

**Adolescent Learners' Awareness of First Language Influence  
on their Second Language Knowledge**

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## Abstract

This research is a replication and expansion of Lightbown and Spada (2000) which investigated the metalinguistic awareness of 11-12 year-old francophone learners of English as second language (ESL). Their research examined whether young L2 learners were able to make explicit L1 rules influencing their L2 performance. The present research builds on Lightbown and Spada (2000) by comparing their findings to those of older and more proficient francophone ESL learners (12-16 years old) in secondary school. As observed with the younger learners in Lightbown and Spada (2000), the interlanguage of the older learners revealed a clear influence of transfer of French even though they were more accurate in their overall performance. The results also indicated that the older learners were capable of considerable metalinguistic awareness regarding the target features (question formation and adverb placement). This contrasts sharply with Lightbown and Spada's (2000) in which there was no evidence of metalinguistic awareness on the part of the younger learners.

## Résumé

Cette étude est une étude réplique et une expansion de Lightbown et Spada (2000) qui ont analysé la connaissance métalinguistique de jeunes apprenants francophones (de 11 à 12 ans) en anglais langue seconde. Lightbown et Spada (2000) ont examiné dans quelle mesure ces jeunes apprenants étaient capables de formuler de façon explicite des règles grammaticales françaises influençant leur performance en anglais. La présente étude s'appuie sur Lightbown et Spada (2000) et compare leurs résultats à ceux d'apprenants francophones plus âgés (de 12 à 16 ans) et plus avancés en anglais dans une école secondaire. Tel qu'observé dans le cas des jeunes apprenants étudiés par Lightbown et Spada (2000), l'interlangue des apprenants plus âgés révèle une influence marquée du transfert du français à l'anglais bien que leur performance globale soit supérieure. Les résultats ont aussi démontré que les apprenants plus âgés possédaient une connaissance métalinguistique considérable des savoirs cibles (la construction de la forme interrogative et la place de l'adverbe). Ces résultats contrastent fortement avec ceux obtenus par Lightbown et Spada (2000) qui n'ont recueilli aucune preuve de connaissance métalinguistique avec leurs apprenants.

## Dedication

To my mother who knows what matters most in life cannot be taught. She gave me what she knows but was not taught – love and the joy of learning and work.

## CHAPTER 1

### Introduction

The research presented in this thesis is a replication and an expansion of Lightbown and Spada's (2000) study that investigated the metalinguistic awareness of young English second language (L2) learners. More specifically their research examined the extent to which 11-12 year-old francophone learners of English were able to make explicit L1 rules that seemed to influence their L2 performance and whether these rules constrained their performance in English with or without their awareness. The two linguistic features examined, adverb placement in simple sentences and subject-auxiliary inversion in questions, were found to be problematic for young francophone learners of English in previous research (Lightbown & Spada, 1994, 1997; Spada & Lightbown, 1993, 1999; Trahey & White, 1993; White, 1991; White, Spada, Lightbown, & Ranta, 1991). That is, the students' knowledge and use of both forms indicated a clear and consistent pattern of L1 influence leading to non-target like performance. Although the transfer of French was systematic for both forms, there was no evidence that students were aware of the ways in which knowledge of their L1 contributed to their L2 performance (Lightbown & Spada, 2000).

The present study builds on the Lightbown and Spada (2000) study by comparing their results with those of older francophone students (12-16 years old) in five regular English as a Second Language (ESL) classes in a French high school in Quebec. The findings are discussed in relation to four research questions: First, whether the older L2 learners (12-16 years old) in this study would be constrained by the same interlanguage rules regulating their use of adverb placement and question formation as the younger learners (11-12 years old) in the Lightbown and Spada (2000) study. Second, whether the older learners would be more metalinguistically aware of what they were doing — that is, whether they were more able to provide explicit metalinguistic explanations of the interlanguage rules transferred from French regulating their use of adverb placement and question in English, than were the younger learners in the Lightbown and Spada (2000) study. Third, whether the older learners in this study tended to be more accurate in their grammaticality judgements when the test items in English closely paralleled French language structures. Fourth, whether the profile of the older

learners' responses on a combined explanation and correction task coincided with the developmental stages in English questions proposed by Pienemann, Johnston and Brindley (1988) and adapted in Spada and Lightbown (1999).

The overall findings are discussed in relation to Lightbown and Spada's (2000) hypothesis that explicit contrastive metalinguistic instruction and corrective feedback that is timed to coincide with learners' developmental "readiness" might be necessary to help learners overcome transfer problems and move into more advanced developmental stages.

The thesis is organized as follows: Chapter 2 provides a review of the literature, and begins with a look at the history and development of the notion of language transfer in SLA as well as the ways in which it interacts in interlanguage development. This is followed by a discussion of some of the L2 classroom research that has examined the effects of form-focussed instruction on linguistic features known to be problematic for L2 learners because of L1 influence. Next, the history and development of the notion of developmental readiness in SLA are briefly reviewed. Then, the research on metalinguistic awareness is examined — with mainly adult or older adolescent learners in L2 acquisition and with children between the ages of 4 to 8 in L1 acquisition. Next, a description of the Lightbown and Spada (2000) study is presented in some detail as the thesis represents a replication and expansion of this research. The chapter concludes with the research questions and hypotheses. Chapter 3 presents the methodology for the research. Chapter 4 provides detailed results that compare the findings of this study with those in the Lightbown and Spada (2000) study in terms of the learners' overall proficiency and their judgements and metalinguistic explanations related to the two target features— question formation and adverb placement. The results of the question data are also discussed in relation to stages in L2 development. Chapter 5 provides a discussion of the findings and conclusions. The implications of the study's findings for future classroom research and L2 pedagogy are also presented.

## CHAPTER 2

### Review of Literature

There are four distinct areas of theoretical and empirical work in the L2 literature, which are directly relevant to this study. They are: 1) the role of transfer in SLA; 2) form-focussed instruction and SLA; 3) “developmental readiness” and SLA; and 4) metalinguistic awareness and SLA.

#### The Role of Transfer in SLA

The role of transfer in L2 learning is central to the questions under investigation in the present study. From 1940 to 1960, the notion of transfer occupied a dominant position in contrastive analysis (CA) then associated with behaviourism the most “popular” theory of psychology at that time. A behaviourist view of language learning is that L2 learners receive linguistic input from speakers in their environment, and positive reinforcement for their correct repetitions and imitations that in turn leads to habit formation. Such a view emphasizes error correction, for errors, it is feared, result in bad habits. It stresses the notion of language transfer, also referred to as “interference” a notion that can be roughly defined as “. . . the influence resulting from similarities and differences between the target language and any other language that has been previously (and perhaps imperfectly) acquired” (Odlin, 1989, p. 27).

The notion of language transfer is to this day often linked to the contrastive analysis hypothesis (CAH) in language learning. This hypothesis is built on the assumption, first, that learning a second language is very different from learning a first. Secondly, the hypothesis claims that a knowledge of the differences and similarities between languages can help to predict the difficulties one is bound to encounter while learning a new language (Lado, 1957).

The predictive validity of this approach was seriously challenged when empirical research began to show that learning difficulties did not arise as predicted by CAH. Some of the errors predicted were not made (Dulay & Burt, 1973; 1974a; 1974b) and some of the errors made were not predicted (Hylstenstam, 1977). In addition, a growing number of similarities between L1 and L2 learning were observed. Furthermore, the fact that CA

disregards cognitive aspects of learning weakens the explanatory power of the hypothesis in relation to a phenomenon as elusive as SLA.

This incomplete view was eventually replaced by a more mentalist view of language learning. This paradigm shift from product (behaviour) to process (mind) brought linguistics right into the center of the intellectual arena. Chomsky (1965) achieved this through devising an original and audacious theory sometimes called Transformational-Generative Grammar or Universal Grammar (UG) depending on which aspect of his work is being stressed.

Chomsky's theory presents language as the product of "rule formation" rather than "habit formation." It explains how we all unconsciously apply grammatical rules, and constantly and effortlessly use sequences and combinations of words that we have never heard or learned before. Although Chomsky never discussed the implications of his work for L2 learning, others have applied his findings to SLA, the most notable example of which is Krashen's Monitor Theory (1981, 1982, 1983). Some SLA researchers (e.g. Dulay & Burt, 1974a, 1974b) contended that transfer plays but a minor role in language learning and that the language acquisition process depends on universal cognitive mechanisms. This implies that it is the L2 system rather than the L1 system that guides the learning process.

White (1985, 1992) argues that UG can provide a "suitable paradigm" for dealing with SLA. White (1985) offers the following illustration of the process of language creativity in asking how learners having been exposed only to utterances (1a), (1b) and (1c) can know that (1d) is wrong and that (1e) is right.

- 1      (a) The car is expensive.
  - (b) Is the car expensive?
  - (c) The car which is advertised in the paper is expensive.
  - (d) \*Is the car—advertised in the paper is expensive?
  - (e) Is the car which is advertised in the paper—expensive?
- (Cited in Larsen-Freeman & Long, 1991, p.229)

This is a good example of what is referred to as the “logical problem” of language acquisition, that is, how learners who have not been exposed to either “overt or covert negative evidence” can come to know what sentences are or are not grammatical. This no doubt suggests that UG is still partially available to L2 learners, a claim that is, however, far from being unchallenged (Mitchell & Myles, 1998).

The role of the L1 in L2 learning was also re-evaluated on the basis of the results of the morpheme studies and error analysis research that tended to look at transfer as process (McLaughlin, 1987). Error Analysis, which was developed during the 1970's, is not concerned with error prediction but with the detailed description and analysis of L2 errors. It views errors as evidence of the natural developmental process and SLA as a rule-dependent and predictable system in its own right. This is often used in support of Chomsky's innatist view due to the fact that some L2 errors are very similar to the kind of errors L1 learners make. From a cognitivist point of view, it makes considerable sense to assume that learners make use of any prior linguistic knowledge they may have as “input” to the creative construction process-- one important knowledge source being their L1 (Ervin-Tripp, 1974).

Considerable research has been done on the role of transfer in L2 learning. This includes research on: a) transfer of typological organization (Wode, 1976; Zobl, 1979); b) avoidance (Schachter, 1974); c) overproduction (Schachter & Rutherford, 1979); d) modification of hypotheses (Schachter, 1983); and e) transfer as decision-making (Gass, 1984; Kellerman 1979, 1983). Zobl (1980) examined the differences between developmental versus transfer errors and argued that transfer errors may be more often “recalcitrant to restructuring”, that is, they show a tendency toward fossilization (pp. 476-477).

One of the main contributions in examining transfer in a new light is what has come to be called interlanguage theory. Interlanguage theory (IL) was developed in the late 1970s and early 1980s and within it transfer is viewed as a learning strategy used by both child and adult learners (Selinker, 1972, 1992). Other strategies used by language learners are the “overgeneralization” of target language rules (using rules in the wrong context) and “simplification” (leaving out elements of a sentence). IL theory can be said to have freed transfer from its behaviourist bondage and preserved it as an important

theoretical concept in L2 acquisition research. In this view, the learner's IL is seen as being developed via different learning strategies (to compensate for the lack of L2 knowledge), transfer being one of them. The role of transfer is here seen as a facilitating rather than a deleterious one. Yet, it must be borne in mind that transfer, as facilitating as it may be, is not necessarily a permanent source of information, for it is possible that learners do not retain the information in their IL systems (Faerch & Kasper, 1987).

The extent to which transfer from the L1 may prevent L2 learners from continuing to make progress in some aspects of their development has been the focus of considerable L2 classroom research. In this work, form-focussed instruction has been targetted to particular features of the L2 that present persistent problems for learners because of L1 influence. The research is presented in the next section.

### Form-Focussed Instruction and SLA

Form-focussed instruction (FFI) is defined as instruction that draws the learners' attention to the form and structures of language within a communicative context (Spada, 1987; Spada & Fröhlich, 1995).<sup>1</sup> The potential benefits of FFI have been investigated in several different ways. In some studies the FFI has been explicit (i.e. containing metalinguistic rules and corrective feedback). In other studies the FFI has been implicit (e.g. high frequency exposure to a target feature without instruction or corrective feedback). In all the studies reviewed below, the FFI has been provided to school-aged learners in intensive ESL classrooms in Quebec. These are programs in which students receive ESL instruction for five months (see Lightbown & Spada, 1994 and Spada & Lightbown, 1989 for descriptions of intensive ESL). In these highly communicative classrooms, FFI has been introduced and targetted to language forms known to be problematic because of L1 influence.

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<sup>1</sup> For more description and discussion of the term form-focussed instruction and how it contrasts with the terms 'focus on form' and 'focus on forms', see Doughty and Williams (1998) and Norris and Ortega (2000).

### Explicit FFI

White (1991), showed that adverb placement was problematic for francophone learners of English who, on a grammaticality judgement task, tended to accept both adverb placement conforming to a French rule (SVAO - *\*she watches often TV*) incorrect in English, as well as to an English rule (SAVO – *she often watches TV*) incorrect in French. White hypothesized that learners would learn simply through exposure to positive evidence (i.e., grammatical sentences in English) that English allows SAVO even though French does not. She likewise hypothesized that students would persist in using adverb placement rules consistent with French (their L1) and that they would require negative evidence, that is, explicit instruction as to the ways English and French adverb placement rules differ, to get rid of the French SVAO structure. Results indicated that the students who received negative evidence via form-focussed instruction and corrective feedback outperformed the comparison groups on immediate post-tests but that these gains were lost on a delayed post-test. The lack of long-term effect may in part be explained by the brevity of the instructional treatment or by the fact that no further in-class practice was given on adverb placement between the immediate and delayed post-tests.

