25	.50	30	.40
U	27	.49	25	.63	23	.60	29	.41

Delayed Posttest

Group	N	Inanimate	N	Kin- same	N	Kin- diff.	N	Body parts
E+	22	.78	27	.69	27	.71	27	.45
E	29	.77	26	.68	30	.58	30	.47
U	27	.77	25	.74	26	.57	29	.44

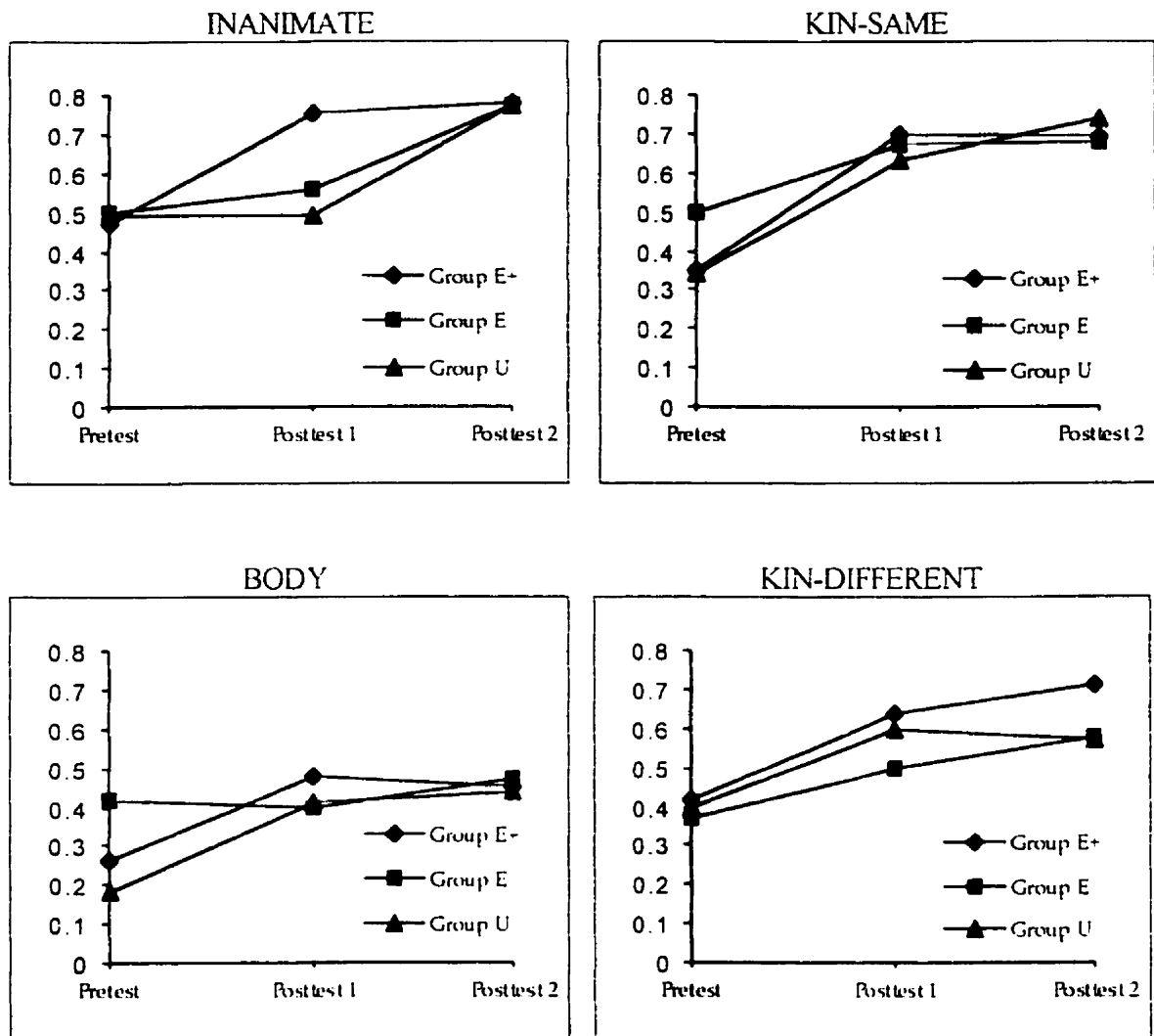


Figure 5.11. Accuracy ratios for third person singular possessive determiners in four domains in picture description task

The results of separate ANOVAs calculated within each domain revealed no statistically significant differences among the groups on any of the test administrations: inanimate - pretest [$F(2,34) = 0.01$; $p = .99$], immediate posttest [$F(2,70) = 3.12$; $p = .05$], delayed posttest [$F(2,78) = 0.00$; $p = .99$]; kin-same pretest [$F(2,29) = 0.50$; $p = .61$],

immediate posttest [$F(2,72) = 0.26; p = .77$], delayed posttest [$F(2,75) = 0.20; p = .82$]; kin-different [$F(2,41) = 0.05; p = .95$], immediate posttest [$F(2,70) = 1.41; p = .25$], delayed posttest [$F(2,80) = 1.12; p = .33$]; body parts [$F(2,65) = 2.08; p = .13$], immediate posttest [$F(2,83) = .71; p = .50$], delayed posttest [$F(2,83) = .16; p = .85$] (Tables 5.46-5.49, Appendix E). ANCOVAs using pretest scores as the covariate showed no significant differences in any domain at the immediate and delayed posttests.

It is noteworthy that at the delayed posttest, the accuracy orders for the three groups were similar:

Group E+	inanimate	>	kin same kin different	>	body parts
Group E	inanimate	>	kin same	>	kin different > body parts
Group U	inanimate kin same	>	kin different	>	body parts

Accuracy ratios were the lowest in the body parts domain. The data show that many learners continued to use the definite article with body parts after they had begun to mark gender in other domains. This finding lends support to Zobl's (1985) claim that the effects of transfer from French are the most enduring in the body parts domain.

Within the human domain, kin-different appears to have been more difficult than kin-same at the delayed posttest for Groups E and U. Recall that the kinship different gender domain is the one which provides the most information about the learner's control of the English agreement rule. That is, while learners who use the French rule can produce correct

PD forms in the kinship same gender domain, they must use the English rule in order to produce correct forms at an above-chance level in the kinship different gender domain. The finding that at the delayed posttest, Group E+ was considerably, though not significantly, more accurate in the kinship different gender domain than Groups E and U suggests a developmental advantage for Group E+. To explore this potential advantage further, a qualitative analysis of these data was undertaken.

5.2.2 Qualitative analyses

To investigate whether there were developmental differences between the groups in terms of their use of PDs, a stage analysis was carried out on the oral production data. The framework for the stage analysis is based on the developmental sequence inferred from accuracy calculations by Zobl (1984, 1985) and Lightbown and Spada (1990). It consists of eight developmental stages that describe a francophone learner's acquisition of control of the English agreement rule for third person singular PDs. It accounts for data in which instances of immature forms coexist with mature forms, sometimes in the same picture description. The stages are shown in Table 5.50. The elaborated version used for coding the data can be found in Appendix F.

Table 5.50

Developmental sequence in the acquisition of the English agreement rule for possessive determiners by francophone learners: Adapted from Zobl (1984,1985); Lightbown and Spada (1990)

Stage 1	pre-emergence: avoidance of <i>his</i> and <i>her</i> and/or use of definite article
Stage 2	pre-emergence: use of <i>your</i> for all persons, genders and numbers
Stage 3	emergence of either or both <i>his</i> and <i>her</i>
Stage 4	preference for <i>his</i> or <i>her</i> (accompanied by over generalization to contexts for the other form)
Stage 5	differentiated use of <i>his</i> and <i>her</i> (not with kin-different gender)
Stage 6	agreement rule applied to either <i>his</i> or <i>her</i> (kin-different gender)
Stage 7	agreement rule applied to both <i>his</i> and <i>her</i> (kin-different gender)
Stage 8	error-free application of agreement rule to <i>his</i> and <i>her</i> (all domains, including body parts)

The following assumptions apply to the developmental framework: 1) stages are based on emergence criteria, and behaviour characteristic of earlier stages may be present in later stages;⁴ 2) the criterion in stages 3-8 is four grammatical uses in different linguistic contexts regardless of the number of ungrammatical instances that may also be present;⁵ 3) the use of PDs with possessed body parts is not considered in stages 1-7.

Table 5.51 shows the distribution of learners in each stage. Figure 5.12 represents this information graphically.

Many learners in all three groups made considerable developmental progress over the two-week instructional treatment period. Whereas the majority were at pre-emergence stages (Stages 1-2) at the immediate pretest, 80% or more of all learners were using gender-marked

forms (Stages 3-7) at the immediate posttest. Although the distribution patterns suggest that Group E+ learners initially benefited more from their instructional treatment than did learners in Groups E and U, the differences were not statistically significant (chi square $p=0.75$). By the delayed posttest five weeks later, the distribution patterns for the three groups were similar: most learners showed a clear preference for one form, either *his* or *her* (Stage 4); a few remained in the pre-emergence and emergence stages (Stages 1-3); and a third of the learners showed an ability to differentiate between *his* and *her* in some linguistic contexts (Stages 5, 6 and 7). No learner in any group demonstrated native-like control of the English rule for PDs (Stage 8).

Table 5.51

Stage development, number of learners per group in picture description task**Pretest**

Group	N	Stages							
		1	2	3	4	5	6	7	8
E+	27	14	4	3	6	0	0	0	0
E	30	12	4	8	5	0	0	1	0
U	29	16	5	3	5	0	0	0	0

Immediate Posttest

Group	N	Stages							
		1	2	3	4	5	6	7	8
E+	27	2	1	1	10	2	1	10	0
E	30	3	3	4	9	2	4	5	0
U	29	4	2	2	12	1	2	6	0

Delayed Posttest

Group	N	Stages							
		1	2	3	4	5	6	7	8
E+	27	1	0	2	14	1	5	4	0
E	30	1	1	3	14	1	3	7	0
U	29	1	1	4	13	1	3	6	0

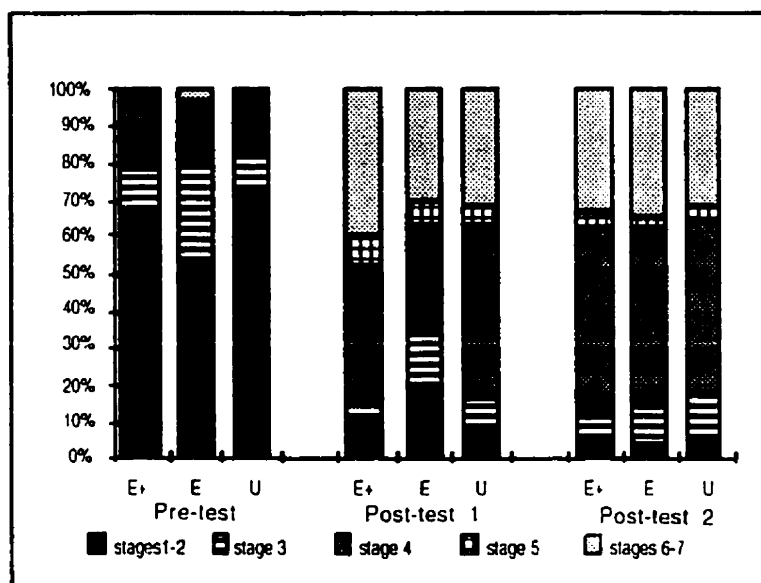


Figure 5.12. Stage development of third person singular possessive determiners at three test sessions

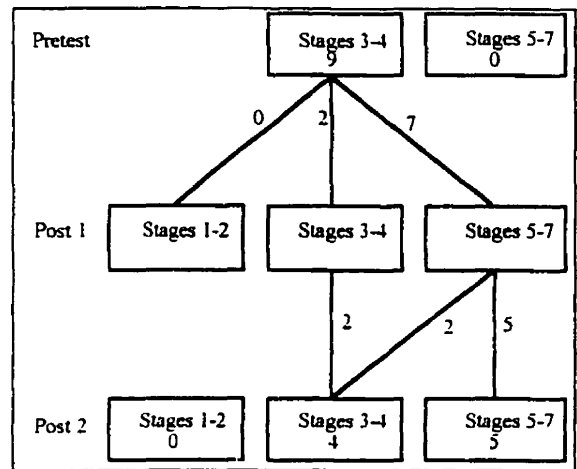
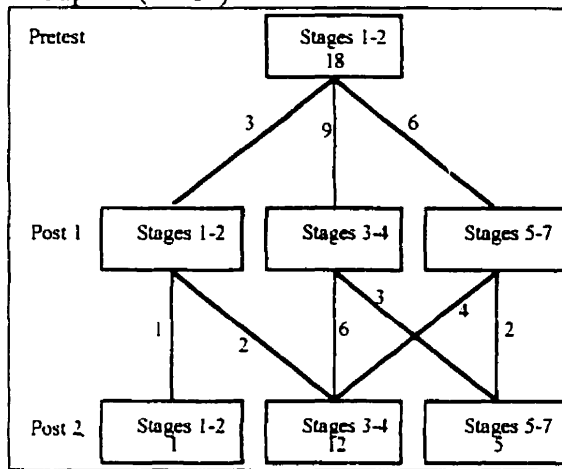
Figure 5.13 shows that learners in this study followed a number of different developmental paths (See Appendix F regarding individual learners). Some moved forward gradually from the immediate pretest to the immediate and delayed posttests. Others moved forward rapidly; of these, some moved back to developmentally earlier stages at the second posttest while others maintained their gains. A few learners in each group remained at their pretest stages throughout the study. For example, of the 18 learners in Group E+ who began at Stages 1-2, three remained at Stages 1-2, nine moved to Stages 3-4, and 6 advanced to Stages 5-7 at the immediate posttest. One learner never advanced beyond Stages 1-2. Four of the learners who went to Stages 5-7 went back to Stages 3-4 at the delayed posttest. Of the

nine learners who went to Stages 3-4 at the immediate posttest,, six stayed there while three went ahead to Stages 5-7 at the delayed posttest.