White, Spada, Lightbown, and Ranta (1991) report on another study with the same population of learners that examined the effects of form-focussed instruction, including corrective feedback on the acquisition of English questions. French and English differ in the formation of interrogatives. A number of partial similarities between the two languages as well as the more restrictive use allowed in SVO order in questions in English often leads to difficulties for francophone ESL learners. For example, inversion with pronoun subjects and auxiliary verbs in questions is grammatical in both French and English as in 1a. However, whereas inversion with pronoun subjects is optional in French, which also allows questions to be formed with the interrogative formula *est-ce que* attached to a declarative sentence as in 1b, it is obligatory in English. Very commonly, French also allows questions to be formed with declarative word order and rising intonation as in 1c. In spoken French, this type of non-inverted question is more frequent in both yes/no and WH questions.

1a) *Peut-elle venir à l'école?*

(Can she come to school?)

1b) *Est-ce qu'elle peut venir à l'école?*

(Is it that she can come to school?)

1c) *Elle peut venir à l'école?*

(She can come to school?)

What is particularly problematic for francophone ESL learners is that inversion with full noun subjects is grammatical in English but ungrammatical in French as in 2a. In French, when a noun subject is needed to make the meaning clear, it is generally preceded by the interrogative formula *est-ce que* attached to a declarative sentence as in 2b or it is topicalized by placing it at the beginning or the end of the sentence, and replaced by a pronoun subject as in 2c. (See White et al., 1991 for more description and discussion on question formation.)

2a) *\*Peut Mary venir à l'école?*

(Can Mary come to school?)

2b) *Est-ce que Mary peut venir à l'école?*

(Is it that Mary can come to school?)

2c) *Mary, peut-elle venir à l'école?*

(Mary, can she come to school?)

White et al. (1991) hypothesized that form-focussed instruction that included explicit ways of drawing the learners' attention to question forms would facilitate their acquisition. Using a grammaticality judgement and a cartoon task to examine learners' accuracy in their knowledge and use of question forms, the researchers found that learners benefitted from the instruction. That is, those who received instruction (and corrective feedback) on question forms were significantly more accurate in their knowledge and use of question forms than those who did not. The instructed learners also made more developmental progress. Unlike the adverb results reported above, the gains on question formation were maintained on the delayed post-test administered five weeks later. What makes this study particularly interesting is that the use of a "relatively spontaneous" oral performance task, which cannot be dismissed as a "monitored" task, brought about improved grammatical knowledge and performance.

Spada and Lightbown (1993) also report on the acquisition of question forms but focus on the oral performance of learners while engaged in a communication task. Once again, the researchers hypothesized that FFI and corrective feedback would help learners discover how to form questions in English through inversion of the subject and verb and/or auxiliary. Given that the options permitted in SVO order are more restricted in English than in French, the researchers likewise hypothesized that second language learners in intensive ESL would assume that English like French has optional inversion and would tend to produce and accept questions that conformed to word order rules typical of spoken French as well as those that corresponded to English rules.

Two types of analyses of the oral data were undertaken: one to measure accuracy (a calculation of the percentage of well-formed questions) and another to measure developmental stages. The six-stage sequence in the acquisition of English questions proposed by Pienemann et al. (1988) and adapted by Spada and Lightbown (1993) was used to determine developmental progress. The overall results revealed that instruction and corrective feedback provided within the context of communicative interaction contributed positively to the learners' knowledge and use of question formation. This was evident for both accuracy and development and in short and long-term testing.

In another study of FFI in a different L2 context, Lyster (1994) investigated the sociostylistic variation in three grade-eight French immersion (FI) classes with anglophone students who were about 13 years old. One of the main linguistic features examined was the use of second person singular forms *tu* (familiar) and *vous* (formal) in French—a sociolinguistic distinction that does not exist in English. The pre- and post-tests results indicated that instruction significantly improved the FI students' sociolinguistic competence. That is, learners in the experimental groups were significantly more able to appropriately recognize and produce *tu* and *vous* on oral and written production measures. Moreover, the proficiency gains were maintained a month later when the students were post-tested.

### Implicit FFI

In research that has implemented less explicit methods of FFI, Trahey and White (1993) introduced what they referred to as an “input flood” to study adverb placement in

English with young francophone learners. This experiment was designed to test White's (1991) hypothesis that negative evidence is required to help learners reject IL features that resemble features in their L1. In this study, learners received only positive evidence (correct examples of adverb placement) via reading passages that contained many, many examples of adverbs. There was no provision for metalinguistic rules or corrective feedback. The results showed that learners developed a better knowledge of what was grammatical in English but not of what was ungrammatical. The mere provision of positive evidence was shown to be insufficient in helping learners get rid of adverb placement errors that reflected rules based on their L1. These findings support White's (1991) hypothesis that negative evidence (i.e. more explicit instruction) may be necessary for particular features to help learners move along in their interlanguage development.

J. White (1998) examined another feature known to be difficult for francophone learners of English – possessive determiners. In her study, the possessive determiners (i.e. his / her) were also taught via an “input flood.” Like Trahey and White (1993), the “input flood” consisted of a large variety of reading passages in which the target features occurred frequently. However, in addition to the “input flood,” one of the groups in White's study also received “typographical enhancement.” In this group, the learners' attention was implicitly drawn to the target form through typographical enhancement (i.e. bold typing, underlining, italicizing, or capitalization) contained in many passages that learners read. The hypothesis was that learners who received typographical enhancements would notice the target features more and thus, develop higher levels of accuracy and development in the use of possessive determiners. However, this hypothesis was not confirmed. Learners who received typographical enhancement did not perform significantly better than those who did not.

The above review has focussed on school-aged learners who have received FFI targetted to specific features of the L2 where there has been evidence of L1 transfer. Many other studies of FFI have been carried out with a variety of L2 learners, targetting different linguistic features in a wide range of instructional contexts. For reviews of this research see Ellis (2001), Norris and Ortega (2000), and Spada (1997). The question as to whether L2 learners may be able to benefit from FFI at particular times in their L2

development has also been investigated and reported in the SLA literature. Some of this research is described below and discussed in relation to L1 influence.

### Developmental Readiness and SLA

Pienemann's Teachability Hypothesis (TH) posits that direct instruction "works" when timed to match the learner's level of development. More specifically, he argues that instruction can improve acquisition with respect to: (1) "the speed of acquisition"; (2) "the frequency of rule application"; and, (3) "the different contexts in which the rule has to be applied" (Pienemann, 1985, p. 37). What is teachable remains in his view limited and constrained by a natural order of acquisition believed to be universal.

Pienemann's work is based on the work done by the *Zweitsprachenwerb Italienischer und Spanischer Arbeiter* (ZISA) group on the natural acquisition of German as a second language (GSL). The stages of acquisition observed by the ZISA group are ones that are considered to be not only universal but also cumulative, that is, the structure acquired at one stage is a prerequisite for moving onto the following stage:

- (1) Stage X = canonical order (SVO)
- (2) Stage X + 1 = adverb preposing (ADV)
- (3) Stage X + 2 = verb separation (SEP)
- (4) Stage X + 3 = inversion (INV)
- (5) Stage X + 4 = verb-end (V-END)

In a 1989 study Pienemann investigated the first four of the five stages of acquisition in a longitudinal study (of one year) of three adult GSL learners attending a beginner's course at university. The main findings of this study (based on some 30 hours of spontaneous recorded speech) support Pienemann's TH that the order of acquisition in students' IL did not coincide with the objectives and sequencing of the teaching syllabus. Moreover, those who were not "ready" to learn (i.e., who were not at the right developmental stage) did not improve in their spontaneous L2 performance. Pienemann reaches two conclusions on the basis of the collected data: "(1) formal learners develop their language stepwise, despite the scheduling of teaching, and (2)—more importantly—in the same order as has been found for the *natural* acquisition of German (at least in the domain of word order)" (1989, pp. 71-72).

Spada (1997, p. 79) points out that apart from Pienemann's work (Pienemann, 1984, 1985) and Spada and Lightbown (1993): "little research has been done to directly examine the teachability hypothesis." In more recent years, however, more research to investigate the effects of different types of interaction and developmental readiness has been carried out. For example, Mackey (1999) examined the L2 development of adult learners involved in communicative activities with native speakers. The learners were divided into three groups. In the first group the input was modified and simplified whenever the participants asked for clarifications. In the second group the participants merely observed the interactions taking place between the learners and native speakers in the first group and they did not engage in conversational interactions with native speakers. In the third group, in which the interactions were premodified to match the learners' current level of language development, there was no negotiation of meaning between speakers. Results indicated that the learners involved in conversational interactions (the first experimental group) produced more advanced question forms than learners in the two other groups.

In another study, Mackey and Philp (1998) also investigated the effects of negotiated interactions on SLA but focussed more specifically on the interactional feature of recasts. They sought to find out whether learners who received interactionally modified and simplified input with recasts would benefit and advance more in their production of questions than the learners who received interactionally modified and simplified input without recasts. The researchers reported an advantage for learners who were at more advanced stages of question development for interactions with recasts versus interactions without recasts. No differences were observed for learners who were at less advanced stages of question development.

Spada and Lightbown (1999) investigated learners' "developmental readiness" in relation to instruction in the acquisition of questions with groups of francophone grade 6 learners. Neither explicit instruction nor corrective feedback was provided to students. Instead, through primarily receptive practice, they were exposed to an input flood of stage 4 and 5 questions, i.e. questions targetted to their next two stages of development. Results on the oral measures did not show "greater benefits" for the "more ready" stage 3 learners than for the "less ready" stage 2 learners. There was evidence, however, that

students had some knowledge of stage 4 and 5 questions in one of the two paper-and-pencil tasks (the Preference Task) used, but this knowledge appeared to be constrained by a French question formation rule. This rule — that questions with nouns in subject position are not inverted was observed to be a fairly robust rule in the learners' performance. This finding led Spada and Lightbown to wonder whether these young L2 learners were aware of the interlanguage rule that constrained their performance. To investigate this question, they designed and implemented a study that is replicated in this thesis research, the details of which are provided in the following section.

### Metalinguistic Awareness and SLA

Most of the research done on the effect of metalinguistic awareness on L2 acquisition has focussed on adult or older adolescent learners (e.g. Birdsong, 1989; Green & Hecht, 1992). The absence of research on metalinguistic awareness with younger L2 learners is probably due to the commonly held assumption that younger learners — particularly those with limited L2 abilities, do not have a sufficiently well-developed metalinguistic awareness to reflect on language acquisition. This contrasts with the considerable work that has been done on metalinguistic awareness in the L1 literature.

While it has been observed that the metalinguistic development of L1 learners varies in terms of both rate of development and level of awareness (Gleitman & Gleitman, 1970), metalinguistic awareness is in no way restricted to older learners. L1 research has often shown that children aged from two to five can recognize violations of word order rules (e.g. de Villiers & de Villiers, 1972, 1974; Gleitman, Gleitman & Shipley, 1972; Hakes 1980). Gleitman et al. (1972) reported on an informal experiment in which they elicited judgements of grammaticality of reversed-word-order imperatives from three two-year-old children. They concluded that rudiments of awareness of word-order-rule violations can already be seen in the two-year olds who were often capable of distinguishing well-formed sentences from deviant ones. However, the children's discrimination although significant was far from being flawless. When required to correct what was wrong with the sentences, these very young children tended to focus on semantic anomalies rather than the syntactic aspect of deviant sentences. This suggests that very young children are relatively insensitive to word order and consider mainly the

semantic aspect, that is, the meanings of a sentence's content words, fitting them together in ways that make sense to them.

De Villiers and de Villiers (1972) used a modification of Gleitman's procedure in a study of two- and three-year-old children's acceptability judgements of sentences including well-formed and anomalous imperatives as well as correct-order and reverse-order imperatives. Eight children were tested ranging in age from 28 to 45 months. As was the case with the Gleitman et al. (1972) study, the children investigated by de Villiers and de Villiers (1972) also tended to focus on the meaning of the words rather than on the correctness of word order itself. More specifically, they tended to accept only sentences that they thought they understood and to reject sentences they found incomprehensible. Only the most linguistically advanced children, those with a mean length of utterance (MLU) of over 4.0, which is beyond the average two-year-old level, could offer direct word-order corrections for the reversed imperatives (e.g. "Egg the eat" to "Eat the egg"). Thus, the strategy of using word order to grasp a sentence's meaning was observed to enter children's repertoire of comprehension strategies only later, when their comprehension ability was sufficiently developed.

In a subsequent study done with older children (aged from five to eight) de Villiers and de Villiers (1974) further substantiated the shift from semantic to word-order corrections that takes place as maturity increases. Consonant with Gleitman et al.'s (1972) findings, de Villiers and de Villiers contend that adult-like behavior, that is, "the ability of a speaker to reflect upon the rules he follows" (1974, p. 132) only emerges in the period from five to eight years. So, although the seed of metalinguistic ability can already be found in two-year-old children, it is here again argued that adult-like metalinguistic awareness can only emerge at a later stage – i.e. between 5 to 8 in talented learners with 7 or 8 years of age representing the norm.

In a related study conducted from a Piagetan perspective, it was similarly observed that children's metalinguistic awareness improves as they grow older (Hakes, 1980). Using a variety of tasks to study 100 children, 20 each of ages 4, 5, 6, 7, and 8 years, Hakes contends that the ability of children to judge synonymy and grammaticality are not independent, develop together, and reflect a single underlying cognitive change. Hakes further claims that metalinguistic abilities, that is, "the linguistic manifestation" of

concrete operational thinking, show its greatest development during middle childhood, the period between four and eight years (Hakes, 1980, p. 2).

The studies reviewed above indicate that in assessing the metalinguistic awareness of young L2 learners, it is important to choose features that most young children are known to be able to recognize. Word order, the focus of Lightbown and Spada's (2000) study, which is here being replicated, is such a feature. In that study, the researchers investigated the metalinguistic awareness of 11-12 year-old francophone students learning English in intensive communicative ESL classes in Quebec. More specifically their research examined the extent to which 11-12 year-old francophone learners of English were able to make explicit L1 rules that seemed to influence their L2 performance. The study focuses on two word-order features found to be problematic for young francophone learners of English in previous research (Lightbown & Spada, 1994, 1997; Spada & Lightbown, 1993, 1999; White, 1991; White et al., 1991), the placement of adverbs in simple sentences and subject-auxiliary inversion in questions. It also aims at answering the following central question: "Are young students aware of their interlanguage rules or do these rules constrain their performance in English without their awareness? (Lightbown & Spada, 2000, p. 204)."

Metalinguistic awareness is here to be understood as "the ability to treat language as an object, separate from the meaning it conveys" (Lightbown & Spada, 1999, p.2). In the present study, it refers to the extent to which the students were able to articulate how their knowledge of the L1, intuitions about the L1 and L2 and interlanguage rules influenced their L2 behaviour.

It will be recalled that what makes question formation particularly problematic for young French learners of English is a constraint brought over from their L1 that allows subject-auxiliary inversion with pronouns and prohibits it with nouns. This explains why the students in the Lightbown and Spada (2000) study produced and accepted questions that conformed to word order rules typical of both spoken French and English word order rules. A similar pattern was observed for adverb placement. The students accepted sentences with both SAVO (ungrammatical in French) and SVAO (grammatical in French but ungrammatical in English). As was the case with question formation, the students here again tended to produce, and accept as grammatical, English sentences that

conformed to the rules of French, their L1, instead of or in addition to those that conform to the rules for word order placement in English.

As indicated above, the students who have participated in the Spada and Lightbown research are learning English in intensive communicative ESL classes in Quebec. In their classes, they receive a strong version of communicative language teaching where the focus is exclusively on meaning with virtually no attention to language form, and in which explicit metalinguistic instruction, in general, and contrastive analysis, in particular, are excluded. The teachers believe that students will learn English incidentally if they are exposed to enough comprehensible input and are given opportunities to use English within a communicative context (for more information on intensive ESL classes in Quebec, see Lightbown and Spada, 1994, 1997).

In Lightbown and Spada (2000), a new sample of 300 students in 10 intact grade 6 classes was taken from the same population and they were given tasks in which they were asked to judge the grammaticality of sentences and to explain their judgements. Two general measures of English proficiency, (1) a Yes/No Vocabulary Recognition Test (Meara, 1992), and (2) a comprehension test (Ministère de l'Éducation du Québec, 1981) were used to assess the overall English language proficiency of all students. No significant differences between the two groups were found on these measures or between these groups and previous samples of students from this population, which were observed in the earlier studies.

Two paper-and-pencil tasks, a Correction Task and an Explanation Task (both adapted from the Preference Task used in the Spada and Lightbown, 1999 study) were each administered to five different classes of students. Both these tasks targeted question formation and adverb placement as well as two other linguistic features used as distractors (i.e. verb tenses and possessive determiners). One group was asked to simply make corrections to the sentences that they judged to be incorrect (see Appendix G for a sample of the Correction Task), and the other group was asked to explain (in either French or English) their judgements (see Appendix H for a sample of the Explanation Task).

The Explanation Task (25 items) included 3 (2 incorrect SVAO and 1 correct SAVO) items on adverbs of manner or frequency. It also included 10 correct and 10

incorrect question items with both noun and pronoun subjects. The Correction Task (35 items) included 3 incorrect SVAO and 1 correct SAVO items on adverbs of manner or frequency. It also included 14 correct and incorrect question items with both noun and pronoun subjects.

Results revealed that for both Adverb and Question items, the overall rate of acceptance and rejection of items was similar on the Correction Task and the Explanation Task (see Appendix E for detailed results of the Lightbown & Spada, 2000 study). The pattern observed in the students' interlanguage for both questions and adverbs showed a marked influence of transfer from French but very little evidence that the students were aware of the way their L1 influenced their L2 performance.

For adverbs, on both the Explanation and the Correction Tasks, the students tended to accept both the SVAO sentences (grammatical in French but ungrammatical in English) and the SAVO sentences (grammatical in English but ungrammatical in French). These findings lend support to White's (1991) hypothesis that ESL students could learn to accept the English SAVO structure without having to be taught that it is incorrect in English, but that they would need negative evidence by means of explicit instruction and/or error feedback to get rid of the French SVAO structure in their use of English.

For questions, as was originally anticipated, students showed a marked preference in their acceptance of grammatical questions in which pronoun subject and auxiliary verb were inverted rather than grammatical questions in which noun subject and auxiliary were inverted. Conversely, they showed a marked preference in their acceptance of ungrammatical questions in which noun subject and auxiliary were not inverted rather than ungrammatical questions in which pronoun subject and auxiliary were not inverted. This result confirms that these students, like those observed previously, were operating, at least implicitly, with a rule brought over from their L1 that allows subject-auxiliary inversion with pronouns and precludes it with nouns.

The students provided an extremely small number of metalinguistic explanations, less than 10%, for questions that they judged to be incorrect. In the case of adverb judgements, most of the explanations dealt with linguistic items other than the target feature. With regard to the question judgements, only 15 metalinguistic explanations were directly related to word order in questions, and the majority of these were consistent

with the students' interlanguage rule (inversion with pronoun subject and non-inversion with noun subjects).

These findings led Lightbown and Spada (2000) to conclude that the students were not aware of the ways in which their L1 knowledge influenced their L2 performance. There was also little evidence that they were aware of the existence of an interlanguage rule governing subject-inversion in questions. Although many of the corrections showed that the students were sensitive to word order rules for nouns and pronouns, none of the students' metalinguistic statements included explicit grammatical explanations related to the use of inversion with noun or pronouns in questions.

Lightbown and Spada's (2000) findings contrast sharply with those obtained in a recent study by White and Ranta (1999) who investigated the use of the possessive determiners "his" and "her" with two grade-six classes also in intensive ESL. The experimental treatment provided over six weeks included two types of metalinguistic instruction: 1) a rule of thumb (ask yourself "Whose \_\_\_\_\_ is it?") and 2) a contrastive analysis component which showed students how English and French differ in their use of possessive determiners. Two types of measures were used were used to pre- and post-test the students: a passage correction task (a measure of metalinguistic knowledge) and a picture description task (a measure of oral production ability). The students in the White and Ranta study were not only willing but also very capable of metalinguistic reflection on the use of the possessive determiners "his" and "her." Results also suggest that the metalinguistic instruction contributed to the higher performance of the learners in the experimental group on both the written correction and oral production tasks. The fact that the experimental group improved not only on the written task but also on the oral production task provides evidence for the interface view (Bialystok, 1978) which argues that explicit knowledge may become implicit and be used in spontaneous use of language.

Lightbown and Spada (2000) offer three explanations for the contrast between their results and those of the White and Ranta (1999) study. First, it may be that students can more easily notice possessive determiners because they can lead to more serious communication breakdowns than word-order errors. Second, it may be that metalinguistic data which is elicited orally (as in White & Ranta, 1999) facilitates the ability of learners to reflect on language more than written (as in Lightbown & Spada,

2000). Thirdly, the students in the White and Ranta study received metalinguistic instruction about possessive determiners and participated in group work activities designed to further their understanding of the use of possessive determiners. The provision of such explicit instruction, absent in the Lightbown and Spada (2000) study, may have equipped the White and Ranta (1999) students with the necessary tools to reflect metalinguistically on the target features.

The findings from the Lightbown and Spada (2000) study led the researchers to argue that for some linguistic features, it may be necessary to draw the learners' attention to the formal properties of language through corrective feedback and explicit instruction that includes contrastive L1/L2 information. They further pointed out that explicit instruction, and in some cases, instruction that includes a contrastive L1 / L2 component may be required. This may be particularly needed with young learners sharing a common L1 in communicative L2 settings.

Results from this study are examined and compared to the Lightbown and Spada (2000) study. The central research questions and hypotheses are presented below.

### Research Questions and Hypotheses

#### Research Questions

- 1) Are older L2 learners be constrained by interlanguage rules regulating their use of adverb placement and question formation as the younger learners in the Lightbown and Spada (2000) study?
- 2) Are older learners (12-16 years old) more metalinguistically aware of "what they are doing," i.e., can provide explicit knowledge of the existence of interlanguage rules transferred from French regulating their use of adverb placement and question in English, than were the younger 11-12 year-old learners studied in the Lightbown and Spada (2000) study?
- 3) Do learners tend to be more accurate in their grammaticality judgements when the test items in English closely parallel French language structures?

- 4) Does the profile of the older learners' responses on a Combined Explanation and Correction Task coincide with the developmental stages in English Questions proposed by Pienemann, Johnston and Brindley (1988) and adapted in Spada and Lightbown (1999)? How does this profile compare with the younger learners in the Lightbown and Spada (2000) study?

### Hypotheses

- 1) As was the case with the younger learners, the older learners will be constrained by interlanguage rules regulating their use of adverb placement and question formation, and they will tend to accept the sentences as "grammatical" or reject them as "ungrammatical" on that basis.

L1 influence has been found to be enduring even after many years of instruction and particularly when one is learning the L2 in a context where the target language is rarely used outside the classroom environment. This has been observed with young francophone learners of English in Quebec (Lightbown & Spada, 1994), with child and adolescent learners in immersion programs (Harley & Swain, 1984) and in many studies of naturalistic and instructed adult second and foreign language learning (Gass & Selinker, 1983). Given that the learners in this study are francophone learners with limited exposure to English outside the classroom, it is anticipated that there will be evidence of L1 transfer in their interlanguage rules regarding the target features.

- 2) Older (12-16 year-old) learners will be more metalinguistically aware of interlanguage rules regulating their use of adverb placement and question formation in English, than were the younger (11-12 year-old) learners studied in the Lightbown and Spada (2000) study.

Older learners who are more proficient and who have received more formal instruction in the L2 including explicit instruction on some of the target features (e.g. verb tenses in English including question formation) will have had the opportunity to reflect on the L2 in more explicit ways and to have been exposed to metalanguage via instruction in the classroom. Although formal instruction (and higher levels of proficiency) do not

guarantee higher levels of metalinguistic awareness (e.g. Green & Hecth, 1992), it is expected that the older, more proficient learners in this study will be more aware of how the L1 influences their L2 learning than were the younger learners in the communicative intensive ESL programs.

- 3) Learners will more often correctly answer questions involving sentences for which there exists a similar linguistic structure in French.

In the Lightbown and Spada (2000) study, the evidence pointed to the L1 as an explanation for the learners' performance. However, other explanations were possible and thus, a more robust test to determine the potential of L1 influence was required. One way of doing this was to design sentences that closely paralleled each other in both languages – English and French. In this study, the Combined Task (35 questions) contains 10 such items— i.e. additional items in English that closely parallel French structures— and it is anticipated that learners will be more accurate in their acceptance of these.

- 4) The profile of the learners' responses on the Explanation and the Correction Tasks and the Combined Task for both populations will not coincide with Pienemann et al.'s developmental stages of question formation

Assuming a strong L1 influence, there is reason to argue that developmental stage may be less influential or may interact with L1 influence in complex ways (see for example, Spada & Lightbown, 2000). Consequently, it is predicted that the learners in this study will be more likely to accept grammatical questions on the basis of whether they closely parallel French structures and not in terms of how this coincides with their progress through developmental stages of question formation.

## CHAPTER 3

### Procedures

#### Context and Participants

##### Context

The experiment was carried out in the classrooms of a public Montreal French-language high school. In this school, students receive ESL instruction via a communicative approach that is consistent with the philosophy and guidelines of the Quebec Ministry of Education (MEQ). The students receive an average of 100 to 110 hours of ESL instruction per year which is in accordance with the 100 hours stipulated by the MEQ.

The high school in which this study took place is not a typical public high school in Quebec because it only accepts students who have passed a highly competitive entrance exam and have maintained an average of 70 to 75% in all school subjects. In a comparison with 38 other high schools in the same school board, the high school in this study regularly comes first in terms of students' performance in English and other subjects combined. Consequently, the level of English proficiency in the ESL classes is above what can generally be expected of a typical public high school in Quebec. It is not, however, representative of the higher level found in ESL-LA classes, i.e., an intermediary level between regular ESL and Language Arts classes. Designed for native speakers of English, the Language Arts program is only offered to students attending anglophone high schools in Quebec.

##### Participants

The students had completed two semesters of class time prior to the commencement of this study. Their degree of exposure to the English language outside of the classroom varied from one student to another and, for this reason, could not be generally assessed.

Six intact classes of learners participated in the study. Of the 179 enrolled in these classes, 155 completed all tasks. Of the 155 students who completed all tasks, only 75 reported French as their primary language and thus matched the linguistic background of learners in the Lightbown and Spada (2000) study. These participants were

francophone students attending secondary I, II, and IV (age 12 to 16) regular ESL classes in Quebec.<sup>2</sup> Two of the original six groups were in Secondary I, one in Secondary I advanced (English as a Second Language - Language Arts or ESL-LA), two in Secondary II, and one in Secondary IV. The ESL-LA group was eliminated from the study because the students were considerably more advanced in their English proficiency compared with the two Secondary I regular groups. Thus the 75 francophone students who were selected for the study had all attended a regular program of English as a second language in a Quebec French high school and were currently in either Secondary I, II, or IV. Their informed consent was obtained and copy of the letter that was sent to them is included in Appendix A.