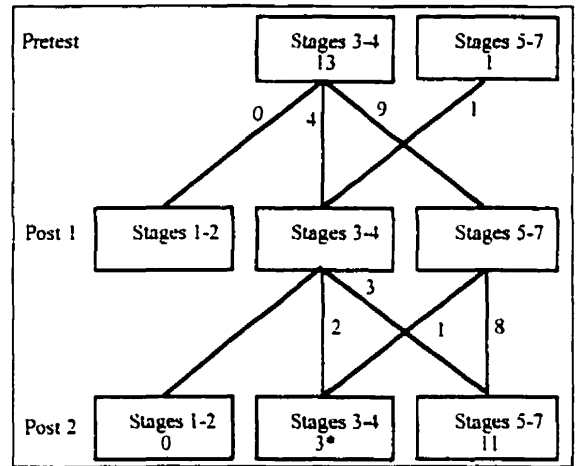
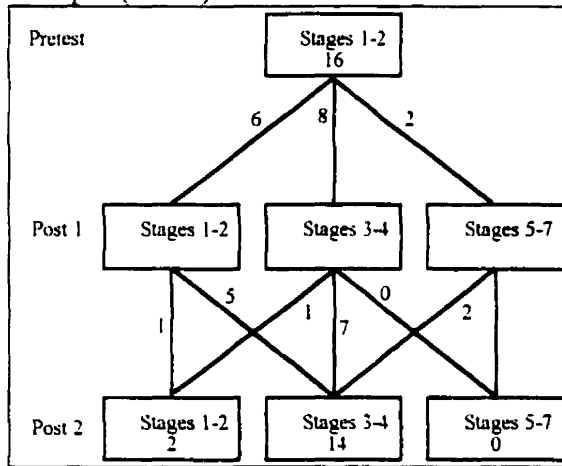
These different paths appear to be related to the learner's developmental stage at the time the enhanced/unenhanced treatment period began. Of the 55 learners who started out at the pre-emergence stages, 5 (9%) were still at Stage 1 or 2 at the delayed posttest, 39 (71%) were at Stage 3 or 4, and 11 (20%) were at Stages 5-7. Of the 30 learners who started out at Stage 3 or 4, 11 (37%) were at Stage 4 at the delayed posttest, and 21 (70%) were at stages Stage 5-7. Regardless of the starting point, however, there was considerable variation in the developmental paths that individual learners took.⁶

Fourteen of the 33 learners who were at Stages 5-7 at the immediate posttest "regressed" to Stage 4 at the delayed posttest. These learners dropped the gender distinction and overgeneralized one form, usually *his*. Nine (64%) of the learners who did this were at Stages 1-2 at the immediate pretest.

Group E+ (N=27)



Group E (N=30)



*includes 1 student from Stage 7 at pretest

Group U (N=29)

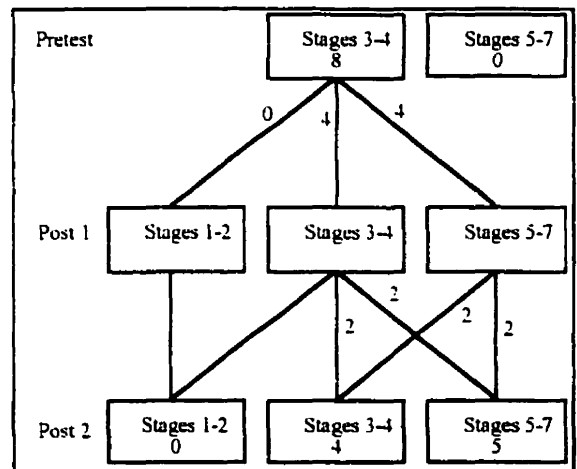
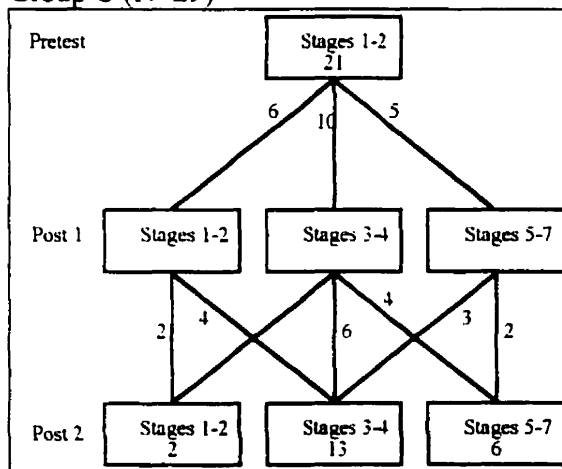


Figure 5.13 Development paths for third person singular possessive determiners

5.2.3 Effect of the treatment: performance on the oral production task

Like the paper and pencil tasks, the oral data do not reveal the between-group differences that were predicted by the hypotheses, namely $E+ > E > U$. In Chapter 6, these findings are discussed.

5.3 Independent measure of general abilities in English

The MEQ test was administered to the three groups during the delayed posttesting session. Mean scores and standard deviations expressed in percentages are shown in Table 5.52 below. An ANOVA indicated that the differences among the groups were not significant [$F(2,83) = 0.34$; $p = .71$] (Table 5.53, Appendix E). When the scores for these three groups were compared with 47 previously tested intensive classes in Quebec, they were found to be among the highest. Mean scores on this measure for all 50 groups ranged from a low of 47% to a high of 78%.

Table 5.52

Mean Scores in Percentages and Standard Deviations by Group on MEQ Test

Group	N	Mean	SD
E+	27	78.13	10.99
E	30	75.47	12.59
U	29	76.97	12.76

The quantitative and qualitative analyses reported in this chapter show that the predicted advantage for typographical enhancement, alone and in combination with a book flood, were not supported. The next chapter offers interpretations for these results.

End Notes for Chapter 5

1. Two coding conventions should be noted here. First, the pronoun *he* was not included in the subject pronoun count when it was used as an introducer, as in "*he have a mother and a father*". Second, when the learner made a false start or self-corrected, only the last pronoun was counted. In the following examples from a student in Group U at the delayed posttest, the pronoun that was counted is underlined: 1) "and he tell *his*, *his* boy, 'show me your brother NOW!"; 2) "and the boy tell *her* mom, *his* mom that is not him, and all kind of stupid things like that..".
2. The body parts category was kept separate from the inanimate category. Zobl (1985) and Martens (1988) combined these two categories.
3. As noted earlier, in the accuracy ratios calculated in this study, the number of grammatical uses in context appears in the numerator. In contrast, Zobl calculated what he called "difficulty ratios", in which the number of ungrammatical uses in context appears in the numerator.
4. The use of the term emergence criteria refers to the minimum number of forms a learner must produce in order to be assigned to each of the eight stages. Emergence criteria say nothing about accuracy. The term *emergence* is also used to describe Stage 3 and Stage 4, when the learner begins to use gender-marked forms but shows no evidence of using the English agreement rule.
5. There is no restriction on how these four uses must be distributed over the different picture descriptions. That is, criterion could be reached in the description of only one picture although this rarely occurred with these data.
6. At the pretest, one learner in Group E met the criteria for classification at Stage 7. However, this individual used only *his* (Stage 4) at the first posttest and continued to overgeneralize *his* at the delayed posttest, with instances of *her* below criterion (Stage 4).

Chapter 6

Discussion and Conclusions

6.0 Introduction

In this chapter, an interpretation and discussion of the results are provided. In Section 6.1, the results are examined in relation to the hypotheses stated in Chapter 3. Section 6.2 presents a discussion of the results within the context of the theoretical and empirical work on the role of salience and explicitness in L2 teaching and learning. Section 6.3 outlines and examines the issues relevant to the developmental framework used in the analysis of the learner data. Section 6.4 outlines the limitations of the study. Section 6.5 describes the contributions of this study to classroom research in L2 learning, and suggestions for future research are made.

6.1 Results in relation to the hypotheses

Hypotheses 1 and 2 predicted that on measures of possessive determiner (PD) development at the immediate posttest, the group exposed to typographically enhanced input in combination with extensive reading and listening activities (Group E+) would outperform the group exposed to typographically enhanced input without extensive reading and listening (Group E), which in turn would outperform the group exposed to input that was typographically unenhanced for PDs (Group U). Hypotheses 1 and 2 can be summarized as follows: Group E+ > Group E > Group U. While mean scores on the written measures and accuracy ratios calculated on the oral data generally followed the predicted order, the only statistically significant differences obtained were between Group E+ and Group U. Thus the findings do not support the hypotheses of this study which predicted an effect for typographical enhancement.

Hypothesis 3 predicted that the differences that were anticipated at the immediate posttest would still be significant at the delayed posttest five weeks later. This hypothesis, which is dependent on Hypotheses 1 and 2, was not supported. Moreover, the differences between Groups E+ and U observed at the immediate posttest were no longer statistically significant. This finding does not reflect a decline in performance by learners in Group E+ between the immediate and delayed posttests, but rather continuing improvement by the learners in all three groups between the immediate and delayed posttests. The improvement demonstrated by Groups E and U during this five-week period was such that learners in these two groups caught up with Group E+. In particular, the strong performance by Group U on the delayed posttest measures was not anticipated. The following discussion examines several factors which may have contributed to equalizing the three groups' chances of acquiring PDs.

6.2 Salience and explicitness

As indicated in Chapters 1 and 2, input is a crucial variable in SLA, and the ways in which it is provided, manipulated, and enhanced in the learning environment can lead to different results in the L2 learner's acquisition of the target language. A hypothesis in the SLA literature which is central to issues concerning the role of input in SLA and, in particular, to the research questions investigated in this study is the "noticing hypothesis". This hypothesis states that getting learners to attend to linguistic forms in the input is a basic prerequisite for learning (Schmidt, 1994; Schmidt and Frota, 1986). Two questions which directly arise from this hypothesis are: a) How can we get learners to "notice" particular features of the L2 in the input? and 2) Are there more effective ways for learners to notice these features which may enable them to convert the input into intake?

In the SLA literature, efforts to create instructional contexts which draw the L2 learners' attention to features in the input by making them more salient or explicit have varied. While some research has shown that explicit efforts to get learners to "notice" may be required, other researchers have argued that less explicit (i.e. implicit) methods may be equally beneficial. As indicated in Chapter 2, Sharwood Smith (1981, 1991) has suggested that the explicit/implicit distinction is best viewed as a continuum rather than a dichotomy. Thus, the instructional treatment used in the present study is best described as less explicit than that provided in the research of Lyster (1994b), Spada and Lightbown (1993), White (1991) and White et al. (1991), more explicit than the "input flood" in studies by Trahey (1992, 1996), Trahey and White (1993) and that of other book flood studies (Elley and Mangubhai, 1983; Lightbown, 1992a; Hafiz and Tudor, 1989, 1990) and less explicit than the visual enhancement conditions implemented by Doughty (1991). In the sections which follow, issues related to the conceptualization and operationalization of such notions as salience and explicitness are discussed in relationship to the findings.

6.2.1 Salience

A number of SLA researchers have pointed out that for input to become intake, learners must attend to linguistic features in the input as well as to messages (e.g. Sharwood Smith, 1986; VanPatten and Cadierno, 1993). Hulstijn (1989) proposed that attention to form at the point of input encoding is the necessary and sufficient condition for learning to take place. However, the dual requirement of processing input for meaning as well as form risks imposing excessively large demands on the learners' attentional capacity, to the possible detriment of either of the two processes, comprehension or acquisition (VanPatten, 1990).

Third person singular pronouns and PDs were visually enhanced in this study to make them more salient and increase the likelihood that learners would pay attention to them without overloading short-term memory. It was expected that additional salience would result from an increase in the frequency with which learners encountered the forms as they completed a set of learning tasks. However, there is evidence from the oral data suggesting that PDs may have been equally salient in the input available to learners in all three groups although this was not intended.

The first evidence comes from the numerous self-corrections and false starts that occurred as learners struggled to describe each of the pictures. The following example shows how a learner eventually arrived at the correct PD form after a number of unsuccessful tries:

Learner Uh the boys have uh all the band-aid. And the her leg it uh hand.

 And uh..

Interviewer Where are the band-aids did you say?

Learner In the, in his leg. And uh her, uh his hand.

Of particular interest was whether there was an increase in the number of self-corrections involving pronouns and PDs immediately following the two-week treatment period since such an increase might be related to the salience of pronominal forms in the input treatment. To investigate this, the data for Picture Set A were used to compare the number of self-corrections made by learners in each group immediately before and immediately after the two-week instructional period. Learners in all three groups showed a similar increase of about 10%. Furthermore, the percentage of pronoun and PD self-corrections out of the total number of self corrections was similar in all groups at both the pretest (14-19%) and the posttest (25-29%). Although no further analyses of the self-correction data were carried out, these findings suggest that the enhanced and unenhanced

input had a similar effect on promoting self-corrections of the target forms..

Additional evidence that salience was similar across groups comes from the finding that learners in Groups E and U were more accurate on *her* than on *his* at the immediate posttest, a finding which is contradictory to claims made by other researchers that learners are more accurate in their use of masculine pronominal forms in early stages of development (Zobl, 1985; Martens, 1988). One interpretation of this finding is that the higher frequency of *her* as compared to *his* in the enhanced and unenhanced input treatment materials made the feminine forms more salient than the masculine forms. Recall that Alanen (1995) found that learners exposed to enhanced input overgeneralized the most frequent forms. The finding that accuracy was similar on *his* and *her* for learners in Group E+ would not constitute counter evidence since this group's exposure to stories containing large amounts of input that was more gender-balanced might be expected to reduce the effects of the imbalance. Thus it appears that while the treatment conditions were designed to provide three different types of input, other factors may have been operating which reduced the impact of these differences.

Another factor involved the nature of the written tests and the frequency with which they were administered. In particular, the multiple choice test created contexts which contrasted *his* and *her* and required the learners to choose among several forms. It is plausible that the process of deliberating over the forms at the pretest and immediate posttest drew the learners' attention to the gaps in their knowledge and increased the salience of the forms that they encountered in the enhanced and unenhanced treatment materials, as well as in the regular classroom input. Learners who found the forms puzzling would have formulated hypotheses about the English rule, and they would have had many opportunities to test their hypotheses. Thus the testing procedure itself may have enhanced the target forms

similarly for learners in all three of the treatment groups.

The evidence presented above lends support to the claim that different types of enhancement may have contributed equally to the learners' acquisition of PDs in this study. Nonetheless, the question as to why the most salient type of enhancement provided (i.e. typographical enhancement) did not benefit learners more still remains. One explanation may be related to the learners' familiarity with the target forms. It is certain that learners had already encountered the target forms in their regular intensive ESL program. Following Cook's (1991, 1993) distinction, they may have been able to decode (understand) messages containing PDs even though most had not yet broken the code (worked out the underlying rule). In other words, the forms may not have been novel enough to attract the learners' attention to the extent predicted (see Harley, 1989, for a similar interpretation).

Another factor may be the number of forms that were visually manipulated. A total of six pronominal forms were typographically enhanced: the subject pronouns *he* and *she*; the object pronouns *him* and *her*; the possessive determiners *his* and *her*. This was done in order to increase the salience of the gender contrast and to implicitly draw the learners' attention to the fact that *his* and *her* are part of the third person singular pronoun system. Although PDs were always enlarged more than subject and object pronouns, it is possible that learners did not perceive this difference. Recall from Chapter 4 that learners had no help from their teachers in making the distinction and were simply informed that some words in the texts were highlighted because "these are words you have trouble with, and we want you to notice how they are used". Thus some learners may have found the pages cluttered and, because their attention was divided among six different enhanced forms, the typographical enhancement of PDs may have been less salient than expected.

Finally, it is possible that the typographically enhanced past-tense *-ed* forms may have

influenced the way in which learners in Group U approached the written texts and the written measures without their having been aware of it. That is, the salience of these forms may have led them to pay more attention to linguistic forms overall than they would have otherwise (see Alanen, 1995, for a similar interpretation).

Some evidence to support the hypothesis that the input was made salient to all three groups in this study and led to improvement comes from other research with intensive ESL learners whose acquisition of PDs was investigated in the absence of any pedagogical intervention which targeted these forms. In research by Martens (1988) and Lightbown and Spada (1990), there was no attempt to provide instruction in, or any particular attention to, PDs. Learners' exposure to third person singular pronouns and possessive determiners was restricted to their use in the regular classroom interaction. It is therefore interesting to compare the results from the present study with those from the Martens and Lightbown and Spada studies. If exposure to these target forms is sufficient to bring learners to similar levels of performance as learners whose attention has been drawn to them either through typographical enhancement, exposure, or repeated testing, this would be consistent with the view expressed by Krashen and others discussed earlier. If there are differences, however, this would offer support for the argument that different types of enhancement played a role in the learners' knowledge and use of personal pronouns and possessive determiners in this study.

The first comparison indicates that learners in the current study benefited from their high frequency exposure to PDs. Performance on all of the written and oral measures improved between the immediate pretest and posttest. Moreover, delayed posttest scores show that development continued after the two-week instructional period had ended. More learners in the current study attempted to use third person singular pronoun forms in the oral

production task and their attempts were more target-like than the learners in Martens' and Lightbown and Spada's descriptive studies. Martens found that at the end of their five-month intensive ESL program, learners had considerable difficulty making gender distinctions and that they tended to overgeneralize masculine forms to contexts requiring the feminine. Table 6.1 compares delayed posttest results from the current study with results from Martens' study in terms of the percentage of learners who produced at least two masculine forms and two feminine forms of any third person singular pronoun or PD during the oral production task at the end of five months of intensive ESL (this calculation does not take accuracy into account). The table shows that virtually all of the learners in the current study produced both masculine and feminine forms, whereas in Martens' study, learners who used gender-marked forms showed a clear preference for masculine.

Table 6.1

Percentage of learners who produced two masculine pronominal forms and percentage who produced two feminine pronominal forms during oral production task at end of 5-month intensive program (Martens, 1988, and current study)

Study	Group	Percentage Masculine	Percentage Feminine
Martens	-	73	40
Current study	E+	100	96
	E	97	93
	U	100	100

Lightbown and Spada found that accuracy rates for PDs ranged from a high of 74% to a low of 42% among the four groups in their study (see Table 3.2 in Chapter 3). This range is similar to the delayed posttest results presented in Tables 5.42 and 5.45 (see Chapter 5) for learners in the current study. The number of students who used enough PDs to be included in the analysis is strikingly different in the two studies, however. All of the learners in the

current study were included in the calculations for *his* and *her* at the delayed posttest. In contrast, the range in Lightbown and Spada's study is from a high of 74% (17/23) to a low of 24% (6/25) of the learners (see Table 3.2). Table 6.2 compares the percentage of learners in the two studies who used both *his* and *her* correctly at least once during the oral production task. These comparisons suggest a developmental advantage for learners in the current study.

Table 6.2

Percentage of learners who used both *his* and *her* correctly at least once during oral production task (Lightbown and Spada, 1990, and current study)

Study	Group	Percentage
Lightbown and Spada	1	35
	2	16
	3	32
	4	0
Current study	E+	74
	E	60
	U	66

Martens' study also included a grammaticality judgement task which investigated learners' ability to recognize correct and incorrect instances of *his* and *her*. They demonstrated this ability by crossing out incorrect forms but were not instructed to make corrections. More than 28% of the learners (n=107) in Martens' study made no accurate judgements on any incorrect PD. The passage is similar to the one used in the passage correction task in the present study in terms of overall length although the nature of the extratextual support is different (i.e. there were pictures in Martens' study; there were pictures and a video in the present study). Table 6.3 compares the PD scores of the four

groups that completed Martens' task with scores attained by learners in the current study on the PD portion of the passage correction task. For purposes of comparison, all scores are in percentages.

Table 6.3

Comparison of scores in % on possessive determiner items in passage correction task (Martens, 1988, and current study)

Study	Group	Percentage
Martens	1	40
	2	27
	3	30
	4	31
Current study	E-	66
	E	60
	U	55

The findings in this table show an advantage for the learners in the present study: 15 percentage points separate the highest group mean in Martens' study and the lowest group mean in the current study. While one might argue that familiarity with the task may have enhanced the performance of learners in the current study (i.e. they had completed the task on two previous test administrations), other arguments can be made against this. First, the task may have been more difficult because learners were instructed to provide the correction for each item they crossed out. Second, they may have become bored with it by the second and third administration and, as a consequence, may not have worked on it as diligently as they had on the first.

Additional evidence for a positive effect for input enhancement comes from data which have subsequently been collected from a cohort of 98 intensive grade six ESL learners from the same school as those in the current study. These learners were not exposed to

enhanced or unenhanced input (Lightbown and Spada, in press). In virtually all other ways, they were comparable to the learners in the study: they had the same teachers, the same meaning-focused program, and they completed the same oral picture description task at the end of their intensive instruction.

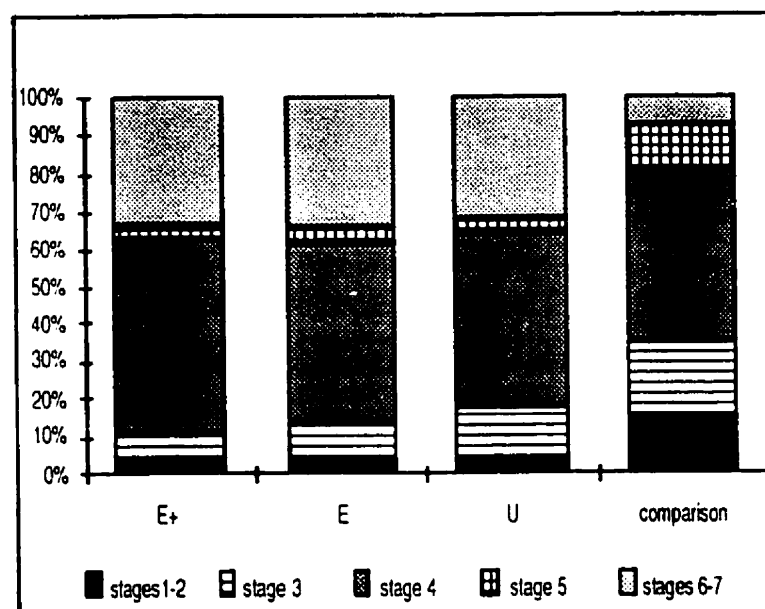


Figure 6.1. Stage development of third person singular possessive determiners; experimental groups and comparison group at delayed posttest, oral production task

Figure 6.1 compares the results of the stage analysis carried out on the oral data collected from this comparison group at the end of their intensive ESL program with the stage analysis at the delayed posttest for the three groups in the current study (see Chapter 5, Figure 5.12). Figure 6.1 suggests that the comparison group learners were developmentally less advanced than the learners in Groups E+, E, and U: a larger percentage of comparison group learners were in Stages 1, 2, and 3; a smaller percentage were in Stages 5, 6, and 7; and

a similar percentage were in Stage 4. Of particular interest is the contrast between the experimental and comparison groups at Stages 6 and 7, where application of the English rule is demonstrated.

A comparison of the findings from the Martens and Lightbown and Spada research with those of the present study provide support for the claim that increased salience played an important role in the higher levels of accuracy and development of third person singular possessive determiners and possessive pronouns obtained in this study. Because these are post-hoc comparisons, however, interpretations must be made cautiously.

6.2.2 Explicitness

In order to ensure that enhancement was at the implicit end of an implicit/explicit continuum, care was taken to avoid focusing the learners' attention on the target forms in more explicit ways, such as through the presentation of pedagogical rules, corrective feedback, discussion of the typographical enhancement, or direct questioning regarding what the learners understood to be the specific purpose of the accompanying tasks or of the study itself. There is evidence, however, that typographically enhanced input, alone or in combination with extensive reading and listening, may have been more similar to the unenhanced input than anticipated in terms of the information that it did not provide to the learners about PDs. Specifically, none of the treatments focused the learners' attention on the key points of interlingual contrast: the agreement rules in English and French and the forms used with body parts. The following paragraphs discuss the results on the multiple choice test, passage correction task, and picture description task that show lower performance in the kin-different and body parts domains and lead to the interpretation that many of the learners needed help in organizing the information about PDs that was abundantly available in the

input to all three groups.

Multiple choice test: As reported in Chapter 5, mean scores on the multiple choice test were high at the immediate posttest and approached the ceiling at the delayed posttest. The strong performance indicates that when learners were presented with four choices for each test item, and when they had time to think about the different alternatives, they were often able to recognize the correct one. It is informative to separately examine the delayed posttest results for the 16 PD items on this measure. Table 6.4 breaks these items down according to semantic domain and shows the mean scores in percent for each group.¹

Table 6.4

Multiple choice delayed posttest - mean score in percentages for 4 semantic domains (4 test items per domain)

Group	Inanimate	Kin-same*	Kin-different	Body parts
E+	90	93	71	91
E	81	77	79	83
U	84	87	73	82

* 3 items

For Groups E+ and U, mean scores in the kin-different domain were lower than in the three other domains, approximately 20% lower for Group E+. In the case of Group E, performance in all four domains was similar, ranging from 77%-83%. The performance of all three groups in the kin-different domain suggests that learners may not have had access to a reliable rule that could help them when they were uncertain about one or more of the distracters. The result of their uncertainty would have been most evident in this domain, where application of the L1 rule necessarily resulted in an incorrect choice.

It is interesting to note that at the delayed posttest, no one selected *the* from among the distracters presented in the body parts domain. This suggests that learners knew that the L1 rule requiring the definite article did not apply in English. However, some learners did select the wrong gender-marked form or the immature PD form, *your*. In fact, the accuracy rate for body parts is similar to the rates for inanimate and kin-same. This provides further support for the claim that by the end of the study, learners had not induced a rule that would help them recognize the correct PD when they had time to monitor their responses. This observation says nothing about whether or not they would have been able to apply such a rule in carrying out other tasks.

Passage correction task: Scores on the PC task reveal that many of the learners in each group still had difficulty detecting and correcting deviant PD forms at the delayed posttest. Delayed posttest mean scores for *his* and *her* on the PD portion of the PC task, shown in Table 5.12 (Chapter 5), were combined and converted to percentages in Table 6.3 above. They are compared with the total PD scores (all domains) on the multiple choice test in Table 6.5.

Table 6.5

Multiple choice test and passage correction task - mean scores on possessive determiners in percentages at delayed posttest

Groups	MC Test (15 items)	PC Task (16 items)
E+	86	66
E	80	60
U	82	55

It is not surprising that scores on the PC task were lower than scores on the multiple choice test since the task was more challenging and involved more than recognizing the

correct form when it was presented with distracters. Although the video and the pictures in the test booklet contextualized the passage, learners had to understand extended segments of written text in order to detect the deviant forms. Once detected, each deviant form had to be corrected. Since the deviant forms were not typographically enhanced or otherwise identified on the page, learners had to rely on internally created salience to find them. Since no choices were offered, they then had to access a PD rule, most likely an implicit one, in order to make a correction. Thus learners were required to devote a major portion of their attentional resources to meaning and to focus on form at the same time.

Learners in Groups E+ and E might have been expected to have a small advantage over learners in Group U in that they had practiced finding and correcting pronouns in one of the tasks included in their instructional package. However, this advantage was probably diminished by the practice opportunities equally available to learners in all three groups during each of the testing sessions. While gain scores on the passage correction task were highest at the immediate posttest, continued improvement was evident at the delayed posttest (Table 5.12, Chapter 5). Differences approaching significance were obtained only at the immediate posttest, however, when Groups E+ outperformed Group U on *her* (see Tables 5.13-5.16, Appendix E).