### Overview of Procedures

Three tests were administered to the students during the two last weeks of April 2000, after they had been in their ESL classes for about 8 months: 1) MEQ Test, 2) Yes/No Vocabulary Recognition Test and 3) Combined Task.

The first step was to obtain a general measure of the students' English language ability. This would reveal any group differences as well as permit a comparison with the proficiency results in the Lightbown and Spada (2000) study. To do this, two tests were administered: 1) the MEQ test and 2) the Yes/No Vocabulary Recognition Test. The MEQ test measured primarily listening ability but also some reading skills. (Ministère de l'Éducation du Québec, 1981). The short version (i.e. 35-item) of the MEQ test, used extensively in the intensive ESL research, has been found to be a useful measure of general ability in English (Lightbown & Spada, 1994, 2000; Spada & Lightbown, 1989). Because the L2 learners in the present study are secondary school learners and have more experience with English, the longer version of the MEQ test (i.e. 53-item test) was administered (see Appendix B for a sample of this test).

The MEQ test was administered to all students following the same procedures. The teacher who is also the researcher read the instructions to all the groups. Students were told that their results would not be included in their report cards and that their

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<sup>2</sup> In Canada, outside the province of Quebec, the Secondary I level is equivalent to Grade 7, Secondary II to Grade 8, and Secondary IV to Grade 10.

performance would be communicated and explained to them on an individual basis before the end of the school year. Upon completion, the tests were scored out of 53 and compared with the MEQ results in the Lightbown and Spada 2000 study. These results are reported in Chapter 4.

The Yes/No Vocabulary Recognition Test, developed by Meara (1992) was also used as a measure of the English proficiency of the secondary ESL learners. Several different levels of the test were examined and three of them were selected as representing an appropriate level of difficulty for the participants (see Appendix C). They were administered to the students after the MEQ test. In completing the Yes/No Vocabulary Recognition test, students were told to put a check mark only next to the words that they were certain to know. They were also told to be honest about this and that there was a penalty built into the scoring system for wrong guessing. As with the MEQ test, students were told that their results would not 'count' for their report cards but that the teacher would use the information to get a better sense of their vocabulary knowledge.

The second step involved administering the Combined Task (35 questions) to the students. This task is a combination of Lightbown and Spada's (2000) Correction and Explanation Tasks. The Correction and Explanation Tasks were two paper and pencil tasks<sup>3</sup> that targeted both question formation and adverb placement as well as two other linguistic features--verb tenses and the possessive determiners "his" and "her." In both tasks, students were presented with sentences and asked to judge whether they were grammatically correct or not. In the Correction Task (35 items), students were required to correct the sentences they judged as ungrammatical and in the Explanation Task (25 items), they were asked to explain (in either French or English) what was ungrammatical in the sentences. In the Combined Task used in the present study, students were required to carry out both operations: correction and explanation. The rationale for this was that the students were older, more proficient learners and thus more able to handle both operations in the same task. The combined task contains the 25 questions included in Lightbown and Spada's (2000) Explanation Task to which 10 items were added. The additional items are those that are intended to investigate the hypothesis that participants

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<sup>3</sup> Both the Explanation Task and the Correction Task were adapted from the Preference Task used in the Spada and Lightbown (1999) study.

may be more likely to judge a sentence as correct if the structure of the sentence parallels a similar one in French (see Appendix D for a sample of the Combined Task). Figure 1 shows examples from the Combined Task.

<p>2. Do they like pepperoni pizza?</p> <p>_____ La phrase est correcte.</p> <p>_____ La phrase n'est pas correcte. La bonne phrase est: _____</p> <p>_____ La phrase n'est pas correcte parce que: _____</p>
<p>26. What the chef likes to cook?</p> <p>_____ La phrase est correcte.</p> <p>_____ La phrase n'est pas correcte. La bonne phrase est: _____</p> <p>_____ La phrase n'est pas correcte parce que: _____</p>

Figure 1. Sample items from the Combined Task.

The Combined Task was administered to the students on a different day than the MEQ and the Yes/No Vocabulary Recognition tests. The teacher read the instructions with the students and explained that they should indicate whether the sentences were correct or not; to correct the sentences when necessary and to explain in their own words (in French or in English) why the sentences were incorrect. Students were given as much time as they needed (up to 75 minutes) to complete the Combined Task.

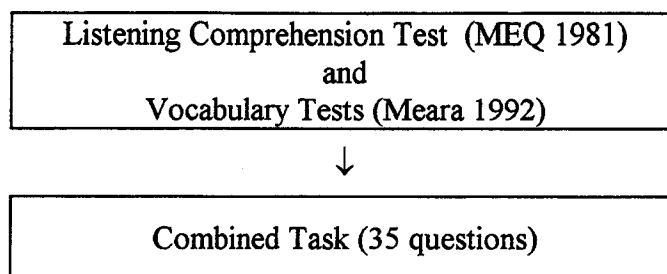


Figure 2. Overview of procedures.

### Organization of the Data

All tests were scored by the researcher and a separate grade was assigned to each student for the MEQ and the Yes/No Vocabulary Test. These grades were entered into data files that were organized to permit statistical analysis and comparisons across groups. For the Combined Task, the researcher calculated the number of acceptances and rejections provided by each student to the correctly and incorrectly inverted question forms and the sentences containing correct and incorrect word-order adverb patterns. This analysis also included a descriptive tally of the explanations that individual learners gave when they rejected particular question forms or word-order adverb patterns. The results of these analyses are presented in Chapter 4.

## CHAPTER 4

### Results

#### Results of the MEQ and Yes/No Vocabulary Recognition Tests

After the tests were graded, the scores were entered into the SYSTAT computer program that calculated the mean scores for both the MEQ and Yes/No Recognition Vocabulary tests. The differences in performance between groups were determined by an analysis of variance (ANOVA) procedure. When significant differences were found, a post hoc test, the Tukey's HSD (honestly significant difference) was used to determine the precise location of between-group differences. The results of these analyses are presented in Tables 1, 2, and 3.

As expected, Table 1 shows that mean scores increase on both the MEQ and the Yes/No Vocabulary Recognition tests as the ESL level increases. It was not anticipated, however, that the mean difference between the Secondary II (90.7) and the Secondary IV (93.67) groups would amount to less than four points. This small difference and accompanying high scores for both groups suggest that the MEQ test was too easy for both the Secondary II and IV groups. Because of this ceiling effect, it is not possible to reliably determine proficiency differences between these two groups based on their performance on the MEQ test.

Table 1 also indicates that the overall mean scores obtained by the participants in the present study are consistently higher than those obtained by the grade-six participants in the Lightbown and Spada 2000 study (see Appendix E, Table 1) on both the MEQ and the Yes/No Vocabulary Recognition tests. The MEQ test mean scores for the groups in this study range from 82.26 to 93.87 compared to 76.79 to 77.05 for the groups in the Lightbown and Spada (2000) study.<sup>4</sup> A similar pattern can be observed on the Yes/No Vocabulary Recognition test with mean scores ranging from 81.87 to 84.76 for the students in this study compared to 70.05 to 73.10 for those in the Lightbown and Spada study.

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<sup>4</sup> Although a shorter version of the same test was used in the Lightbown and Spada study, both the 33 and 53-item MEQ test highly correlate and thus can be considered as comparable measures (Spada & Lightbown, 1999).

Table 1

Group Comparisons for MEQ and Yes/No Vocabulary Recognition Tests

	MEQ test				Yes/No test	
	<u>n</u>	<u>Mean (%)</u>	<u>SD</u>		<u>Mean (%)</u>	<u>SD</u>
<b>Sec. I Reg.</b>	30	82.26	12.56		81.87	12.55
<b>Sec. II Reg.</b>	28	90.70	8.18		83.54	9.55
<b>Sec. IV Reg.</b>	17	93.67	6.26		84.76	9.17

An ANOVA showed a significant difference between the group means on the MEQ test ( $F = 8.93$ ,  $p < .025$  with a Bonferonni adjustment  $p < .025$  for two comparisons made to  $\alpha = .05$ ) (see Table 2). No significant group differences were found on the Yes/No Vocabulary Recognition test.

Table 2

Analysis of Variance for MEQ and Yes/No Vocabulary Tests

<b>Source</b>	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>
<b>MEQ test</b>				
<b>Between</b>	2	1738.49	869.24	8.93*
<b>Within</b>	72	7009.40	97.35	
<b>Yes/No test</b>				
<b>Between</b>	2	97.90	48.95	0.42
<b>Within</b>	72	8375.49	116.33	

\* $p < .025$ . (Bonferonni adjustment for 2 comparisons made to  $\alpha = .05$ )

To determine the location of between-group differences on the MEQ test, the Tukey HSD was conducted. It showed that the Secondary I group was significantly different ( $F = 8.93$ ,  $p < .025$ ) from the Secondary II and IV groups.

On the basis of these results, it was decided to treat all three groups separately in the study. Other factors such as differences in age and cognitive and psychological differences among the learners in the three classes also contributed to this decision.

### Question Formation: Judgements and Corrections

The 35-item Combined Task contained 20 question-items. Ten of these questions were identical to those used in the Lightbown and Spada (2000) Correction Task <sup>5</sup> to which 10 new question-items were added that closely parallel French language structures (see Appendix D for a sample of the Combined Task). As was the case in Lightbown and Spada (2000), the overall pattern of responses on question-items in this study showed that the students were operating with an implicit interlanguage rule (IL rule) based on a constraint brought over from their L1. According to this rule, subject-auxiliary inversion is permitted in French questions with pronoun subjects, but not with noun subjects.

Table 3 <sup>6</sup> shows that correctly inverted questions were more readily accepted (from 69.5% to 81.5%) than incorrectly non-inverted questions (from 39.2% to 57.7%), which suggests that the principle of inversion in question formation was predominantly understood by the students in this study.

Table 3

Number and Percentage of Acceptances of Correct Inverted Questions and Incorrect Non-Inverted Questions on the Combined Task

Groups	<i>n</i> of Acceptances Correct Inverted Questions ( <i>n</i> = 7)	% of Acceptances Correct Inverted Questions ( <i>n</i> = 7)	<i>n</i> of Acceptances Incorrect Non-inverted Questions ( <i>n</i> = 3)	% of Acceptances Incorrect Non-inverted Questions ( <i>n</i> = 3)
Sec. I Reg.	146	69.5	52	57.7
Sec. II Reg.	145	74.0	34	40.5
Sec. IV Reg.	97	81.5	20	39.2
All 3 Groups	388	73.9	106	47.1

<sup>5</sup> Lightbown and Spada's (2000) Correction Task did not include questions beginning with "do you" or "can I" on the grounds that these might represent formulaic utterances rather than be evidence of a rule for inversion.

<sup>6</sup> Table 3 shows results for the 10 question-items that are identical with those in the Lightbown and Spada (2000) study. Their corresponding numbers on the Combined Task are: #2, #6, #7, #9, #12, #14, #17, #26, #29, and #33.

The results are even stronger for the correctly inverted questions that are similar to or closely parallel French language structures (see Table 4).<sup>7</sup> For example, sentence #19 *What is our homework?* has an identical structure in French: *Quel est notre devoir?* Although the structure of sentence #4 *When can she watch television?* differs slightly from its French counterpart, *Quand peut-elle regarder la télévision?*, apart from the inclusion of the definite article "la" in front of the noun "télévision," the French sentence is structured exactly as it is in English.

These structural similarities appear to have led the students to accept these types of questions more readily. The scores range from 81.8% to 86.3%, which also suggests that students were influenced by an IL rule based on their L1. That is, they tend to transfer to English what they already know in French, a learning strategy that is now and then successful.

Table 4

Number and Percentage of Acceptances of Grammatically Correct Questions Paralleling French Structures

Group Level	<i>n</i> of Acceptances Correct Inverted questions ( <i>n</i> = 10)	% of Acceptances Correct Inverted questions ( <i>n</i> = 10)
Sec. I Reg.	259	86.3
Sec. II Reg.	231	82.5
Sec. IV Reg.	139	81.8
All 3 Groups	629	83.9

As was the case in the Lightbown and Spada (2000) study, Table 5 shows that the students in this study were more likely to accept grammatical questions in which pronoun subject and auxiliary verbs were inverted than grammatical questions in which the noun subject and auxiliary were inverted. The level of acceptance for the single question with pronoun inversion was particularly high. All the students in Secondary IV and nearly all the students in Secondary II (96.4%) and Secondary I (93.3%) accepted it.

<sup>7</sup> Table 4 shows results for the 10 grammatically correct question-items paralleling French structures added to the Combined Task. Their corresponding numbers on the Combined Task are: #4, #5, #13, #16, #19, #23, #27, #31, #34, and #35. These 10 question-items were not included in the Lightbown and Spada (2000) Explanation Task.

Table 5

Percentage Acceptance of Grammatical Questions with Noun and Pronoun Subjects on the Combined Task

<b>Pronoun Inversion (<math>n = 1</math>)</b>	<b><math>n</math> (%) Sec. I Reg.</b>	<b><math>n</math> (%) Sec. II Reg.</b>	<b><math>n</math> (%) Sec. IV Reg.</b>
Do they like pepperoni pizza? (#2)	28 (93.3)	27 (96.4)	17 (100)
<b>Noun Inversion (<math>n = 6</math>)</b>	<b><math>n</math> (%) Sec. I Reg.</b>	<b><math>n</math> (%) Sec. II Reg.</b>	<b><math>n</math> (%) Sec. IV Reg.</b>
Why do children like McDonald's? (#6)	16 (53.3)	19 (67.9)	15 (88.2)
What is your brother doing? (#9)	20 (66.7)	18 (64.3)	14 (82.3)
Do the children want to play? (#12)	23 (76.7)	24 (85.7)	13 (76.5)
When is my mother coming home? (#33)	18 (60.0)	15 (53.6)	15 (88.2)
Can the children speak Spanish? (#17)	25 (83.3)	25 (89.3)	11 (64.7)
Where is the teacher going? (#14) ***	16 (53.3)	17 (60.7)	12 (70.6)
<b>Total : Noun Inversion</b>	<b>118 (65.6)</b>	<b>118 (70.2)</b>	<b>80 (78.4)</b>

\*\*\* This sentence is not inverted on Lightbown and Spada's (2000) Correction and Explanation Tasks.

The scores range from 53.3% to 89.3% acceptance for the questions with noun inversion resulting in an average of 70.2% (316/450) for all 6 questions combined. As was the case for the single question with pronoun inversion, the majority of the students accepted the 6 questions with noun inversion, and the higher the level, the higher the score. The average score for the students in Secondary IV is 78.4% compared to 70.2% in Secondary II and 65.6% in Secondary I.

Although the students in this study accepted questions with noun inversion to a greater extent than did the students in the Lightbown and Spada's (2000) study (53.2%) (see Appendix E, Table 4), these results are consistent with the overall pattern of results in previous studies (Lightbown & Spada, 2000; Spada & Lightbown, 1999; Zobl, 1979).

As indicated in Table 6, students were more likely to accept ungrammatical questions (i.e. non-inverted) when they had nouns as subjects. Across the three groups, the scores range between 52.9% and 76.7%. This contrasts strikingly with the percentage scores for the students' acceptance of the single ungrammatical question in which the pronoun and the auxiliary verb were not inverted (i.e. 11.8% to 33.3%). Nonetheless, the influence of the IL rule was not as apparent in this study as it was in Lightbown and Spada (2000). On both the Explanation and the Correction Tasks, Lightbown and Spada observed higher scores ranging from 61% to 92% for identical questions (see Appendix

E, Table 5). This percentage difference may be explained by the fact that the students in this study were more advanced than those tested in Lightbown and Spada (2000).

Table 6

Percentage Acceptance of Ungrammatical Questions with Noun and Pronoun Subjects on the Combined Task

<b>Pronouns non-inversion (n = 1)</b>	<b>n (%) Sec. I Reg.</b>	<b>n (%) Sec. II Reg.</b>	<b>n (%) Sec. IV Reg.</b>
*What we can watch on TV tonight? (#29)	10 (33.3)	5 (17.9)	2 (11.8)
<b>Nouns non-inversion (n = 2)</b>	<b>n (%) Sec. I Reg.</b>	<b>n (%) Sec. II Reg.</b>	<b>n (%) Sec. IV Reg.</b>
*Why fish can live in water? (#7)	19 (63.3)	18 (64.3)	9 (52.9)
*What the chef likes to cook? (#26)	23 (76.7)	17 (60.7)	10 (58.8)
<b>Total Nouns non-inversion</b>	<b>42 (70.0)</b>	<b>35 (62.5)</b>	<b>19 (55.9)</b>

Student's Corrections: Inversion with Pronoun-Subject

Consistent with the Lightbown and Spada (2000) findings, Table 7A reveals that the changes made by the students were predominantly or completely consistent with the IL rule referring to pronoun-subject inversion in questions. Only two items, questions #2 and #29, dealt with pronoun-subject inversion on the Combined Task. Question #2 *Do they like pepperoni pizza?*<sup>8</sup> had a grammatical form and was accepted by 96% of the students (see Table 7A: All 3 Groups Combined). Only three students made changes to this question. The two Secondary I students who corrected it wrote: *\*Does they like pepperoni pizza?* and *Are they like pepperoni pizza?* The single Secondary II student who also corrected question #2 wrote: *Do they like pepperoni on their pizza?*. All three changes reflect the students' acceptance of inversion with pronoun subjects in English, a type of inversion that is also mandatory in French. Lightbown and Spada (2000) observed a similar pattern of responses for this question. The majority of the changes made by their students to that question (85 %) were also consistent with the IL rule allowing pronoun-subject inversion in questions in English (see Appendix E, Table 6).

<sup>8</sup> The asterisk (\*) means that the sentence is not grammatical.

This pattern emerges even more clearly when we look at ungrammatical question #29: *\*What we can watch on TV tonight?* . The majority of the students (77.3%) rejected it, and all the changes made to this question ( $n = 58$ ) were consistent with the IL rule for pronoun-subject inversion (see Table 7A: All 3 Groups Combined). This suggests that the students operated with the IL rule permitting auxiliary and pronoun-subject inversion in both French and English. Nearly all the changes made to question #29 (57/58) were accurate corrections and the one student (1/58) who did not provide an accurate correction wrote: *\*What do we can watch on TV tonight?* a sentence structure that no doubt reflects an incomplete understanding of question formation in English, but at the same time the acceptance of the IL rule for pronoun-subject inversion.

In short, 77.3% (58/75) of the students in this study judged ungrammatical question #29 as incorrect (22.7% accepted it) and all the changes they made (58/58) reflect their acceptance of pronoun-subject inversion (see Table 7A, All 3 Groups Combined). Again, these results are consistent with those in Lightbown and Spada's (2000). For question #29, Lightbown and Spada (2000) obtained a score of 76% for changes made by their students that showed the acceptance of pronoun-subject inversion. This indicates that the majority of their students likewise operated under the IL rule permitting pronoun-subject inversion in English (see Appendix E, Table 6). Once again, the percentage difference between the two studies reflects the more advanced level of English for the students in the present study.

Table 7A

Changes Made by Students that are Consistent with the Interlanguage Rule (Inversion with Pronoun Subjects)

Inversion with Pronoun Subjects ( $n = 2$ )			
Secondary I Reg. ( $n = 30$ )			
Questions	#2	#29	Total
% Acceptance	93.3	33.3	63.3
% Non-Acceptance	6.7	66.7	36.7
$n$ of Changes	2	20	22
$n$ of Changes Consistent with IL Rule	2	20	22
% of Changes Consistent with IL Rule	100	100	100
Secondary II Reg. ( $n = 28$ )			
Questions	#2	#29	Total
% Acceptance	96.4	17.9	57.1
% Non-Acceptance	3.6	82.1	42.9
$n$ of Changes	1	23	24
$n$ of Changes Consistent with IL Rule	1	23	24
% of Changes Consistent with IL Rule	100	100	100
Secondary IV Reg. ( $n = 17$ )			
Questions	#2	#29	Total
% Acceptance	100	11.8	55.9
% Non-Acceptance	0	88.2	44.1
$n$ of Changes	0	15	15
$n$ of Changes Consistent with IL Rule	0	15	15
% of Changes Consistent with IL Rule	0	100	100
All 3 Groups Combined ( $n = 75$ )			
Questions	#2	#29	Total
% Acceptance	96.0	22.7	59.3
% Non-Acceptance	4.0	77.3	40.7
$n$ of Changes	3	58	61
$n$ of Changes Consistent with IL Rule	3	58	61
% of Changes Consistent with IL Rule	100	100	100

Question #2: *Do they like pepperoni pizza?*

Question #29: *\*What we can watch on TV tonight?*

### Student's Corrections: Inversion with Noun Subjects

A different picture emerges with regard to the non-acceptance of inversion with noun-subjects and auxiliary verbs in questions in English (see Table 7B). Because they were more advanced, the students in this study accepted noun-inversion in questions to a much greater extent than the students in Lightbown and Spada (2000). The results obtained for the eight questions (#6, #9, #12, #33, #17, #14, # 7, and #26) dealing with noun-subject inversion on the Combined Task show that the students in this study have attained a much greater understanding of the acceptability of inversion with noun-subjects in English than was originally anticipated. Table 7B presents results for the grammatical questions and Table 7C for the ungrammatical ones.

Although the Secondary I students are the ones who showed the least understanding of correct noun-subject inversion in questions, they nevertheless did better for that grammatical feature than was originally expected. As can be seen on Table 7B, an average of 65.6% of the Secondary I students accepted all 6 grammatical questions combined, which means that only 34.4% ( $n = 62$ ) of the students corrected them. Most of the changes made (59.7%) were consistent with the IL rule precluding noun-subject inversion in English. If we combine the number of correct answers in Table 7B ( $n = 118/180 = 65.6\%$ ) with the number of corrections that were not consistent with the IL rule ( $n = 25/62 = 40.3\%$ ), we obtain a new total of 79.4% ( $143/180$ ) for Secondary I answers showing acceptance of noun-subject inversion in grammatical questions with noun-inversion in English (see Table 7B).<sup>9</sup>

It came as somewhat of a surprise to discover that the Secondary II group showed a level of understanding of inversion with noun subjects that was close to that of the Secondary IV students. As can be seen in Table 7B, an average of 73.8% of the Secondary II students accepted all 6 grammatical questions combined compared to 78.4% for the Secondary IV group. The percentage difference amounts to only 4.6%. This also means that only 26.2% of the Secondary II students made changes to all 6 grammatical questions compared to 21.6% for the Secondary IV group (see Table 7B). Once more, the percentage difference amounts to a mere 4.6%. Finally, if we combine the number of

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<sup>9</sup> The combined results are not included in Table 7B, but they are calculated on the basis of the figures it contains.

correct Secondary II answers ( $n = 124/168 = 73.8\%$ ) with the number of corrections that were not consistent with the IL rule ( $n = 17/44 = 38.6\%$ ) this results in a total of 83.9% (141/168) of answers that show acceptance of noun-subject inversion in grammatical questions in English. The corresponding numbers for the Secondary IV group are 80/102 (78.4%) for the number of correct answers and 10/22 (45.5%) for the number of corrections that were not consistent with the IL rule. This results in a total of 88.2% (90/102) of answers that show acceptance of noun inversion in grammatical questions. Once again the percentage difference amounts to only 4.3%.

Table 7C reveals that the Secondary I students found ungrammatical question #7 *\*Why fish can live in water?* far more difficult. Only 36.7% ( $n = 11$ ) of the Secondary I students judged it incorrect, which means that 63.3% of them accepted it and also the IL rule precluding noun-subject inversion in English. The Secondary I students provided no corrections that were consistent with the IL rule for this question.

The Secondary II students did better than the Secondary IV students for ungrammatical question #7 *\*Why fish can live in water?*. As can be seen in Table 7C, as many as 64.3% ( $n = 18$ ) of the Secondary II students judged it incorrect compared to 52.9% ( $n = 9$ ) for the Secondary IV students. This represents a percentage difference of 11.4% between the two groups. This also means that 35.7% of the Secondary II students and 47.1 % of the Secondary IV students operated under the IL rule precluding noun-subject inversion in questions in English for question #7. In comparison, the Secondary I students are lagging far behind. Only 36.7% ( $n = 11$ ) of them judged ungrammatical question #7 as incorrect which represents a percentage difference of 27.6% with the Secondary II students and 16.2% with the Secondary IV students.

Also shown in Table 7C, the Secondary II students obtained scores that were close to that of the Secondary IV students for ungrammatical question #26 *\*What the chef likes to cook?*. Only 23.3% ( $n = 7$ ) of the Secondary I students judged that ungrammatical question as incorrect compared to 39.3% ( $n = 11$ ) in Secondary II, and 41.2% ( $n = 7$ ) in Secondary IV. The difference in performance between the Secondary II and IV students is only 2%. The high performance of the Secondary II students may be explained by the fact that they were taught question inversion during the previous academic year when they were in Secondary I.

Table 7B

Grammatical Questions: Changes Made by Students that are Consistent with the Interlanguage Rule (Non-Inversion with Noun Subjects)

<b>Inversion with Noun Subjects : Grammmatical Sentences (<math>n = 6</math>)</b>							
<b>Secondary I Reg. (<math>n = 30</math>)</b>							
Questions	#6	#9	#12	#33	#17	#14 <sup>10</sup>	Total
% Acceptance	53.3	66.7	76.7	60.0	83.3	53.3	65.6
% Non-Acceptance	46.7	33.3	23.3	40.0	16.7	46.7	34.4
$n$ of Changes	14	10	7	12	5	14	62
$n$ of Changes Consistent with IL Rule	9	8	0	8	2	10	37
% of Changes Consistent with IL Rule	64.3	80.0	0	66.7	40.0	71.4	59.7
<b>Secondary II Reg. (<math>n = 28</math>)</b>							
Questions	#6	#9	#12	#33	#17	#14	Total
% Acceptance	67.9	64.3	85.7	53.8	89.3	60.7	73.8
% Non-Acceptance	32.1	35.7	14.3	46.2	10.7	39.3	26.2
$n$ of Changes	8	7	2	13	3	11	44
$n$ of Changes Consistent with IL Rule	4	7	0	7	0	9	27
% of Changes Consistent with IL Rule	50.0	100	0	53.8	0	81.8	61.4
<b>Secondary IV Reg. (<math>n = 17</math>)</b>							
Questions	#6	#9	#12	#33	#17	#14	Total
% Acceptance	88.2	82.4	76.5	88.2	64.7	70.6	78.4
% Non-Acceptance	11.8	17.6	23.5	11.8	35.3	29.4	21.6
$n$ of Changes	2	3	4	2	6	5	22
$n$ of Changes Consistent with IL Rule	2	3	0	2	0	5	12
% of Changes Consistent with IL Rule	100	100	0	100	0	100	54.5
<b>All 3 Groups Combined (<math>n = 75</math>)</b>							
Questions	#6	#9	#12	#33	#17	#14	Total
% Acceptance	66.7	69.3	80.0	64.0	81.3	60.0	70.2
% Non-Acceptance	33.3	30.7	20.0	36.0	18.7	40.0	29.8
$n$ of Changes	24	20	13	27	14	30	128
$n$ of Changes Consistent with IL Rule	15	18	0	17	2	24	76
% of Changes Consistent with IL Rule	62.5	90.0	0	63.0	14.3	80.0	59.4

<sup>10</sup> No percentage comparison with the Lightbown and Spada (2000) study could be made for question #14 because this question was non-inverted on the Lightbown and Spada (2000) Correction and Explanation Tasks.