The results indicate that most learners were sensitive to the difference between well-formed and deviant PDs and limited their corrections to deviant forms (Table 5.21, Chapter 5). Deviant possessive determiner forms in kin-different and body parts domains appear to have been particularly difficult to detect and correct, and very few learners correctly corrected all three of the deviant forms used in kin-different contexts. Furthermore, at the delayed posttest, only a small number of learners in each group corrected both of the definite articles used in body parts contexts and replaced them with the appropriate PD (Table 5.20,

Chapter 5). The majority of the learners did not notice, or were not able to correct, the deviant forms in these two semantic domains. While there was an increase in the number of learners who made the corrections from one test administration to another, it is possible that their performance on this measure would have been improved by a more explicit focus on the target language rules, with particular attention to points of contrast between English and French. A similar interpretation was offered by Alanen (1995), who found that even learners exposed to rule-based instruction overgeneralized the L1 rule when the L1/L2 differences were not explicitly pointed out.

Oral picture description task: The accuracy ratios presented in Table 5.45 of Chapter 5 show that on the oral production task, learners had the most difficulty with PDs in the body parts domain. Errors included the use of the incorrect gender-marked form (e.g. *his* for *her* and vice versa), as well as developmentally immature forms ($\emptyset$, *the*, or *your*). Table 6.6 shows the number of learners in each group who used two or more (ungrammatical) tokens of the definite article with body parts at the delayed posttest. The numbers in parentheses indicate the learners who were in Stages 6 or 7. An additional 6 learners in Group E, one of whom was in Stage 7, used the $\emptyset$ form two or more times in the body parts domain.

Table 6.6

Picture description task - number of learners using *the* with body parts at delayed posttest (number in parentheses indicates Stage 6 or 7)

Group	N	Number of learners
E+	27	14 (7)
E	30	15 (4)
U	29	16 (4)

Accuracy did not substantially increase in the body parts domain between the immediate and delayed posttests; in fact, for Group E, which had an accuracy ratio of .42 at the pretest, there was essentially no improvement over the period of the study (Table 5.45, Chapter 5). This suggests that there may have been a ceiling on development within this domain without a different kind of instruction. Since examples of PDs with body parts were available in the treatment input, it would seem that learners needed to have their attention drawn more explicitly to the L1/L2 form-function differences.

For Groups E and U, the second lowest accuracy ratios at the delayed posttest were in the kin-different domain. Here, as in the inanimate and kin-same domains, many of the errors involved the overgeneralization of one gender-marked PD to contexts requiring the other form. Other errors reflected the variability which was illustrated in Chapter 5 in which learners produced correct and incorrect forms within a single picture description. Overgeneralization and variability are natural processes in L2 acquisition, and it is not surprising to find evidence of them in the oral data. Indeed, it could be said that the considerable intraleader variability in the oral production data and the interleader differences in developmental sequences were great enough to cancel out the between-group differences. What is noteworthy here is that the input enhancement techniques that were manipulated in this study did not appear to be effective in helping learners use PDs accurately in the oral production task. Again, it would seem that they needed help in discovering the points of difference between the L1 and L2 PD agreement rules.

One might also argue that learners needed practice accessing the L2 rule for comprehension and production. There are two different points of view on the type of practice that might have been useful. First, from the perspective of VanPatten's (1993 and elsewhere) input processing research, learners might have needed only focused comprehension practice

in order to show development on both comprehension and production tasks. However, it is important to point out that this kind of practice is based on an initial explicit presentation of the target language rule which helps learners to structure the input and facilitates intake processes. From the second perspective, one could claim that learners needed more opportunities to practice using the target forms in order to develop automaticity in accessing rules that had previously been learned explicitly (e.g. McLaughlin, 1990b, McLaughlin and McLeod, 1983). It may also be that they needed to practice in order to develop control over the attentional resources allocated to representations of linguistic knowledge (Bialystok, 1991b). Swain (1985 and elsewhere) has noted the value of practice opportunities, which she has called *comprehensible output*, to push learners to deeper levels of syntactic processing and has provided some evidence for the benefits of "negotiating form" (Lyster, 1994a) in learner-centred interaction (Kowal and Swain, 1994).

The stage development analysis of the oral data also indicated that learners were a long way from reaching target-like performance at the end of the study. At the delayed posttest, 58 per cent of the learners were at Stages 3-4. That is, while they used gender-marked forms, they showed no evidence of applying the English rule with any consistency. A few, six per cent, used no gender-marked PDs in any domain (Stage 1-2). Only 36 per cent of the learners demonstrated partial control of the English rule (Stages 5-7), and no one gave evidence of target-like use of PDs in all domains, including body parts (Stage 8).

These findings, along with the quantitative analyses, suggest that many of the learners might have benefited from a more explicit type of enhancement. For example, a different typographical technique involving the use of arrows or colour coding could have been used to make the relationship between the PD and its referent more salient and more explicit for the learners. It will be recalled that in Doughty's (1991) study, a clear indication of the

relationship between the relative pronoun and head noun was provided. An even more explicit pedagogical technique would include a brief rule explanation, either at the beginning of the input enhancement period or part of the way through it, to help learners structure the input (see discussions in Scott, 1989; Berry, 1994; Hulstijn, 1995). As indicated above, VanPatten's work has shown the benefits of rule explanation in combination with input processing instruction in helping learners develop automatic access to the target language rule in comprehension and production tasks (VanPatten and Cadierno, 1993; VanPatten and Sanz, 1995). Alanen's (1995) findings on the acquisition of semi-artificial Finnish provided additional support for the usefulness of combining typographical enhancement and rule explanation. Other classroom research reviewed in Chapter 2 also suggests that explicit instruction which includes metalinguistic information combined with error correction is beneficial for L2 development (e.g. Day and Shapson, 1991; Lightbown and Spada, 1990; Spada and Lightbown, 1989; Lyster, 1994b; Tomasello and Herron, 1988, 1989) and that implicit instruction may be less so (e.g. Harley, 1989; Lyster, 1994b).

The performance by Group E+ on the oral and written measures at the immediate posttest suggests that more exposure to PDs in the extensive reading and listening treatment was beneficial. However, the between-group differences which favoured Group E+ disappeared five weeks later as Groups E and U caught up. The finding that the benefits of additional exposure were not durable also suggests that learners may have needed more explicit information about the underlying PD system than they had received. An alternative explanation is that learners in all groups had reached a threshold that permitted the development of PDs to continue without on-going intensified exposure (see Lightbown, 1992b, for L2; see Karmiloff Smith, 1986, for L1). According to this interpretation, the book flood exposure did not have a powerful enough impact relative to this "off-line" development

experienced by learners in all three groups to keep learners in Group E+ significantly ahead of the others.

A questionnaire that was administered to the learners at the end of the two-week treatment period sheds additional light on the salience and explicitness of the typographical enhancement (Appendix D). This questionnaire was intended to obtain information about the learners' reactions to the typographical enhancement. Learners' responses suggested that typographical enhancement was salient enough to attract their attention to the target forms without distracting them while they read.² The majority of the learners in all three groups also reported that enhancement had helped them understand the texts, but only a third of the learners named the enhanced forms when asked why they thought some of the words had been enlarged.³ Instead, they repeated what their teachers had said at the beginning of the treatment period, that is, "because the words are difficult". Thus it would appear that many learners were uncertain about the purpose of the typographical enhancement and that it had not been useful in helping them figure out the English agreement rule. These findings must be interpreted cautiously, however, in light of the difficulty of investigating processes which take place inside the learner's head. To find out about input enhancement after the end of the treatment period, it was necessary to rely on the learner's memory and ability to describe the experience. Asking explicit questions about an on-going, presumably implicit process during the study, on the other hand, would have risked altering it (Swain and Lapkin, 1995; Jourdenais, Ota, Stauffer, Boyson, and Doughty, 1995).

Of course, it is also possible that individual learner characteristics may account for the finding that some learners in all groups reached Stages 5-7 without more explicit instruction. These learners may have been more comfortable with the inductive approach

used in this study and more able than other individuals to figure out the patterns in the input on their own (see Skehan, 1989, 1991, regarding individual differences in L2 acquisition).

The pedagogical rule for English third person singular possessive determiners would seem to be a simple rule according to the criteria of scope and reliability (see Hulstijn, 1995). The rule covers only two forms (*his* and *her*) and has no exceptions aside from the special cases involving body parts. It can be stated simply in the following way: use *his* when the possessor is masculine (a man/boy) and use *her* when the possessor is feminine (a woman/girl). However, very few learners were able to state this rule at the end of the study. The day following the delayed posttests, learners were given four sentences of the type they had seen on each of the multiple choice tests and asked to choose whether each was correct or incorrect. Then they were asked, "How do you decide whether to use *his* or *her*? They had the option of answering in English or French. For example, one of the items was the following:

(picture of a boy, and girl sitting at a table with a loaf of bread)

Mary and his brother made a loaf of bread.

___ Correct

___ Incorrect

Only 15 learners (equally distributed across the groups) out of 86 stated a rule that included a reference to possession or belonging or explained a pedagogical trick which indicated knowledge that agreement was between the PD and the possessor. In the example above, the following responses were considered to reveal knowledge of the rule:

brother of Mary

c'est son frère à elle

Mary's brother

an arrow drawn from *brother* to *Mary*

Instead, most learners stated a variant of the following rule of thumb: "When it's a boy, I use *his* and when it's a girl, I use *her*". Since two of the four items included a kin-different term, this rule was ambiguous as to whether the boy or girl was the possessed entity or the possessor. Some of the others said they used the strategy of looking at the noun before the PD, which would, in fact, have been a reliable rule in the four items they were asked to consider. Some of the rules and strategies were totally wrong, however:

1) These learners overgeneralized the feminine form:

Je déciderais (*her*)

I choice *her* because I'm a girl for girl it *her*

- 2) This learner was totally confused:

His is *my* and *her* is *your*,

- 3) This learner stated the L1 rule:

When is a girl and you want to said “sa” in english you said “her”. And the
opset with “son” = “his”

- 4) And the last example came from a learner who trusts his implicit (but unreliable)
knowledge:

Because I understand.

While the ability to state the relevant pedagogical rule, whether induced from the input or presented through explicit rule presentations during instruction, has not been found to reliably predict accurate performance (for empirical work in this area, see Green and Hecht, 1992; Robinson, 1996), it is possible that the inability of the majority of the learners to access a useful rule limited their performance on the tasks in which they would have had time to do so, namely the passage correction and multiple choice tests.

6.3 Developmental sequence

As indicated in Chapter 3, the term *stage* is widely used in the SLA literature, yet the concept of stage is not often discussed or sufficiently clear (Cook, 1993). The framework used to analyze the oral production data in this study is based on previous theoretical and empirical work by Felix, who described the sequence in which learners acquire the semantic features of case, number, person, and gender (Felix, 1981; Felix and Hahn, 1985) and Zobl, who proposed a sequence in which learners gradually acquire the English PD rule in four semantic domains (1984, 1985). The framework describes the learners' gradual acquisition

of the ability to produce *his* and *her* during a communicative task. It consists of the following macro-stages:

- 1) pre-emergence - learners in Stages 1-2 do not use gender-marked PD forms;
- 2) emergence - learners in Stages 3-4 use *his* and/or *her* but show no evidence of applying the English rule;
- 3) post-emergence: learners in Stages 5-7 gradually develop the ability to use the English rule;
- 4) target-like performance: learners in Stage 8 use *his* and *her* correctly in all semantic domains (inanimate, kinship, and body parts).

The framework assumes that the stages are qualitatively different, that is, they represent the acquisition of additional semantic features (e.g. case, number, person, gender) or the development of an increasing ability to differentiate between *his* and *her* in the kin-different semantic domain. It also assumes that learners do not skip stages. These assumptions are supported by the finding that in all three groups, most learners who were at a pre-emergence stage at the immediate pretest were at an emergence stage at the delayed posttest seven weeks later, and all of the learners who were at an emergence stage at the immediate pretest were either still at an emergence stage or had moved to a post-emergence stage at the delayed posttest. Furthermore, with one exception, learners did not go back to a pre-emergence stage once they had begun to use gender-marked PD forms.

While Stage 4 learners marked grammatical gender, they appear to have adopted an overgeneralization strategy, using one gender-marked form in all contexts. They were applying neither the L1 nor the L2 agreement rule, but rather seemed to be avoiding the gender distinction altogether. Indeed, it would appear that the emergence stages were pivotal

in the PD acquisition sequence for the learners in this study. Not only were most of the learners (79 out of 86) at an emergence stage at one or more of the three testing sessions, but the majority were at an emergence stage at the end of the study, either because they had advanced to it, or because they had gone back to Stage 4 from one of the post-emergence stages.

This backward movement does not pose a problem for the developmental framework. The shift from correct use of a target feature to a developmentally earlier L2 feature and eventually back again to target-like use is well-documented in the SLA literature. It has been characterized as U-shaped development (Kellerman, 1985) and as restructuring (McLaughlin, 1990b; Lightbown, 1985). Restructuring is said to occur when the learner encounters new forms which cause a reorganization of larger parts of the linguistic system. Zobl (1984) used the term restructuring to describe the phenomenon in which learners simplify their interlanguage PD rule by dropping the gender distinction and overgeneralizing one PD form. Thus, restructuring can be viewed as part of the normal acquisition sequence for at least some learners in the current study.⁴

There are several explanations for this restructuring. One is that learners who met the criteria for Stages 5-7 at the immediate posttest were using memorized chunks from the input flood and had not yet analyzed these chunks to find the underlying English agreement rule. At the delayed posttest five weeks later, when the memorized chunks were less readily available for use in the oral production task, learners adopted the cognitively less demanding rule simplification strategy and used one PD in all contexts. The learners who did this may have been more memory-oriented than others and more likely to rely on prefabricated chunks and routines (Skehan, 1991). This provides more evidence to suggest that the emergence stages, and in particular Stage 4, were pivotal stages in the acquisition of PD forms.