Table 7C

Ungrammatical Questions: Changes Made by Students that are Consistent with the Interlanguage Rule (Non-Inversion with Noun Subjects)

Inversion with Noun Subjects : Ungrammatical Sentences ( $n = 2$ )			
Secondary I Reg. ( $n = 30$ )			
Questions	#7	#26	Total
% of Acceptance	63.3	76.7	70.0
% of Non-Acceptance	36.7	23.3	30.0
$n$ of Changes	11	7	18
$n$ of Changes Consistent with IL Rule	0	3	3
% of Changes Consistent with IL Rule	0	42.9	16.7
Secondary II Reg. ( $n = 28$ )			
Questions	#7	#26	Total
% of Acceptance	35.7	60.7	48.2
% of Non-Acceptance	64.3	39.3	51.8
$n$ of Changes	18	11	29
$n$ of Changes Consistent with IL Rule	1	0	1
% of Changes Consistent with IL Rule	5.6	0	3.4
Secondary IV Reg. ( $n = 17$ )			
Questions	#7	#26	Total
% of Acceptance	47.1	58.8	52.9
% of Non-Acceptance	52.9	41.2	47.1
$n$ of Changes	9	7	16
$n$ of Changes Consistent with IL Rule	1	0	1
% of Changes Consistent with IL Rule	11.1	0	6.3
All 3 Groups Combined ( $n = 75$ )			
Questions	#7	#26	Total
% of Acceptance	49.3	66.7	58.0
% of Non-Acceptance	50.7	33.3	42.0
$n$ of Changes	38	25	63
$n$ of Changes Consistent with IL Rule	2	3	5
% of Changes Consistent with IL Rule	5.3	8.6	6.8

Question #7: *\*Why fish can live in water?*

Question #26: *\*What the chef likes to cook?*

Again, the Secondary I group lags behind in the acceptance of ungrammatical question #26 compared to that of the two other groups. The performance of the Secondary I group (76.7%) amounts to 16% more than that of the Secondary II group (60.7%), and 17.9% more than that of the Secondary IV group (58.8%). The reasons the students tended to accept question #26 more readily than question #7 are not fully understood since both questions are ungrammatical and have a similar structure.

#### Judgements and Corrections: Comparison with Lightbown and Spada (2000)

Table 8 shows that almost 60% of all the changes made by the students in this study were not consistent with the IL rule precluding inversion with noun-subjects and auxiliary verbs in questions compared to 26.6% for the Lightbown and Spada (2000) students. This represents a percentage difference of 33.1% between the two populations.

In the Lightbown and Spada (2000) study 75.8% of the changes that were made to the grammatical questions ( $n = 5$ ) were consistent with the IL rule. In this study 59.4% of the changes by all three groups combined were consistent with the IL rule (see Table 8). This 16.4% difference shows that the students in this study relied less heavily on the IL rule than did the students in the Lightbown and Spada (2000) study.

Table 8

Changes Made by Students Consistent with the Interlanguage Rule (Non-Inversion with Noun Subjects) for the Students in this Study and in Lightbown and Spada (2000)

Inversion with Noun Subjects ( $n = 8$ )	This Study		Lightbown & Spada (2000)		Both
	% of Cons. Changes	% of Non-Cons. Changes	% of Cons. Changes <sup>11</sup>	% of Non-Cons. Changes	% Dif. Between 2 Studies
Grammmatical Sentences ( $n = 6$ )	59.4	40.6	75.8	24.2	16.4
Ungrammatical Sentences ( $n = 2$ )	6.8	93.2	67.5	32.5	60.7
Total all 8 sentences	40.3	59.7	73.4	26.6	33.1

% of Cons. Changes = percentage of changes consistent with the IL rule

% of Non-Cons. Changes = percentage of changes non-consistent with the IL rule

% Dif. Between 2 Studies = percentage difference between the two studies

<sup>11</sup> The Lightbown and Spada (2000) question sample does not include question #14 that had an ungrammatical form on both the Correction and Explanation Tasks. For this reason the number of grammatical questions under investigation is here 5 instead of 6.

The contrast is even more striking for the two ungrammatical questions (#7 and #26) in which nouns and auxiliary verbs were inverted. In Lightbown and Spada (2000) 67.5% of the students' corrections for the two ungrammatical questions were consistent with the IL rule. This contrasts with only 6.8% for all 3 groups combined in this study (see Table 8). This represents a difference of 60.7% between the Lightbown and Spada (2000) students and the students in this study (see Table 8). Such a disparity is another strong indicator that the students in this study relied much less on the IL rule than did the Lightbown and Spada (2000) students.

To sum up, Table 8 shows that 40.3% of the changes to the eight grammatical and ungrammatical questions made by the students in this study, were consistent with the IL rule precluding noun-subject inversion in questions.

Conversely, 59.7% of the changes made by the students in this study reflect a correct understanding of the rules regulating noun-subject inversion in questions in English. In comparison, the majority of the changes made by Lightbown and Spada's (2000) students (73.4%) were consistent with the IL rule. This means that only 26.6% of the changes made by Lightbown and Spada's (2000) students show an understanding of correct usage for noun-subject inversion in questions in English. This percentage difference (33%) was much higher than was originally anticipated.

#### Grammatically Correct Questions Paralleling French Structures

Whether learners would tend to be more accurate in their grammaticality judgements when the test items in English closely paralleled French language structures was one of the four main questions that motivated the present study. The results presented in Table 4 show that learners more readily accepted correctly inverted English questions that have a similar structure in French.<sup>12</sup> A comparison of these results with those obtained for the grammatically correct questions that do not parallel French structures and that are found on the Combined Task and on the Lightbown and Spada (2000) Correction and Explanation Tasks supports this finding. As Table 9 shows,

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<sup>12</sup> These 10 added items correspond to the following numbers on the Combined Task: #4, #5, #13, #16, #19, #23, #27, #31, #34, and #35.

acceptance of the 10 added questions ranges from 81.8% to 86.3% with an average of 83.9% for all three groups combined. The less advanced students (the Secondary I group) show the highest level of acceptance (86.3%) compared to 82.5% for the Secondary II group and 81.8% for the Secondary IV group.

The scores are markedly lower for the 7 common questions that do not parallel French structures with averages ranging from 69.5% to 81.5% and an average of 73.9% for all 3 groups combined. In this instance, the more advanced students (the Secondary IV group) accepted this type of question the most (81.5%) compared to 74% in Secondary II and 69.5% in Secondary I.

Table 9

Number and Percentage Acceptance of Grammatically Correct French Parallel Items and 7 Common Items on the Combined Task

Group Levels	n of 10 French Parallel Inverted Questions	% of 10 French Parallel Inverted Questions	n of 7 Common Correctly Inverted Questions	% of 7 Common Correctly Inverted Questions (?)
Sec. I Reg.	259	86.3	146	69.5
Sec. II Reg.	231	82.5	145	74.0
Sec. IV Reg.	139	81.8	97	81.5
All 3 Groups	629	83.9	388	73.9

Grammatically Correct Questions Paralleling French Structures: Comparison with Lightbown and Spada (2000)

Only 6 of the 7 common questions could be directly compared with the results obtained by Lightbown and Spada (2000). The reason for this is that question #14 was grammatically correct on the Combined Task but had an ungrammatical form in the Correction and Explanation Tasks used in Lightbown and Spada (2000). Because their students were less advanced, they obtained much lower results for the 6 common questions. Table 10 shows that the scores obtained by the Lightbown and Spada students range from 51% to 90% on the Correction Task and from 39% to 90% on the Explanation task with a total average of 59.3% for the Correction and Explanation Tasks combined. This represents a performance difference of 14.6% between Lightbown and Spada's (2000) students and the students in this study (73.9%) (see Table 9: All 3 Groups).

### Learners' Responses and Developmental Stages

One of the questions that motivated this study was whether the learners' responses would coincide with the hierarchy of developmental stages in English questions proposed by Pienemann, Johnston and Brindley (1988) and adapted in Spada and Lightbown (1999). It was also of interest to see how the older learners in this study compared with the younger learners in the Lightbown and Spada (2000) study. It was hypothesized that the profile of the learners' responses on the Explanation and the Correction Tasks and the Combined Task for both populations would not coincide with Pienemann et al.'s developmental stages. The findings lend support to this hypothesis (Hypothesis #4). It must be first be pointed out that each of the 6 common questions is at the most advanced stage (stage 5) on Pienemann's developmental scale for questions (see Appendix F for the developmental stages). However, although all the questions share a common stage, the levels of acceptance vary greatly from question to question ranging from 45% to 90% (see Table 10). Such discrepancies suggest that the complexity of the questions in terms of developmental stages appears to have been less related to the students' judgements of grammaticality than to other factors.

Table 10

#### Overall Percentage Acceptance for the 6 Grammatically Correct Questions on the Correction and Explanation Tasks by Students in Lightbown and Spada (2000)

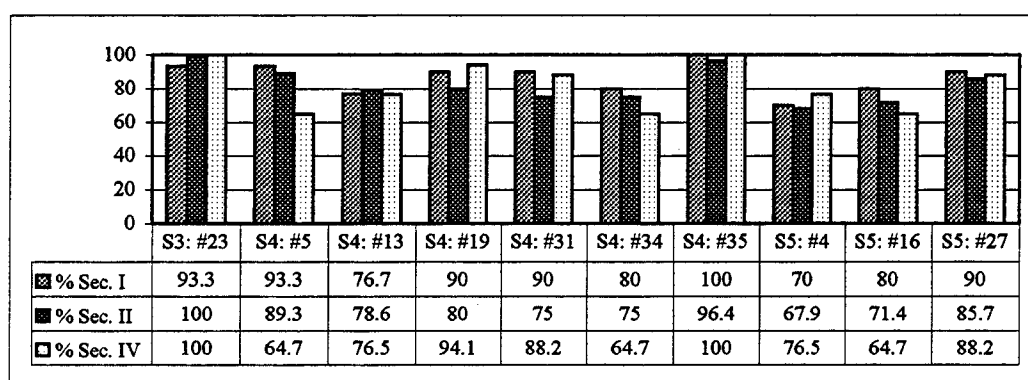
<b>Pronoun Inversion (n = 1)</b>	<b>% C.T.</b>	<b>% E.T.</b>	<b>% C.T. &amp; E.T. Combined</b>
Do they like pepperoni pizza? (#2)	90.0	90.0	90.0
<b>Noun Inversion (n = 6)</b>	<b>% C.T.</b>	<b>% E.T.</b>	<b>% C.T. &amp; E.T. Combined</b>
Why do children like McDonald's? (#6)	54.0	48.0	51.0
What is your brother doing? (#9)	51.0	46.0	48.5
Do the children want to play? (#12)	66.0	65.0	65.5
When is my mother coming home? (#33)	51.0	39.0	45.0
Can the children speak Spanish? (#17)	61.0	51.0	56.0
<b>Total Average: All 6 Questions</b>	<b>62.2</b>	<b>56.5</b>	<b>59.3</b>

C.T. = Correction Task

E.T. = Explanation Task

A similar pattern can be observed for the 10 correctly inverted questions paralleling French structures that were added in this study (see Figure 3). These questions span three of Pienemann's developmental stages: stage 3 (question #23), stage 4 (questions #5, #13, #19, #31, #34, and #35), and stage 5 (questions #4, #16, and #27). It must nevertheless be noted that with the exception of questions #13 and #34 (stage 4) and question #27 (stage 5), the students tended to accept stage 3 and 4 questions more readily than stage 5 questions.

A more detailed look at the ten questions that were added to this study suggests that the students seem to be less influenced by developmental stages in their acceptance of them. As illustrated in Figure 3, the less advanced students (Secondary I and II) tended to accept most of the questions at stage 4 (#5, #13, #31, #34 and #35), and stage 5 (#16, and #27) to a greater extent than the more advanced Secondary IV students. Except for questions #23 (stage 3), #19 (stage 4), and #4 (stage 5), the Secondary I students accepted more advanced questions to a greater extent than did the Secondary IV students. They obtained either higher or similar scores on 5 out of the 6 stage 4 questions (#5, #13, #31, #34 and #35) and 2 out of the 3 stage 5 questions (#16 and #27). Here again, the students seem to have accepted the questions more on the basis of similarities to French structures than in terms of a developmental sequence of question formation.



**Figure 3.** Overall percentage acceptance of the 10 added questions paralleling French structures on the Combined Task.

List of Corresponding Questions for Figure 3

**Stage 3:**

#23 Are you his brother?

**Stage 4:**

#5 Can you speak Spanish?