For others, the backward movement may be explained by the recency of the experimental treatments, which had drawn the learners' attention to PDs and led them to attempt to use these forms in their picture descriptions at the immediate posttest. Furthermore, the coding procedure may have overestimated their development at one test administration and underestimated it at the next. Overestimation would have been possible in the case of learners who produced a lot of PDs because, regardless of the number of PD errors they made, they would have been assigned to the stage at which they met the minimum criterion for correct uses. Underestimation could have occurred if learners had said less and failed to produce enough target forms to be reassigned to their previous stage. This is more likely to have occurred at the delayed posttest, when five weeks had elapsed since the experimental treatment, and the effects of increased salience may have been considerably weakened.

The oral data strongly suggest that acquisition of PDs follows a developmental sequence and that the instructional treatment could be altered in ways that might speed up the progression of francophone learners of English through the developmental stages. Specifically, it may be necessary to make the relationship between the PD and the possessor more salient for French L1 learners of English. One way to do this would be to use typographical enhancement to focus learners' attention only on kin-different forms since the Mf and Fm forms reveal the most information about L1/L2 contrasts. As indicated above, another way would be to use arrows from the PD to the possessor to make the relationship more salient and explicit. This enhancement technique might be so salient that it would interfere with reading, however, and it might be advisable to use arrows with only a subset of the PDs in a text. Arrows used with instances of *his* and *her* in the kin-different and body parts domains, for instance, would provide the greatest contrast with the L1 agreement

subrules and would seem to have the greatest potential for promoting development. In retrospect, it seems that the number of enhanced items per page may have detracted from the usefulness of the typographical enhancement and that enhancing personal pronouns along with all semantic PD domains may have provided less information to the learners than arrows or a heightened focus on kin-different forms alone.

This study suggests that, while drawing the learners' attention to a linguistic feature may be sufficient to speed up acquisition of that feature, implicit instruction may not be adequate in cases involving L1-L2 contrasts. It further suggests that there may be a ceiling on this development when the L1 and L2 differ in ways that are not evident to the learner on the basis of positive evidence available in the input. In such cases, learners may need explicit information about the L1-L2 contrasts in order to progress to more advanced developmental stages. The ways in which this information can be combined with additional exposure and increased salience are in need of further investigation.

6.4 Limitations of the study

The absence of a control group (i.e. one which was entirely uninstructed with regard to the target forms) is a limitation of the study. However, as noted in Chapter 4, when the study was being planned, it was necessary to make some trade-offs. The advantages of limiting data collection to one school were offset by the potential disadvantage that only three treatment groups were available within the school. Since the primary variable manipulated was typographical enhancement, it was essential to have a comparison group that was exposed to unenhanced input containing the target forms. However, this meant that there was no control group which received regular instruction only. Fortunately, comparisons with other intensive ESL groups that did not receive instruction or extensive exposure to PDs and

personal pronouns have been possible. However, as indicated above, these are post-hoc comparisons, and one cannot be confident that the different results obtained are due only to variations in the instructional treatment.

A second limitation concerns interpretation of the oral data elicited at the delayed posttest. Since many learners described the pictures in Picture Set C in such a way that there were fewer contexts for feminine PD forms than for masculine ones, it was not possible to make claims regarding differences between Stages 6 and 7. As a result, these two stages were combined for some of the analyses. Although this imbalance was not foreseen, it points out the need for careful piloting of all measures. Furthermore, since the picture sets were not identical at each testing session, learners had different opportunities to produce the target forms. Thus, the conclusions about stage development must remain tentative until follow-up investigations can be carried out.

Another limitation is, paradoxically, a strength of any classroom-based research carried out in the “real world” over an extended period of time. This study lasted five months, and during that time, many other things happened in the classroom to affect learning. The investigator was in the class regularly, observing and taking notes. Considerable efforts were also made both formally and informally to keep track of classroom events and behaviours, but it was not possible to do this all the time. Consequently, one cannot be sure whether other instructional activities might have contributed to the results.

6.5 Contributions and implications for future research

The results of this study have made an important contribution to SLA research investigating the effects of instruction on the acquisition of third person singular PDs in the following ways. Prior to this study, Zobl’s proposed developmental stage framework for the

acquisition of PDs had not been empirically validated in subsequent research. It had not been used with young L2 learners, nor had it been used in an instructional study over an extended period of time. While the results obtained in this study provide support for Zobl's developmental stages, they also point to some difficulties in the characterization of certain stages as well as in the assignment of stages and development. The indication that certain stages may be pivotal to the learner's development suggests a particularly interesting direction for future research and will require the development of new research instruments and procedures. Investigation of the role of the L1 in the PD developmental sequence is also needed to determine whether this sequence would be obtained in studies of learners with L1s other than French. Furthermore, comparisons are needed with other acquisition sequences that have been observed with adults and children to investigate whether the developmental processes involving morphology might differ from those involving syntax.

The findings from this enhancement study have also made an important contribution to research investigating the role of implicit instruction, and in particular the role of "noticing", in SLA. No other study has examined how the enhancement of input combined with high frequency exposure compares with enhancement alone. The results call into question the assumption that if target features are implicitly enhanced in the input, learners will "notice" them. Indeed, the results suggest that getting learners at this age to "notice" may require more explicit techniques. These findings reinforce the need for greater precision in specifying the nature of form-focused instructional treatments that may facilitate the acquisition of specific linguistic features in future research. Of particular importance is the need to tease apart the specific contributions that implicit and explicit types of form focused instruction may make on the accuracy and rate of development in classroom L2 learning.

This research has also pointed to potential problems resulting from "testing effects"

in the measurement of L2 learning over time. As indicated above, learners were tested three times during the study with several measures at each administration. Since their attention was drawn repeatedly to the target forms through the testing procedures, this may have served as another source of enhanced input to the learners. Another methodological issue highlighted in this study concerns the necessity for long-term follow-up testing in research investigating the effects of instruction on SLA. If the present study had not included a delayed posttest, the immediate posttest results could have reasonably indicated support for the first two hypotheses - a conclusion which has been drawn in other research without long-term follow-up testing in the research designs.

Clearly, more research is needed to understand whether and how implicit and explicit input enhancement techniques might contribute to L2 learners' acquisition of particular linguistic features. Findings from this study suggest that learners may benefit from help in noticing and also in organizing information available in the input when their L1 leads them to make faulty hypotheses about the target language. Questions about the way in which explicit information may be combined with more implicit enhancement techniques such as typographical enhancement or intensified exposure, lead to other questions which are also in need of further research: When is explicit information most useful, at the beginning of the enhancement period or after a period of intensified exposure? Are learners able to make better use of explicit information once they have reached particular stages in the developmental sequence? How do individual learner characteristics interact with implicit and explicit input enhancement techniques? We can expect that as researchers attempt to answer these increasingly precise research questions, the picture of instructed L2 acquisition will gradually be brought into sharper focus.

Endnotes for Chapter 6

1. One test item (number 21) in the kin-same domain was removed from this analysis because the distracters (*your*, *they*, and *she*) seemed to confuse learners in all three groups. The item was not removed from any of the analyses presented in Chapter 5.
2. The questionnaire was presented to the learners with a general comment that the researcher wanted to know what they thought about the “big letters” in the stories they had been reading. One learner asked seriously, “What big letters?”
3. Recall that regular past tense *-ed* endings were enhanced for Group U.
4. It is possible that all learners experienced restructuring of the PD rule even though the researcher was not there at the appropriate developmental moment to capture this phenomenon.

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Appendix A: Classroom observation coding sheet

VISIT NO.: _____

Page

2

3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

MODIFIED COLT. 08/86

Teacher Feedback on Error

Date:

Teacher:

School :

* for grammar; x for vocabulary; p for pronunciation

Notes

[illegible]

Appendix B: Sample of treatment materials

Activity 2 - The Frog Prince

Part of the text and related task

Enhanced treatment

Activity 2
Part 1



The Frog Prince

Once upon a time there was a king. *He* had a beautiful, young daughter. For *her* birthday, the king gave *her* a golden ball that *she* played with every day.

The king and *his* daughter lived near a dark forest. There was a deep well near the castle. Sometimes, the princess would sit by the well and play with *her* ball. One day, the princess threw *her* golden ball in the air but it did not fall into *her* hands. It fell into the well. Splash! The well was deep and the princess was sure *she* would never see *her* ball again. So *she* cried and cried and could not stop.

"What is the matter?" said a voice behind *her*. The girl looked around, and *she* saw a frog. *He* was in the well, *his* head sticking out of the water.

"Oh, it's you" said the girl. "My ball fell into the well."

"I can help," said the frog. "I can get your ball. What will you give me if I do?"

"Whatever you want," said the princess. "I'll give you my beautiful gold ring. I'll give you flowers from my garden."

"I do not want your beautiful gold ring or flowers from your garden," said the frog.

"But I would like to live with you and be your friend."

Activity 2
Part 2

Princess, King or Frog

Who does the underlined word refer to? Write P in the blank if it refers to the princess, write K in the blank if it refers to the king, and write F in the blank if it refers to the frog. If necessary, look back at the story. The first one is done for you.

1. For *her* birthday, he had given *her* a golden ball. K
2. The princess lived with him near a dark forest.
3. *She* played with her golden ball.
4. *She* dropped her golden ball in the well.
5. He was in the well, sticking *his* head out of the water.
6. *She* offered to give him *her* fine golden ring and flowers from *her* garden.
7. The frog said *he* wanted to be her friend.

Enhanced Materials

All instances of *he, she, him, her, his, her* were enhanced in the texts and activity sheets. The teacher corrected the answers to each task with the class before beginning the next one.

Activity 1: Encyclopedia Brown

Part 1

Working individually, students read a short mystery story that took place in the summer about a boy detective, Encyclopedia Brown, and then tried to solve the mystery with a partner. They were encouraged to reread relevant parts of the story.

Part 2

Students read a similar story that took place in the winter, told from the point of view of a girl detective. They were encouraged to find differences between the stories and then to solve the mystery as in Part 1.

Part 3

Students read 35 sentences and, without looking back at the texts, identified which of the two stories each sentence came from. Clues consist of third person singular pronouns and possessive determiners. Students corrected their partners' papers by finding each sentence in the appropriate story.

Activity 2: The Frog Prince

Part 1

After eliciting information about a familiar fairy tale, the *Frog Prince*, the teacher asked students to identify characteristics of this and other fairy tales. Working individually, students read a traditional version of the *Frog Prince*.

Part 2

Students worked with a partner to answer 20 questions about the story; the task required them to write the initial of the person to whom the underlined pronoun or possessive determiner referred (*K* for the King; *P* for the Princess; *F* for the Frog).

Parts 3 and 4

After looking at a cartoon with the caption “I was happier when I was a frog”, students discussed why his life as a human might have been more difficult than his life as a frog. The teacher read the illustrated story book *The Frog Prince Continued* while students followed along with their own texts in which pronouns and possessive determiners were enhanced.

Part 5

Students read a letter from the princess to her father in which some of the content was wrong. Errors primarily involved pronouns and possessive determiners, but other errors of fact were included. Students circled the errors in the letter and wrote the correct information above the error. Students exchanged their papers and referred back to the story to correct them.

Activity 3: Helen Keller

Part 1

After discussing what it would be like to be deaf and blind, students looked at a picture of Helen Keller and discussed what they knew about her. Working individually, they read a story about her discovery of the meaning of the word *water*.

Part 2

Working in groups of six, students took turns answering questions about the water story. Pronouns were used instead of proper nouns whenever possible. The task required students to go back to the text to find the information.

Part 3

Students read another text about Helen Keller and asked each other questions about her life. Questions contained pronouns instead of proper nouns.

Part 4

The teacher asked the class questions with third person singular pronouns and possessive determiners about Helen Keller and her teacher, Annie Sullivan. Students were required to understand which woman the pronouns referred to.

Part 5

Students answered additional factual questions about Helen and her teacher, Annie. They had to reread portions of the text to answer them. Answers were corrected with the class.

Part 6

Students were told that Helen was a difficult child who often fought with her teacher and with her father. They read questions with masculine and feminine pronouns and had to predict to which of two stories each question referred. Fighting with Annie or Fighting with Father. They corrected their own answers by reading the relevant texts.

Activity 4: Poems

Activity 1

Students followed along as the teacher read aloud ten humorous poems in which the gender of the characters could only be determined by understanding the pronouns and possessive determiners. As they read along, they selected a title for each poem from a list provided. Working with a partner, students confirmed their choice of titles and answered questions about the genders of the characters (e.g. Is the speaker a boy or a girl? What makes you think so?).

Part 2

Working in pairs, students grouped the poems according to themes.

Part 3

Each student chose a poem to practice; several students performed or read them aloud to the class.

Part 4

Students read a new poem and created a title with a partner.

Activity 5

Omitted.

Activity 6: Brothers and Sisters

Part 1

Students read one of two complementary stories about a brother and sister who did not get along. One story was written from the sister's perspective, the other from the brother's perspective.

Part 2

Working in groups of three, students decided whether six statements containing pronouns and possessive determiners were true or false, based on the story they had read. They underlined passages in the text supporting their responses. Students compared answers for the two different texts and found that they were different. They then read the other story. The teacher pointed out that the perspective of the speaker can change the story.

Part 3

Students read a story about triplets, separated in early childhood, who found each other as young adults.

Part 4

Students worked in groups of three to answer five factual questions about the story.

Part 5

Still in groups of three, students answered ten *who* and *why* questions about the story. Who questions required them to decide which triplet a pronoun or possessive determiner referred to. Students justified their answers by reading aloud relevant passages in the story.

Part 6

Students sequenced eight statements in the order in which events happened in the story.

Activity 7: Fables

Part 1

Individually, students read the story of *King Midas and the Golden Touch*.

Part 2

Working in pairs, students answered five questions about the story.

Part 3

Students read a list of items and decided which of the things that King Midas touched belonged to him, and which belonged to his daughter. They had to refer to the pronouns in the text to find the correct answers.