#13 Where is McDonald's?

#19 What is our homework?

#31 What is the birthday present for her niece?

#34 Can she wash her hands?

#35 Where is the teacher?

**Stage 5:**

#4 When can she watch television?

#16 Where can he go without his mother?

#27 Why can they live in water?

### Adverb Placement: Judgements and Corrections

In addition to question formation, the students were tested on adverb placement on the Combined Task. As was the case with Lightbown and Spada (2000), White (1991), and Trahey and White (1993), the performance of the students in this study included acceptance of sentences in which the placement of adverbs conformed to the rules of French instead of or in addition to sentences conforming to the rules for adverb placement in English. Students accepted both English sentences in which adverbs of manner and frequency were placed between verb and object (SAVO) and English sentences with the adverb between subject and verb (SVAO). English allows SAVO sentences but not French. Conversely, French allows SVAO sentences but not English.

\*Mary reads carefully newspapers. (SVAO) <sup>13</sup>

*Marie lit attentivement des journaux.* (SVAO)

Mary carefully reads newspapers. (SAVO)

\**Marie attentivement lit des journaux.* (SAVO)

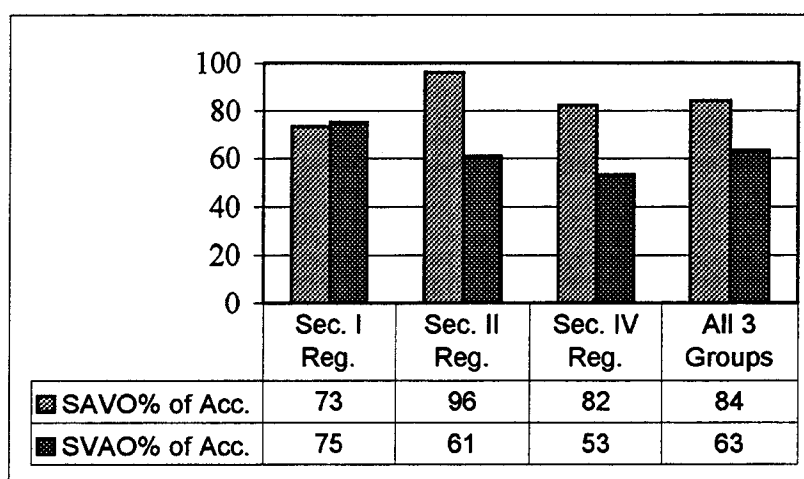
For adverbs, 3 common items (2 incorrect SVAO and 1 correct SAVO) can be found on both Lightbown and Spada's (2000) Explanation and Correction Tasks and on the Combined Task used in this study. Only one grammatical sentence, item #32 on the Combined Task, *Lucy always watches television after school.* conforms to the SAVO pattern. The two ungrammatical sentences, #30 \**Alexandra cleans sometimes her room.* and #15 \**John does quickly his homework.* conform to the SVAO pattern. Figure 4 shows that the majority of the students in this study accepted the single grammatical SAVO English sentence to a greater extent than the two ungrammatical SVAO English sentences even though they had received no prior instruction on adverb placement in English before the beginning of the study. The level of acceptance for the grammatical SAVO sentence ranges from 73% to 96% with an average of 84% for all three groups combined. Lightbown and Spada (2000) obtained a slightly lower percentage (76%) on both the Explanation and the Correction Tasks (see Appendix E, Table 2).

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<sup>13</sup> These examples are taken from Lightbown and Spada (2000).

The majority of the students in this study (63%) also accepted the 2 SVAO ungrammatical sentences as correct (see Figure 4), but because they were more advanced, they did not do it as readily as the students in Lightbown and Spada (2000) who accepted these 79% of the time on the Explanation Task and 74% on the Correction Task (see Appendix E, Table 2).

Figure 4 further illustrates that except for the Secondary I students, the students in this study accepted the single grammatical SAVO sentence to a greater extent than the two ungrammatical SVAO sentences.



**Figure 4.** Overall percentage acceptance of the SAVO and SVAO sentences on the Combined Task.

Table 11 shows how the 3 groups of students in this study performed on the single grammatical SAVO sentence (#32) *Lucy always watches television after school.* and on the two ungrammatical SVAO sentences, #30 *\*Alexandra cleans sometimes her room.* and #15 *John does quickly his homework.* The Secondary I students accepted both the SAVO and SVAO patterns with scores ranging from 73% to 77%. The Secondary II students for their part showed a marked preference (96.4%) for the grammatical SAVO sentence, and did not accept the SVAO sentences as readily. Only 50% of them accepted sentence #30 and 71% sentence #15. For reasons that are not fully understood, the Secondary II students obtained the highest performance (96.4%) on SAVO sentence # 32 compared to 82.4% for the Secondary IV students.

Table 11

Number and Percentage Acceptance of Sentences with SAVO and SVAO

<b>Grammatical SAVO Sentence (n = 1)</b>	<b>n (%) Sec. I</b>	<b>n (%) Sec. II</b>	<b>n (%) Sec. IV</b>	<b>n (%) All 3 Groups</b>
Lucy always watches television after school. (SAVO #32)	22 (73.3)	27 (96.4)	14 (82.4)	64 (85.3)
<b>Ungrammatical SVAO Sentences (n = 2)</b>	<b>n (%) Sec. I</b>	<b>n (%) Sec. II</b>	<b>n (%) Sec. IV</b>	<b>n (%) All 3 Groups</b>
*Alexandra cleans sometimes her room. (SVAO #30)	23 (77.0)	14 (50.0)	8 (47.0)	45 (60.0)
*John does quickly his homework. (SVAO #15)	22 (73.0)	20 (71.0)	10 (59.0)	52 (69.0)
<b>Total SVAO Sentences</b>	<b>45 (75.0)</b>	<b>34 (60.7)</b>	<b>18 (52.9)</b>	<b>97 (64.7)</b>

The Secondary IV students also showed a marked preference (82.4%) for grammatical SAVO sentence #32 and were not as inclined to accept the ungrammatical SVAO sentences #30 (47%) and #15 (59%) (see Table 11). They were the group that accepted the ungrammatical SVAO sentences the least (52.9%). This shows that the more advanced the students, the less likely they were to accept the two SVAO ungrammatical sentences. This in turn suggests that the Secondary IV students were more aware of correct adverb placement in English.

The reasons why both the Secondary II and IV groups did substantially better on SVAO sentence #30 than on SVAO sentence #15 are not fully understood since both sentences follow a similar adverb placement pattern.

Overall, the results show that the students tend to operate with an IL rule for adverb placement in accepting both English sentences in which adverbs of manner and frequency are placed between verb and object (SAVO) and English sentences with the adverb between subject and verb (SVAO). This confirms previous findings by Lightbown and Spada (2000), Spada and Lightbown (1999), Trahey and White (1993), and White (1991) and provides additional support for Hypothesis #1: that the older learners in this study, like the younger learners, would be constrained by interlanguage rules regulating their use of adverb placement and question formation. That is, they would tend to accept the sentences as “grammatical” or reject them as ungrammatical” on that basis.

### Learners' Metalinguistic Awareness

The analysis of learners' metalinguistic awareness focussed on: 1) the extent to which learners were able to make explicit L1 rules that appeared to influence their L2 performance, and 2) the extent to which learners were able to make explicit L2 rules that also appeared to influence their L2 performance. Lightbown and Spada (2000) focussed exclusively on the influence of L1 rules on L2 performance since, presumably, their students had not reached sufficiently advanced stages that enabled them to formulate explicit L2 rules to account for their L2 performance. Since much of the metalinguistic explanation provided by the students in this study revealed correct understanding of English grammatical usage for both question formation and adverb placement, it became imperative to include as a new category, the extent to which learners were able to articulate L2 rules to account for their performance.

It will be recalled that metalinguistic awareness was previously defined as "the ability to treat language as an object, separate from the meaning it conveys" (Lightbown and Spada, 1999, p.2). In the present study, it refers to: 1) the extent to which the students were aware of the ways their intuitions or IL rules about L1 and L2 grammaticality influenced their L2 judgements and 2) whether these constrained their performance in English with or without their awareness.

### Inversion with Pronoun Subjects

In general, the students in this study were more metalinguistically aware of the word order rules regulating question formation in English than the students observed in Lightbown and Spada (2000). Table 12<sup>14</sup> focusses on the changes made by the students to 7 questions on the Combined Task and indicates whether these changes are consistent with the IL rule allowing inversion with pronoun subjects in English. Table 12 also shows that inversion with pronouns was widely accepted which explains why the students provided few changes and explanations. As much as 85.7% of the Secondary I students' responses led to an acceptance of the 7 grammatical questions compared to

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<sup>14</sup> Six out of the seven correctly inverted questions with pronoun subjects included in Table 12 were part of the ten questions added to the Combined Task and are not included in Lightbown and Spada's (2000) Correction and Explanation Tasks.

83.7% for the Secondary II students, and 79.8% for the Secondary IV students. Only 30 corrections and 28 explanations were provided by the Secondary I students, 29 corrections and 29 explanations for the Secondary II students, and 23 corrections and 17 explanations for the Secondary IV students.

However, the number and percentage of changes consistent with the IL rule are very high: 26/30 (86.7%) in Secondary I, 24/29 (82.8%) in Secondary II, and 21/23 (91.3%) in Secondary IV (see Table 12, Columns 2 and 3). If we combine the number of correct answers with the number of corrections consistent with the IL rule, the level of acceptance for pronoun-subject inversion increases to 98.1% ( $n = 206$ ) for the Secondary I group, 95.9% ( $n = 188$ ) for the Secondary II group, and 97.5% ( $n = 116$ ) for the Secondary IV group (see Table 12, Column 6). None of the metalinguistic explanations provided by the Secondary I (0/28) group were consistent with the IL rule (see Table 12, Columns 4 and 5). For the other groups the numbers were also low: 2/29 for the Secondary II group, and 5/17 for the Secondary IV group (see Table 12, Columns 4 and 5).

A closer look at individual questions is revealing. For question #2 *Do they like pepperoni pizza?* only 3 changes and 3 explanations (provided in parentheses) were provided, 2 by the Secondary I students, *\*Does they like pepperoni pizza?* (Does 3e personne) and *Are they like pepperoni pizza?* (Il faut mettre "are" quand c'est au pluriel), and one by a Secondary II student *Do they like pepperoni on their pizza?* (Parce que "pepperoni pizza" ne se dit pas) (see Table 12, Columns 2 and 4). All 3 changes show an acceptance of the IL rule allowing inversion with pronoun subjects in English. No metalinguistic explanations concern word order in English.

Table 12

Number and Percentage of Correct Answers, Changes, and Explanations that are Consistent with the Interlanguage Rule on the Combined Task

	1	2	3	4	5	6
	<i>n</i> (%) of C.A.	<i>n</i> of Chg.	<i>n</i> (%) of C. Chg.	<i>n</i> of Expl.	<i>n</i> (%) of C. Expl.	<i>n</i> (%) Comb. Results
<b>Sec. I Reg. (<i>n</i> = 30)</b>						
#2 Do they like pepperoni pizza?	28 (93.3)	2	0 (0)	2	0 (0)	28 (93.3)
#4 When can she watch television?	21 (70.0)	9	8 (88.9)	8	0 (0)	29 (96.7)
#5 Can you speak Spanish?	28 (93.3)	2	2 (100)	1	0 (0)	30 (100)
#16 Where can he go without his mother?	24 (80.0)	6	6 (100)	6	0 (0)	30 (100)
#23 Are you his brother?	28 (93.3)	2	2 (100)	2	0 (0)	30 (100)
#27 Why can they live in water?	27 (90.0)	3	2 (66.7)	3	0 (0)	29 (96.7)
#34 Can she wash her hands?	24 (80.0)	6	6 (100)	6	0 (0)	30 (100)
Total	180 (85.7)	30	26 (86.7)	28	0 (0)	206 (98.1)
<b>Sec. II Reg. (<i>n</i> = 28)</b>						
#2 Do they like pepperoni pizza?	27 (96.4)	1	0 (0)	1	0 (0)	27 (96.4)
#4 When can she watch television?	19 (67.9)	9	7 (77.8)	9	2 (22.2)	26 (92.9)
#5 Can you speak Spanish?	25 (89.3)	3	3 (100)	3	0 (0)	28 (100)
#16 Where can he go without his mother?	20 (71.4)	6	6 (100)	6	0 (0)	26 (92.9)
#23 Are you his brother?	28 (100)	0	0 (0)	0	0 (0)	28 (100)
#27 Why can they live in water?	24 (85.7)	3	1 (33.3)	3	0 (0)	25 (89.3)
#34 Can she wash her hands?	21 (75.0)	7	7 (100)	7	0 (0)	28 (100)
Total	164 (83.7)	29	24 (82.8)	29	2 (6.9)	188 (95.9)
<b>Sec. IV Reg. (<i>n</i> = 17)</b>						
#2 Do they like pepperoni pizza?	17 (100)	0	0 (0)	0	0 (0)	17 (100)
#4 When can she watch television?	13 (76.5)	4	2 (50.0)	3	1 (33.3)	15 (88.2)
#5 Can you speak Spanish?	11 (64.7)	6	6 (100)	4	4 (100)	17 (100)
#16 Where can he go without his mother?	11 (64.7)	5	5 (100)	5	0 (0)	16 (94.1)
#23 Are you his brother?	17 (100)	0	0 (0)	0	0 (0)	17 (100)
#27 Why can they live in water?	15 (88.2)	2	2 (100)	1	0 (0)	17 (100)
#34 Can she wash her hands?	11 (64.7)	6	6 (100)	4	0 (0)	17 (100)
Total	95 (79.8)	23	21 (91.3)	17	5 (29.4)	116 (97.5)
<b>All 3 Groups Combined (<i>n</i> = 75)</b>						
#2 Do they like pepperoni pizza?	72 (96.0)	3	0 (0)	3	0 (0)	72 (96.0)
#4 When can she watch television?	53 (70.7)	22	17 (72.3)	20	3 (15)	70 (93.3)
#5 Can you speak Spanish?	64 (85.3)	11	11 (100)	8	4 (50)	75 (100)
#16 Where can he go without his mother?	55 (73.3)	17	17 (100)	17	0 (0)	72 (96.0)
#23 Are you his brother?	73 (97.3)	2	2 (100)	2	0 (0)	75 (100)
#27 Why can they live in water?	66 (88.0)	8	5 (62.5)	7	0 (0)	71 (94.7)
#34 Can she wash her hands?	56 (74.7)	19	19 (100)	17	0 (0)	75 (100)
Total	439 (83.6)	82	71 (86.6)	74	7 (9.5)	510 (97.1)