Part 4

Students read a poem about King Midas' daughter and answered ten questions about the things she touched.

Part 5

After reading a fable, *The Lion and the Mouse*, students answered six questions with a partner and underlined the part of the story that gave them the answer.

Activity 8

Omitted.

Activity 9

Omitted.

Activity 10: Larry the Champ

Part 1

Students read along while the teacher read them the first part of a story about a boy who made underwear commercials.

Part 2

Students matched a set of ten sentence beginnings with their endings. Sentences were taken from the story they had just read. They exchanged their papers with a partner, who corrected the sentences by finding them in the text.

Part 3

Working in pairs, students read seven statements about how the main character, Larry, felt. They were required to go back to the text and determine whether the feeling was stated explicitly in the story or not.

Part 4

Students read the next part of the story on their own.

Part 5

Students read ten statements, each containing an underlined third person singular pronoun or possessive determiners. They had to answer a "Who is it?" question about each statement.

Part 6

After students had predicted the ending of the story, they found out what actually happened.

Unenhanced treatment

Activity 2
Part 1



The Frog Prince

Once upon a time there was a king. He had a beautiful, young daughter. For her birthday, the king gave her a golden ball that she *played* with every day.

The king and his daughter *lived* near a dark forest. There was a deep well near the castle. Sometimes, the princess would sit by the well and play with her ball. One day, the princess threw her golden ball in the air but it did not fall into her hands. It fell into the well. Splash! The well was deep and the princess was sure she would never see her ball again. So she *cried* and *cried* and could not stop.

"What is the matter?" said a voice behind her. The girl *looked* around, and she saw a frog. He was in the well, his head sticking out of the water.

"Oh, it's you" said the girl. "My ball fell into the well."

"I can help," said the frog. "I can get your ball. What will you give me if I do?"

"Whatever you want," said the princess. "I'll give you my beautiful gold ring. I'll give you flowers from my garden."

"I do not want your beautiful gold ring or flowers from your garden," said the frog.

"But I would like to live with you and be your friend."

Activity 2
Part 2

The Frog Prince Questions

Answer the questions below. The first one is done for you.

1. Who gave the princess a golden ball for her birthday?

The King

2. Where did the princess live?

3. Who did the princess live with?

4. Where was the princess playing with her golden ball?

5. What happened to the ball?

6. What did the princess offer to give the frog if he *returned* her ball?

7. What did the frog want?

Unenhanced Materials

All instances of past tense *-ed* were enhanced in the texts and activity sheets. The teacher corrected the answers to each task with the class before beginning the next one.

Activity 1: Encyclopedia Brown

Part 1

Working individually, students read a short mystery story that took place in the summer about a boy detective, Encyclopedia Brown, and then tried to solve the mystery with a partner. They were encouraged to reread relevant parts of the story.

Part 2

Students read a similar story that took place in the winter, told from the point of view of a girl detective. They were encouraged to find differences between the stories and then to solve the mystery as in Part 1.

Part 3

Students read 35 sentences and, without looking back at the texts, identified which of the two stories each sentence came from. Clues consisted of sentences from the stories; proper nouns were used instead of pronouns and possessive determiners in most sentences. Students corrected their partners' papers by finding each sentence in the appropriate story.

Activity 2: The Frog Prince

After eliciting information about a familiar fairy tale, the *Frog Prince*, the teacher asked students to identify characteristics of this and other fairy tales. Working individually, students read a traditional version of the *Frog Prince*.

Part 2

Students worked with a partner to answer 15 factual information questions about the story. The teacher went over the answers with the class.

Parts 3 and 4

After looking at a cartoon with the caption "I was happier when I was a frog", students discussed why his life as a human might have been more difficult than his life as a frog. The teacher read the illustrated story book *The Frog Prince Continued* while students

followed along with their own texts in which pronouns and possessive determiners were enhanced.

Part 5

Students read a letter from the princess to her father in which some of the content was wrong. Errors were factual. Students circled the errors in the letter and wrote the correct information above the error. Students exchanged their papers and referred back to the story to correct them. Answers were then checked with the entire class.

Activity 3: Helen Keller

After discussing what it would be like to be deaf and blind, students looked at a picture of Helen Keller and discussed what they knew about her. Working individually, they read a story about her discovery of the meaning of the word *water*.

Part 2

Working in groups of six, students took turns answering questions about the water story. The task required them to go back to the text to find factual information.

Part 3

Students read another text about Helen Keller and asked each other questions about her life. Proper nouns were used in all sentences.

Part 4

The teacher asked the class factual information questions about a text describing Helen and her teacher, Annie Sullivan.

Part 5

Students answered factual questions about Helen and her teacher, Annie. They had to reread portions of the text to answer them.

Part 6

Students were told that Helen was a difficult child who often fought with her teacher and with her father. They read questions with proper nouns and had to decide to which of two stories each question referred, Fighting with Annie or Fighting with Father. They corrected their own answers by reading the relevant texts.

Activity 4: Poems

Activity 1

Students followed along as the teacher read aloud ten humorous poems about children. As they read along, they selected a title for each poem from a list provided. Working with a partner, students confirmed their choice of titles and answered factual information questions about the genders of the characters (e.g. Is this a true story? How do you know?).

Part 2

Working in pairs, students grouped the poems according to themes. Students had to defend their choices.

Part 3

Each student chose a poem to practice; several students performed or read them aloud to the class.

Part 4

Students read a new poem and created a title with a partner.

Activity 5

Omitted.

Activity 6: Brothers and Sisters

Part 1

Students read one of two complementary stories about a brother and sister who did not get along. One story was written from the sister's perspective, the other from the brother's perspective.

Part 2

Working in groups of three, students decided whether a set of six statements referring to the boy and the girl were true or false, based on the story they had read. They underlined passages in the text supporting their responses. Students compared answers for the two different texts and found that they were different. They then read the other story. The teacher pointed out that the perspective of the speaker can change the story.

Part 3

Students read a story about triplets, separated in early childhood, who found each other as young adults.

Part 4

Students worked in groups of three to answer five factual questions about the story.

Part 5

Still in groups of three, students answered ten *why* questions about the story. Students justified their answers by reading aloud relevant passages in the story.

Part 6

Students sequenced eight statements in the order in which events happened in the story.

Activity 7: Fables

Part 1

Individually, students read the story of *King Midas and the Golden Touch*.

Part 2

Working in pairs, students answered five questions about the story.

Part 3

Still working in pairs, students read each of ten sentences and decided in which order they occurred in the story.

Part 4

Students read a story about King Midas' daughter and answered ten questions about the things she touched.

Part 5

After reading a fable, *The Lion and the Mouse*, students answered six questions with a partner and underlined the part of the story that gave them the answer.

Activity 8

Omitted.

Activity 9

Omitted.

Activity 10: Larry the Champ

Part 1

Students read along while the teacher read them the first part of a story about a boy who made underwear commercials.

Part 2

Students matched a set of ten sentence beginnings with their endings. Sentences were taken from the story they had just read. They exchanged their papers with a partner, who corrected the sentences by finding them in the text.

Part 3

Working in pairs, students read seven statements about how the main character, Larry, felt. They were required to go back to the text and determine whether the feeling was stated explicitly in the story or not.

Part 4

Students read the next part of the story on their own.

Part 5

The teacher asked the students seven factual questions about events in the part of the story they had just read.. Students answered orally.

Part 6

After students had predicted the ending of the story, they found out what actually happened.

Appendix C: Criteria for the selection of books

Criteria for the selection of books

The following guidelines and rationale were developed and used in the selection of books:

1) Children's literature: Books written for English L1 children provide rich linguistic input, as well as opportunities for ESL children to participate in the literary world familiar to their anglophone counterparts. They were selected over ESL books, including simplified versions of children's "classics", in all cases.

2) Topics: Familiar topics make stories easier to understand than unfamiliar ones since background knowledge plays an important role in helping the reader make predictions. For this reason, books were chosen with people, things, events and feelings that learners could identify with. Furthermore, concrete topics are easier to understand than abstract ones since they are easier to illustrate and contextualize.

3) Story lines: Simple story lines which allow learners to make accurate predictions are easier to follow than complex plots when learners' L2 proficiency is limited (but see Meek, 1987, for a different view in the case of L1 readers). When learners' are more proficient, stories with problems to resolve can lead to discussions and skits.

4) Illustrations: Clear illustrations help the reader identify topics and guess meanings of unfamiliar words if they are directly related to the story. Learners in grade six like books that look new and hip. If a book has humorous or modern pictures, learners will often accept subject matter that is quite juvenile, but they will not accept books that look babyish.

5) Repetitions: Vocabulary acquisition is facilitated when words in the story are repeated. When key words and phrases are repeated in a familiar refrain, learners anticipate and become involved in the story, repeating the refrain along with the teacher. Moreover, repetition and rephrasing lighten the information density of a story.

6) Print size: Densely printed pages are intimidating for low-level L2 learners. Early picture books should have enlarged print and few words per page. Early chapter books

should also have big print and one or two illustrations per chapter. This is psychologically important because it decreases the density of the text.

7) Variety: Books of different genres, on different topics, and at different levels of difficulty should be selected and available for use at story time and free reading periods. Books with accompanying cassettes provide variety, as well.

8) Values: Books that promote gender or cultural stereotypes should be avoided in the first two months of the intensive program, before the learners' language proficiency has developed sufficiently to permit discussion of the relevant issues.

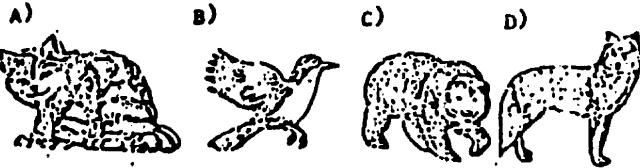
Appendix D: Language measures

Baldwin-Cartier test de classement (sample items)

PREMIERE PARTIE:

Pour chacun des numéros suivants, dites quelle illustration convient le mieux à la phrase entendue.

Ex.: "What's this?" "It's cat."

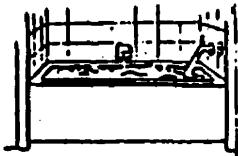


La bonne réponse est "A" - cat.

1. A)



B)



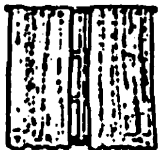
C)



D)



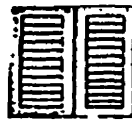
2. A)



B)



C)



D)



DEUXIEME PARTIE:

CHOISISSEZ LA BONNE REPONSE.

Ex.: She has forty-one dollars.

A) 21 \$ B) 72 \$ C) 11 \$ D) 41 \$

La bonne réponse est "D" - 41 \$.

15. A) Thursday B) Monday C) Friday D) Tuesday

16. A) March B) May C) April D) June

17. A) She never hurt me.
B) That's not funny.
C) This is not a joke.
D) Who knows?

18. A) He hasn't either.
B) I have a toothache.
C) It's wonderful.
D) So do we.

Passage correction task (sample items)

April, 1993

Name: _____

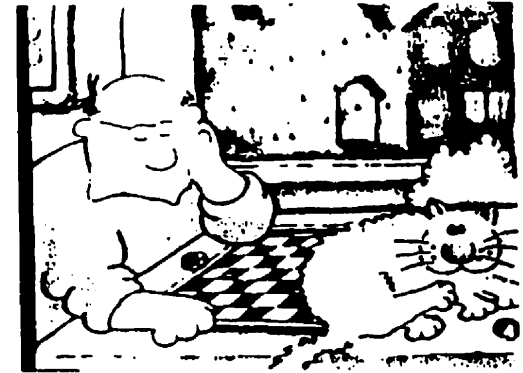
George and Rosemary

This is the story of George and Rosemary from the video, but it has a lot of errors. There is a maximum of one error in each sentence, and some sentences are correct. There are NO spelling errors. Read the story carefully. When you find a word that is incorrect, put an X on it. Then write the correct word above.

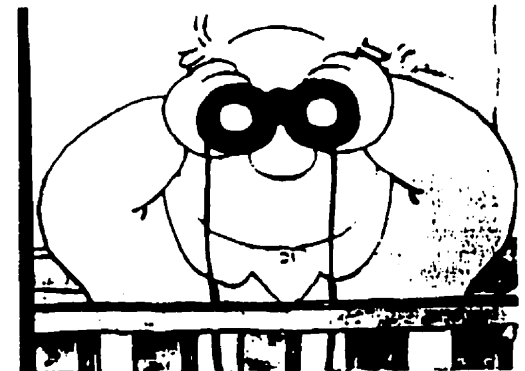
Look at the example.



George wanted to talk to Rosemary, but he ^{was} ~~be~~ too nervous. One day he imagined they were in an opera. George climbed a ladder to Rosemary's window, and then ~~we~~ ^{they} kissed each other.



George Edgecomb lived at 42 St. Basil Crescent. On cold and rainy days he stayed home and played checkers with Lucy, her cat. Sometimes he watched t.v. and ate a pizza. Her daughter lived far away in another city.



On warm and sunny days, George liked to sit on his front porch and watch a people pass by. But there was a more important reason for his outdoor activities - he had a passion for her neighbour, Rosemary Harris. She lived alone with your goldfish.

Truth value task (sample items)

Name: _____ Number: _____

Instructions:

Hi! My name is Mark, and I'm twelve. Life was okay until my mother and father told me that they were going to have a new baby.

There was a knock on the door and I heard her say "Mark..."

- | | | |
|----------------------------------|------|-------|
| 1. Mark has two sisters. | True | False |
| 2. Mark's father is at the door. | True | False |

"I'm leaving! I said to my parents. "I don't want to be here when the baby comes. Good-bye."

"I don't know" I said.

"Why don't you have supper while you decide?" Mom said.

I was very hungry. Mom and Dad were already eating. His lasagna looked delicious and her pizza smelled good. So I decided to stay for supper.

3. Mark wants to eat in a restaurant. True False

4. Mark's father is eating pizza. True False

I wanted to leave because I didn't want to deal with any more babies. Two is more than enough. Paul is seven years old and Betsy is five. They don't look alike at all. She is short, and he is tall. Her hair is red, and she wears it in a pony tail. Her eyes are green. His hair is blond and curly, and he has blue eyes.

- | | | |
|---------------------------|------|-------|
| 3. He is five years old. | True | False |
| 6. Paul is short. | True | False |
| 7. Paul's hair is blond. | True | False |
| 8. Betsy's eyes are blue. | True | False |

Multiple choice baseline test (sample items)



PART II Circle the correct word to replace the underlined words.

EXAMPLE:

The boy plays tennis.

- a) She **b) He** c) They d) It



16. The girl sees her grandfather.

- a) her b) she c) him d) you



17. The boy eats the cookies.

- a) them b) her c) him d) they



18. Louise plays hockey with the boys.

- a) you b) her c) him d) them

PART IV Susan's grandparents have come to visit. Read the conversation and circle the correct word to complete the sentence as in the example. There are THREE people in this conversation: Susan, Grandma and Mother.



Grandma



and Mother



(GRANDMA AND GRANDPA ENTER)



Grandma: Hi Susan! How are you?



Susan: You am fine.



Grandma: Where are their your her parents?



Susan: He You They are downstairs.



Grandma: You We They have a present for you them him, Susan!



Susan: I have a present for them us you too!



Grandma: (opens present) A picture! It's beautiful! Thank you.



Susan: I You He made it at school.



Grandma: Open their her your present, Susan.



Susan: (opens present) An album!

Multiple choice pretest/posttests (sample items)

5/93

Name: _____ Number: _____

Circle the correct word to complete the sentence.

EXAMPLE:

My name is Diane Jones. _____ as a teacher.

- a) She b) You c) I d) He

1. Mary likes to wash _____ face.

- a) his b) her c) the d) your

2. This is Sarah Brown. _____ is a doctor.

- a) They b) It c) She d) Her

3. The old man is happy to see _____.

- a) you b) him c) she d) her

4. The boy has to do _____ homework before dinner.

- a) his b) her c) your d) their



5. Tim and _____ sister are twins. They have the same birthday.

- a) his b) her c) your d) their

6. George's mother asked _____ to play with the baby.

- a) her b) he c) him d) his

7. Bill loves animals. This is _____ bird.

- a) him b) her c) his d) your

8. Mary's family went to the zoo. _____ brother didn't like the giraffes.

- a) her b) your c) she d) his

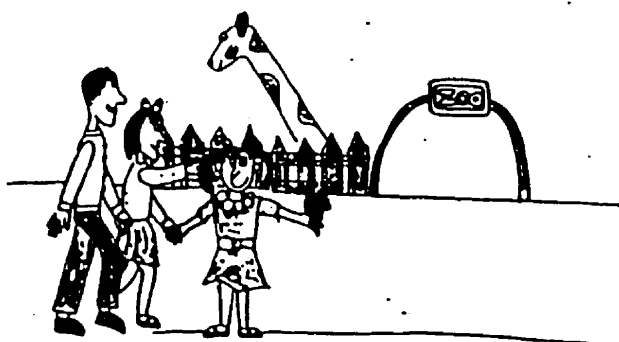
9. This is Paul White. _____ is a policeman.

- a) She b) Him c) It d) He

Oral production task pictures

Picture Set A

Birthday Party



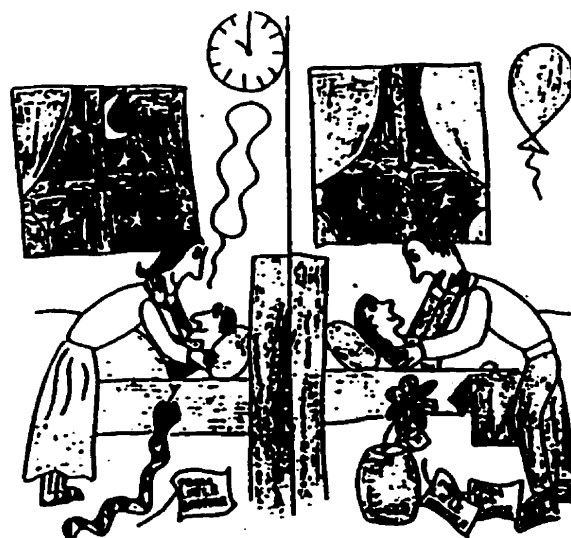
Zoo



Expo



Party



Bed

Picture Set B



Bike



Bandage



Make-up



Hair

Set C



Gum



Sand



Leg



Mess



Tooth



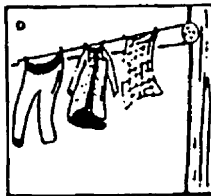
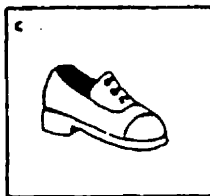
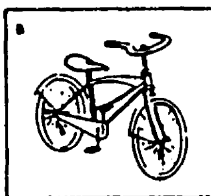
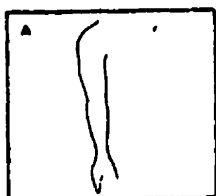
Snow

MEQ test (sample items)

PREMIERE SECTION

DIRECTIVES: Indique quelle illustration convient le mieux à la phrase que tu auras entendus.

Exemple:

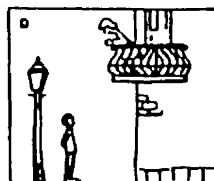


La réponse est:



Nous commençons.

1.



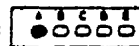
DEUXIEME SECTION

DIRECTIVES: Choisis parmi les quatre phrases suggérées celle qui correspond le mieux à celle que tu auras entendus.

Exemple:

- (A) They belong to us.
- (B) They belong to her.
- (C) They are my books.
- (D) They are difficult.

La réponse est:



Nous continuons.

16.

- (A) He needs to buy an old bike.
- (B) He sold his old bike to a friend.
- (C) He'd like to sell his old bike.
- (D) He found someone with an old bike to sell.

17.

- (A) We'll play only if it rains.
- (B) If it rains we won't play.
- (C) Rain will not stop the game.
- (D) We'll play the game when it rains.

Enhancement activities questionnaire

Nom: _____ Numéro: __

Pendant ce project, tu as fait 7 activités:

1. Encyclopedia Brown
2. The Frog Prince
3. Helen Keller
4. Poems
5. The Pain and The Great One; Happy Triplets
6. King Midas
7. Larry the Champ

1. Quelles activités étaient les plus intéressantes? Pourquoi?

2. Quelles activités étaient moins intéressantes? Pourquoi?

3. Quel était le niveau de difficulté des textes? Mets un X sur la ligne:

difficile _____ facile

4. Dans les activités de ce projet, il y avait des lettres écrites en gros. A ton avis, pourquoi est-ce qu'on a élargi ces lettres-là?

5. Est-ce que cet agrandissement t'a gêné?

6. Est-ce que cet agrandissement t'a aidé à comprendre les textes?

Appendix E: ANOVA tables

Table 5.2

One-Way ANOVA comparing scores on Baldwin-Cartier Test de Classement

Source	SS	df	MS	F	p
Between	627.69	2	313.84	1.93	0.15
Within	13528.13	83	162.99		

Table 5.4

One-Way ANOVA comparing scores at pretest, immediate posttest, and delayed posttest on Passage Correction task: grammatical corrections of deviant third person singular pronouns and possessive determiners

Source	SS	df	MS	F	p
Pretest					
Between	55.42	2	27.71	1.29	0.28
Within	1757.76	82	21.44		
Immediate Posttest					
Between	406.99	2	203.50	5.11	0.01
Within	3308.32	83	39.86		
Delayed Posttest					
Between	52.78	2	26.39	0.61	0.55
Within	3619.05	83	43.60		

Table 5.5

ANCOVA comparing scores at immediate and delayed posttests on passage correction task: grammatical corrections of deviant third person singular pronouns and possessive determiners; immediate pretest scores as covariate

Source	SS	df	MS	F	p
Immediate posttest					
Between	140.94	2	70.47	3.50	0.04
Immediate pretest	1608.45	1	1608.45	79.79	0.00
Within	1632.77	81	20.16		
Delayed posttest					
Between	5.06	2	2.53	0.09	0.91
Immediate pretest	1311.82	1	1211.82	48.61	0.00
Within	2185.80	81	26.99		

Table 5.6

Repeated measures ANOVA showing effects of group and time (pretest, immediate posttest, delayed posttest), passage correction task

Source	SS	df	MS	F	p
Between subjects					
Group	349.49	2	174.74	2.15	0.12
Error	6661.31	82	81.24		
Within subjects					
Time	4281.82	2	2140.91	191.40	0.00
Time*Group	113.99	4	28.50	2.55	0.04
Error	1834.38	164	11.19		

Table 5.7

Repeated measures ANOVA comparing scores on grammatical corrections of deviant third person singular pronouns and possessive determiners at immediate and delayed posttests, passage correction task

Group	Source	SS	df	MS	F	P
E+	Between	58.07	1	58.07	5.88	0.02
	Within	256.93	26	9.88		
E	Between	216.60	1	216.60	23.85	0.00
	Within	263.40	29	9.08		
U	Between	475.10	1	475.10	41.20	0.00
	Within	322.90	28	11.53		

Table 5.9

One-Way ANOVA comparing scores at pretest, immediate posttest, and delayed posttest on Passage Correction task: grammatical corrections of deviant third person singular pronouns

Source	SS	<i>df</i>	MS	F	<i>p</i>
Pretest					
Between	16.54	2	8.27	2.34	0.10
Within	289.65	82	3.53		
Immediate Posttest					
Between	47.98	2	23.99	4.13	0.02
Within	482.45	83	5.81		
Delayed Posttest					
Between	12.71	2	6.36	0.88	0.42
Within	597.52	83	7.20		

Table 5.10

ANCOVA comparing scores at immediate and delayed posttests on passage correction task; grammatical corrections of deviant third person singular pronouns; immediate pretest scores as covariate

Source	SS	df	MS	F	p
Immediate posttest					
Between	25.27	2	12.64	3.11	0.05
Immediate pretest	146.79	1	146.79	36.15	0.00
Within	328.92	81	4.06		
Delayed posttest					
Between	4.47	2	2.24	0.40	0.67
Immediate pretest	118.32	1	118.32	21.19	0.00
Within	452.22	81	5.58		

Table 5.11

Repeated measures ANOVA comparing scores on grammatical corrections of deviant third person singular pronouns at immediate and delayed posttests, passage correction task

Group	Source	SS	df	MS	F	P
E+	Time	9.80	1	9.80	4.74	0.04
	Error	53.70	26	2.07		
E	Time	41.67	1	41.67	16.26	0.00
	Error	74.33	29	2.56		
U	Time	94.41	1	94.41	34.97	0.00
	Error	75.59	28	2.70		

Table 5.13

One-Way ANOVA comparing scores at pretest, immediate posttest, and delayed posttest on passage correction task: grammatical corrections of deviant masculine third person singular masculine possessive determiners (*his*)

Source	SS	df	MS	F	p
Pretest					
Between	14.75	2	7.38	2.28	0.11
Within	268.05	83	3.23		
Immediate Posttest					
Between	49.75	2	24.88	4.20	0.02
Within	491.84	83	5.93		
Delayed Posttest					
Between	18.49	2	9.24	1.54	0.22
Within	499.57	83	6.02		

Table 5.14

One-Way ANOVA comparing scores at pretest, immediate posttest, and delayed posttest on passage correction task: grammatical corrections of deviant masculine third person singular possessive determiners (*her*)

Source	SS	df	MS	F	p
Pretest					
Between	6.53	2	3.27	0.78	0.46
Within	346.18	83	4.17		
Immediate Posttest					
Between	46.58	2	23.29	4.25	0.02
Within	454.92	83	5.48		
Delayed Posttest					
Between	8.13	2	4.07	0.68	0.51
Within	497.26	83	5.99		

Table 5.15

ANCOVA with immediate pretest scores as covariate comparing immediate and delayed posttest scores on passage correction task; grammatical corrections of deviant masculine possessive determiners (*his*)

Source	SS	df	MS	F	p
Between	23.40	2	11.70	2.42	0.10
Immediate pretest	95.24	1	95.24	19.69	0.00
Within	396.60	82	4.84		
Delayed posttest					
Between	9.18	2	4.59	0.86	0.43
Immediate pretest	61.00	1	61.00	11.41	0.00
Within	438.57	82	5.35		

Table 5.16

ANCOVA with immediate pretest scores as covariate comparing immediate and delayed posttest scores on passage correction task; grammatical corrections of deviant feminine possessive determiners (*her*)

Source	SS	df	MS	F	p
Between	24.64	2	12.32	3.61	0.03
Immediate pretest	174.92	1	174.92	51.23	0.00
Within	280.00	82	3.42		
Delayed posttest					
Between	2.83	2	1.41	0.30	0.74
Immediate pretest	114.63	1	114.63	24.56	0.00
Within	382.63	82			

Table 5.17

Repeated measures ANOVA comparing scores on grammatical corrections of *his* at immediate and delayed posttests, passage correction task

Group	Source	SS	df	MS	F	P
E+	Between	11.57	1	11.57	4.94	0.04
	Within	60.93	26	2.34		
E	Between	16.02	1	16.02	9.78	0.00
	Within	47.48	29	1.64		
U	Between	43.10	1	43.10	18.60	0.00
	Within	64.90	28	2.32		

Table 5.18

Repeated measures ANOVA comparing scores on grammatical corrections of *her* at immediate and delayed posttests, passage correction task

Group	Source	SS	df	MS	F	P
E+	Between	1.19	1	1.19	0.54	0.47
	Within	56.81	26	2.19		
E	Between	18.15	1	18.15	10.25	0.00
	Within	31.35	29	1.77		
U	Between	30.41	1	30.41	12.60	0.00
	Within	67.59	28	2.41		

Table 5.19

Statistics for trend analyses, passage correction task; $p < .001$ unless indicated

Measure	Group	F	
		Linear	Quadratic
Passage Correction			
Pronouns and PDs	E+ (1,26)	114.30	41.14
	E (1,29)	90.13	23.90
	U (1,27)	86.41	4.74**
Pronouns	E+ (1,26)	57.44	17.50
	E (1,29)	49.50	8.50*
	U (1,27)	71.19	0.18***
PD his	E+ (1,26)	87.99	24.80
	E (1,29)	49.01	19.65
	U (1,27)	64.15	11.29*
PD her	E+ (1,26)	26.96	15.91
	E (1,29)	40.71	7.45*
	U (1,27)	20.48	0.40***
Multiple choice			
Pronouns and PDs	E+ (1,26)	37.14	36.55
	E (1,29)	51.69	8.51*
	U (1,27)	79.26	4.32**

* $p < .01$
 ** $p < .05$
 *** $p > .05$

Table 5.23

One-Way ANOVA comparing groups scores on multiple choice initial pretest

Source	SS	df	MS	F	p
Between	4.27	2	2.14	0.08	0.92
Within	2223.31	83	26.79		

Table 5.25

One-Way ANOVA comparing groups' scores on multiple choice test at pretest, immediate posttest and delayed posttest

Source	SS	df	MS	F	p
Pretest					
Between	85.51	2	42.76	1.37	0.26
Within	2554.07	82	31.15		
Immediate Posttest					
Between	268.63	2	134.32	4.84	0.01
Within	2304.40	83	27.76		
Delayed Posttest					
Between	52.09	2	26.04	1.02	0.37
Within	2124.76	83	25.60		

Table 5.26

ANCOVA with immediate pretest scores as covariate comparing immediate and delayed posttest scores on multiple choice test

Source	SS	df	MS	F	p
Immediate posttest					
Between	93.02	2	46.51	2.95	0.06
Immediate pretest	933.91	1	933.91	59.16	0.00
Within	1278.70	81	15.79		
Delayed posttest					
Between	25.42	2	12.71	0.86	0.43
Immediate pretest	864.78	1	864.78	58.71	0.00
Within	1193.12	81	14.73		

Table 5.27

Repeated measures ANOVA showing effects of group and time (pretest, immediate posttest, delayed posttest), multiple choice test

Source	SS	df	MS	F	p
Between subjects					
Group	304.26	2	152.13	2.31	0.11
Error	5406.65	82	65.93		
Within subjects					
Time	1717.09	2	858.55	99.30	0.00
Time*Group	65.65	4	16.41	1.90	0.11
Error	1417.93	164	8.65		

Table 5.28

Repeated measures ANOVA comparing scores on grammatical corrections of *his* at immediate and delayed posttests, passage correction task

Group	Source	SS	df	MS	F	P
E+	Time	6.69	1	6.69	1.85	0.19
	Error	93.81	26	3.61		
E	Time	56.07	1	56.07	10.17	0.00
	Error	159.93	29	5.51		
U	Time	190.09	1	190.09	24.71	0.00
	Error	215.41	28	7.69		

Table 5.30

ANCOVA comparing mean number of grammatical uses of subject and object pronouns:
Picture Set A, immediate pretest means as covariate

Source	SS	df	MS	F	p
Between	55.21	2	27.61	2.04	0.14
Immediate pretest	234.80	1	234.80	17.34	0.00
Within	1110.42	82	13.54		

Table 5.31

ANCOVA comparing mean number of ungrammatical uses of subject and object pronouns: Picture Set A, immediate pretest means as covariate

Source	SS	df	MS	F	p
Between	14.11	2	7.06	1.90	0.16
Immediate pretest	2.32	1	2.32	0.62	0.42
Within	304.67	82	3.72		

Table 5.32

ANCOVA comparing mean number of grammatical uses of possessive determiners,
Picture Set A; immediate pretest means as covariate

Source	SS	df	MS	F	p
Between	149.68	2	74.84	3.64	0.03
Immediate pretest	825.96	1	825.96	40.13	0.00
Within	1687.69	82	20.58		

Table 5.33

ANCOVA comparing mean number of ungrammatical uses of possessive determiners, Picture Set A, pretest means as covariate, picture description task

Source	SS	df	MS	F	p
Between	22.25	2	11.13	1.09	0.34
Immediate pretest	188.18	1	188.18	18.43	0.00
Within	837.38	82	10.21		

Table 5.35

ANCOVA comparing mean number of grammatical uses of subject and object pronouns: Picture Set B, immediate posttest means as covariate

Source	SS	df	MS	F	p
Between	129.14	2	64.57	2.50	0.09
Immediate pretest	361.65	1	361.65	14.01	0.00
Within	2116.48	82	25.81		

Table 5.36

ANCOVA comparing mean number of ungrammatical uses of subject and object pronouns: Picture Set B, immediate posttest means as covariate

Source	SS	df	MS	F	p
Between	3.97	2	1.99	0.50	0.61
Immediate pretest	22.91	1	22.91	5.76	0.02
Within	324.61	82	3.96		

Table 5.37

ANCOVA comparing mean number of grammatical uses of possessive determiners, Picture Set B; immediate posttest means as covariate

Source	SS	df	MS	F	p
Between	0.36	2	0.18	2.44	0.09
Immediate pretest	0.00	1	0.00	0.04	0.85
Within	6.06	82	0.07		

Table 5.38

ANCOVA comparing mean number of ungrammatical uses of possessive determiners, Picture Set B; immediate posttest means as covariate

Source	SS	df	MS	F	p
Between	9.72	2	4.86	0.82	0.44
Immediate pretest	59.84	1	59.84	10.09	0.00
Within	486.24	82	5.93		

Table 5.40

One-Way ANOVA comparing groups' scores on subject pronouns, picture description task

Source	SS	df	MS	F	p
Pretest					
Between	0.13	2	0.07	0.43	0.65
Within	9.07	60	0.15		
Immediate Posttest					
Between	0.15	2	0.07	1.14	0.32
Within	5.17	81	0.06		
Delayed Posttest					
Between	0.10	2	0.05	1.68	0.19
Within	2.58	83	0.03		

Table 5.41

One-Way ANOVA comparing groups' scores on object pronouns, picture description task

Source	SS	df	MS	F	p
Pretest					
Between	0.02	2	0.01	0.05	0.95
Within	3.34	14	0.24		
Immediate Posttest					
Between	0.49	2	0.25	1.52	0.24
Within	4.35	27	0.16		
Delayed Posttest					
Between	0.81	2	0.41	1.99	0.15
Within	10.00	49	0.20		

Table 5.43

One-Way ANOVA comparing groups' scores on *his*

Source	SS	df	MS	F	p
Pretest					
Between	1.00	2	0.50	4.01	0.02
Within	8.19	66	0.12		
Immediate Posttest					
Between	1.09	2	0.55	4.17	0.02
Within	10.86	83	0.13		
Delayed Posttest					
Between	0.43	2	0.13	1.64	0.20
Within	10.97	83			

Table 5.44

One-Way ANOVA comparing groups' scores on *her*

Source	SS	df	MS	F	p
Pretest					
Between	0.09	2	0.04	0.21	0.81
Within	13.10	64	0.20		
Immediate Posttest					
Between	0.13	2	0.07	0.43	0.65
Within	12.43	83	0.15		
Delayed Posttest					
Between	0.62	2	0.31	2.63	0.08
Within	9.75	83	0.12		

Table 5.46

One-Way ANOVA comparing groups' scores on inanimate

Source	SS	df	MS	F	p
Pretest					
Between	0.00	2	0.00	0.01	0.99
Within	6.45	34	0.19		
Immediate Posttest					
Between	0.88	2	0.44	3.12	0.05
Within	9.89	70	0.14		
Delayed Posttest					
Between	0.00	2	0.00	0.00	0.99
Within	7.96	78	0.10		

Table 5.47

One-Way ANOVA comparing groups' scores on kin-same

Source	SS	df	MS	F	p
Pretest					
Between	0.16	2	0.08	0.50	0.61
Within	4.53	29	0.16		
Immediate Posttest					
Between	0.57	2	0.03	0.26	0.77
Within	7.73	72	0.11		
Delayed Posttest					
Between	0.05	2	0.02	0.20	0.82
Within	8.48	75	0.11		

Table 5.48

One-Way ANOVA comparing groups' scores on kin-different

Source	SS	df	MS	F	p
Pretest					
Between	0.02	2	0.01	0.05	0.95
Within	7.36	41	0.18		
Immediate Posttest					
Between	0.26	2	0.13	1.41	0.25
Within	6.43	70	0.09		
Delayed Posttest					
Between	0.31	2	0.16	1.12	0.33
Within	11.05	80	0.14		

Table 5.49

One-Way ANOVA comparing groups' scores on body parts

Source	SS	df	MS	F	p
Pretest					
Between	0.69	2	0.35	2.08	0.13
Within	10.82	65	0.17		
Immediate Posttest					
Between	0.12	2	0.06	0.71	0.50
Within	6.92	83	0.08		
Delayed Posttest					
Between	0.02	2	0.01	0.16	0.85
Within	5.70	83	0.07		

Table 5.53

One-way ANOVA Comparing Groups' Scores on MEQ Test

Source	SS	<i>df</i>	MS	F	<i>p</i>
Between	101.30	2	50.65	0.34	0.71
Within	12300.74	83	148.20		

Appendix F: Possessive determiner stages

Coding sheet used for individual learners

PRONOUN USE: ORAL PRETEST

Student:

Number:

Word count:

GRAMMATICAL

UNGRAMMATICAL

Subject:

he

she

Object:

him

her

Possessive:

his: inanimate

body part

kin: same sex

different sex

plural

her: inanimate

body part

kin: same sex

different sex

plural

Ambiguous

Introducer

Other

Full description of stages

ORAL DATA: STAGE DEVELOPMENT, POSSESSIVE DETERMINERS: ADAPTATION OF ZOBL

- Stage 1** **pre-emergence:**
avoidance of *his* and *her* (0-1 correct uses, 1-2 incorrect uses) and/or use of definite article;
- Stage 2** **pre-emergence:**
use of *your* (minimum of 2 times) for all persons, genders and numbers; 0-1 correct uses of *his* or *her*;
- Stage 3** **emergence of either or both *his/her*:**
2-6 combined total correct uses of *his* and *her*, neither to criterion (4 correct uses);
- Stage 4** **preference for *his* or *her***

4m) preference for *his*; use of *his* to criterion (4 correct uses); probably accompanied by overgeneralization of *his* to contexts for *her*; 0-3 instances of *her*

4f) preference for *her*; use of *her* to criterion (4 correct uses); probably accompanied by overgeneralization of *her* to contexts for *his*; 0-3 instances of *his*;
- Stage 5** **differentiated use of BOTH *his* and *her* without agreement rule**

differentiated use of both *his* and *her* to criterion (4 correct uses); below criterion (0-1 correct uses) with kin different gender for *his* and *her*;
- Stage 6** **agreement rule applied to *his* or *her* (kin different gender)**

differentiated use of both *his* and *her* to criterion (4 correct uses); agreement rule applied to kin different gender to criterion (2 correct uses) for either *his* or *her*;
- Stage 7** **agreement rule applied to *his* and *her* (kin different gender)**

differentiated use of both *his* and *her* to criterion (4 correct uses); agreement rule applied to kin different gender to criterion (2 correct uses) for both *his* and *her*; errors with body parts may continue;
- Stage 8** **error-free application of agreement rule**

rule applied to *his* and *her* (all domains, including body parts)

Stage development of individual learners

Oral stages for learners in three groups (stage 4 overgeneralization: m=*his*; f=*her*)

Group E+ Learner	Pretest	Immediate posttest	Delayed posttest
101	4f	7	7
102	2	7	4m
103	3	6	4m
104	1	4f	6
105	1	4f	5
107	1	7	4m
108	2	2	3
109	1	7	6
110	4m	4m	4m
111	1	3	4m
112	4f	7	4m
113	1	4f	4m
114	2	4m	4m
115	3	4f	4f
116	1	4f	3
117	1	5	4m
118	1	4m	4m
119	4m	7	6
120	4m	7	6
122	1	5	4m
123	1	4m	6
124	2	7	7
125	4m	7	7
126	1	1	1
127	1	4m	4m
128	3	7	7
129	1	1	4m

N.B. Data from learners 106, 121, and 130 were not analyzed

Group E			
Learner	Pretest	Immediate posttest	Delayed posttest
201	7	4m	4m
202	1	1	1
203	2	3	2
204	1	4f	4f
205	1	2	3
206	3	4f	5
207	1	4f	4m
208	4m	7	7
209	1	3	4m
210	3	4m	7
211	1	7	4m
212	4f	7	6
213	1	1	3
214	1	1	3
215	2	4f	4f
216	1	4f	4m
217	3	7	6
218	3	7	7
219	1	6	4m
220	3	6	6
221	1	3	4m
222	1	2	4f
223	3	6	7
224	2	2	4f
225	3	5	4m
226	4f	4m	7
227	2	3	4m
228	4m	4m	4m
229	4f	6	7
230	3	5	7

Group U			
Learner	Pretest	Immediate posttest	Delayed posttest
301	1	4m	6
302	2	2	4f
303	3	4f	4m
304	1	4f	3
305	1	4f	7
306	1	1	4m
307	1	4f	7
308	1	5	7
309	1	7	6
310	2	4f	4f
311	1	4f	4f
312	2	6	4m
313	1	4f	4f
314	1	3	4m
315	1	1	1
316	1	4f	7
317	4m	7	6
318	4f	4f	3
319	2	2	3
320	1	1	2
321	3	7	4m
322	4f	4f	7
323	2	3	4f
325	3	4f	7
326	1	7	4m
327	1	1	3
328	4f	7	4m
329	4f	7	5
330	1	6	4m

N.B. Data from learner 124 were not analyzed