1) *n* and % of C.A. = number and percentage of correct answers

2) *n* of Chg = number of changes made by the students

3) *n* of C. Chg = number of changes consistent with the IL rule

4) *n* of Expl. = number of changes provided by the students

5) *n* of C. Expl. = number of explanations consistent with the IL rule

6) *n* and % Comb. Results = number and % of correct answers + changes consistent with the IL rule

A total of 22 changes and 20 explanations were provided for question #4 *When can she watch television?* (see Table 12, Columns 2 and 4: All 3 Groups Combined). Most of the changes (17/22) were consistent with the IL rule. The 4 out of the 5 changes made that are not consistent with the IL rule are identical - *\*When she can watch television?* and show that the students have de-inverted the pronoun subject and the auxiliary verb, a usage that is neither grammatical in French nor in English. The other correction *\*When can watches television?* shows an incomplete attempt at word order inversion as well as a misunderstanding of the 3rd person singular “s” rule in the simple present tense in English. Few of the explanations (3/20) were consistent with the IL rule.

Question #5 *Can you speak Spanish?* was corrected by 11 and explained by 8 students (see Table 12, Columns 2 and 4: All 3 Groups Combined). All the changes (11/11) that were made are consistent with the IL rule and 4 of the explanations provided deal with word order rule in English. Most of the students (10/11) wrote *Do you speak Spanish?* and replaced the auxiliary “can” by “do.” The new questions thus obtained are formulaic utterances with which the students are familiar. The last student substituted *Are you able to speak Spanish?* for the original question without providing any explanation.

In response to question #16 *Where can he go without his mother?*, 17 students provided consistent changes and explanations (see Table 12, Columns 2 and 4: All 3 Groups Combined). Most of the changes (14/17) show an incorrect understanding of the 3<sup>rd</sup> person singular “s” rule in the simple present and the other changes (3/17) show an incorrect understanding of the rules for possessive determiners in English. None of the explanations provided addressed word order rule in English.

Only 2 Secondary I students corrected and provided explanations for question #23 *Are you his brother?* suggesting in its place *\*Are you is brother?* (parce que his est un verbe, et c’est son frère) and *Are you my brother?* (Quand c’est à nous il faut dire my) which again reveals an incorrect understanding of the use of possessive determiners but also shows acceptance of pronoun-subject inversion in English (see Table 12, Columns 2 and 4). Again, none of the explanations provided deal with the IL rule (see Table 12, Columns 4 and 5: All 3 Groups Combined).

Question #27 *Why can they live in water?* was corrected by 8 students and 7 provided explanations (see Table 12, Columns 2 and 4: All 3 Groups Combined). Most

of the changes (5/8) were consistent with the IL rule (see Table 12, Column 3: All 3 Groups Combined) and the remaining 3 changes were identical and inconsistent with the IL rule *\*Why they can live in water?*. None of the explanations provided by the students concerned word order in English (see Table 12, Columns 4 and 5: All 3 Groups Combined).

The last item, question #34 *Can she wash her hands?* was corrected by 19 and explained by 17 students, but mostly for the wrong reason (see Table 12, Columns 2 and 4: All 3 Groups Combined). All the changes were consistent with the IL rule and they all had to do with the incorrect application of the 3<sup>rd</sup> person singular “s” rule in the simple present in English. No explanations refer to the IL rule allowing pronoun-subject inversion in English questions (see Table 12, Columns 4 and 5: All 3 Groups Combined).

Thus, the majority of the students clearly understood and accepted inversion with pronoun subjects in English, a type of inversion that similarly applies to French. As indicated in Table 12, 83.6% of all students accepted the 7 questions and 86.6% (71/82) of the changes they made for all 3 groups combined are consistent with the IL rule (see Table 12, Columns 1 to 3: All 3 Groups Combined). If we combine the number of correct answers (Column 1) with the number of consistent corrections (Column 3) but this time for all 3 groups, the results are even more striking. The percentage of acceptance of pronoun-subject inversion increases to 97.1% ( $n = 510$ ) which explains why so few corrections were consistent with the IL rule (see Table 12, Column 6: All 3 Groups Combined).

### Inversion with Noun-Subjects

Whereas the students were expected to widely accept pronoun-subject inversion in questions, they were not expected to accept noun inversion in accordance with the French IL rule. Surprisingly, they not only accepted noun inversion to a greater extent than what was originally anticipated, but they also showed that they possessed considerable metalinguistic awareness with regard to their performance.

Eight questions dealt with noun inversion on the Combined Task, 6 of which were grammatical questions with inversion and the other 2, ungrammatical questions in which the noun and the auxiliary verb were non-inverted. The first column of Table 13 shows that the majority of the students in this study accepted inversion with noun subjects in

grammatical questions. The scores range from 53.3% to 89.3% with an average of 65.6% for the Secondary I students, 70.2% for the Secondary II students, 78.4% for the Secondary IV students, and a total average of 70.2% for all 3 groups combined. Lightbown and Spada (2000) obtained an acceptance score of 53.2% on both the Explanation and Correction Tasks combined for 5 of the 6 questions appearing on the Combined Task (see Appendix E, Table 4). This represents a difference of 17% when compared with the students in this study.<sup>15</sup>

The acceptance results for noun-inversion produce an even stronger finding when the number of correct answers (Column 1) are combined with the number of changes that were consistent with the L2 rule (Column 4). This results in an increase to 77.2% ( $n = 139$ ) for the Secondary I group, 79.2% ( $n = 133$ ) for the Secondary II group, 88.2% ( $n = 90$ ) for the Secondary IV group, and 80.4% ( $n = 362$ ) for all 3 groups combined (see Table 13, Column 8). When calculated in this manner, these figures represent a difference of 27.2% when compared to the students in the Lightbown and Spada (2000) study.

Table 13 (Column 3, All 3 Groups)) further indicates that 64.1% ( $n = 82$ ) of the changes made by the students in this study were consistent with the L1 IL rule. Overall, 66.1% ( $n = 41$ ) of the changes made by the Secondary I students were consistent with the L1 IL rule compared to 65.9% ( $n = 29$ ) in Secondary II, and 54.5% ( $n = 12$ ) in Secondary IV, for a total average of 64.1% ( $n = 82$ ) for all 3 groups combined (see Table 13, Column 3).

A different pattern can be observed for the series of explanations that were consistent with the L1 IL rule. Only 49.0% ( $n = 24$ ) of the explanations provided by the Secondary I students are consistent with the L1 IL rule precluding inversion with noun subjects, compared to 54.3% ( $n = 19$ ) in Secondary II, and 38.5% ( $n = 5$ ) in Secondary IV, for a total average of 49.5% ( $n = 48$ ) for all 3 groups combined (see Table 13, Column 6).

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<sup>15</sup> Because question #14 was non-inverted and ungrammatical on Lightbown and Spada's (2000) Correction and Explanation Tasks it was not included in their results for noun-subject inversion. Moreover, their results included the sentence *Where are your parents working?* taken from the Correction Task but not included on The Combined Task. The five other sentences (#6, #9, #12, #17, and #33) are found both on Lightbown and Spada's (2000) Correction and Explanation Tasks, and on the Combined Task used in this study.

Table 13

Grammatical Questions: Number and Percentage of Correct Answers and Changes Consistent with the L1 and L2 Interlanguage Rules on the Combined Task

	1	2	3	4	5	6	7	8
<b>Sec. I</b> ( <i>n</i> = 30)	<i>n</i> (%) of C.A.	<i>n</i> (%) of Chg	<i>n</i> (%) Chg L1 rule	<i>n</i> (%) Chg L2 rule	<i>n</i> (%) of Expl.	<i>n</i> (%) of Expl. L1 rule	<i>n</i> (%) of Expl. L2 rule	<i>n</i> (%) Comb. Results
#6	16 (53.3)	14 (46.7)	9 (64.3)	5 (35.7)	13 (43.3)	8 (61.5)	5 (38.5)	21 (70.0)
#9	20 (66.7)	10 (33.3)	8 (80.0)	2 (20.0)	9 (30.0)	4 (44.4)	5 (55.6)	22 (73.3)
#12	23 (76.7)	7 (23.3)	0 (0)	7 (100)	6 (20.0)	0 (0)	6 (100)	30 (100)
#14	16 (53.3)	14 (46.7)	14 (100)	0 (0)	10 (33.3)	7 (70.0)	3 (30.0)	16 (53.3)
#17	25 (83.3)	5 (16.7)	2 (40.0)	3 (60.0)	3 (10.0)	1 (33.3)	2 (66.7)	28 (93.3)
#33	18 (60.0)	12 (40.0)	8 (66.7)	4 (33.3)	8 (26.7)	4 (50.0)	4 (50.0)	22 (73.3)
<b>Total</b>	118 (65.6)	62 (34.4)	41 (66.1)	21 (33.9)	49 (27.2)	24 (49.0)	25 (51.0)	139 (77.2)
<b>Sec. II</b> ( <i>n</i> = 28)	<i>n</i> (%) of C.A.	<i>n</i> (%) of Chg	<i>n</i> (%) Chg L1 rule	<i>n</i> (%) Chg L2 rule	<i>n</i> (%) of Expl.	<i>n</i> (%) of Expl. L1 rule	<i>n</i> (%) of Expl. L2 rule	<i>n</i> (%) Comb. Results
#6	19 (67.9)	8 (28.6)	4 (50.0)	4 (50.0)	9 (32.1)	4 (44.4)	5 (55.6)	23 (82.1)
#9	18 (64.3)	7 (25.0)	7 (100)	0 (0)	6 (21.4)	4 (66.7)	2 (33.3)	18 (64.3)
#12	24 (85.7)	2 (7.1)	0 (0)	2 (100)	2 (7.1)	0 (0)	2 (100)	26 (92.6)
#14	17 (60.7)	11 (39.3)	11 (100)	0 (0)	9 (32.1)	4 (44.4)	5 (55.6)	17 (60.7)
#17	25 (89.3)	3 (10.7)	0 (0)	3 (100)	0 (0)	0 (0)	0 (0)	28 (100)
#33	15 (53.6)	13 (46.4)	7 (53.8)	6 (46.2)	9 (32.1)	7 (77.8)	2 (22.2)	21 (75.0)
<b>Total</b>	118 (70.2)	44 (26.2)	29 (65.9)	15 (34.1)	35 (20.8)	19 (54.3)	16 (45.7)	133 (79.2)
<b>Sec. IV</b> ( <i>n</i> = 17)	<i>n</i> (%) of C.A.	<i>n</i> (%) of Chg	<i>n</i> (%) Chg L1 rule	<i>n</i> (%) Chg L2 rule	<i>n</i> (%) of Expl.	<i>n</i> (%) of Expl. L1 rule	<i>n</i> (%) of Expl. L2 rule	<i>n</i> (%) Comb. Results
#6	15 (88.2)	2 (11.8)	2 (100)	0 (0)	0 (0)	0 (0)	0 (0)	15 (88.2)
#9	14 (82.4)	3 (17.6)	3 (100)	0 (0)	1 (5.9)	1 (100)	0 (0)	14 (82.4)
#12	13 (76.5)	4 (23.5)	0 (0)	4 (100)	4 (23.5)	0 (0)	4 (100)	17 (100)
#14	12 (70.6)	5 (29.4)	5 (100)	0 (0)	3 (17.6)	3 (100)	0 (0)	12 (70.6)
#17	11 (64.7)	6 (35.3)	0 (0)	6 (100)	4 (23.5)	0 (0)	4 (100)	17 (100)
#33	15 (88.2)	2 (11.8)	2 (100)	0 (0)	1 (5.9)	1 (100)	0 (0)	15 (88.2)
<b>Total</b>	80 (78.4)	22 (21.6)	12 (54.5)	10 (45.5)	13 (12.7)	5 (38.5)	8 (61.5)	90 (88.2)
<b>All 3 Groups</b> ( <i>n</i> = 75)	<i>n</i> (%) of C.A.	<i>n</i> (%) of Chg	<i>n</i> (%) Chg L1 rule	<i>n</i> (%) Chg L2 rule	<i>n</i> (%) of Expl.	<i>n</i> (%) of Expl. L1 rule	<i>n</i> (%) of Expl. L2 rule	<i>n</i> (%) Comb. Results
#6	50 (66.7)	24 (32.0)	15 (62.5)	9 (37.5)	22 (29.3)	12 (54.5)	10 (45.5)	59 (78.7)
#9	52 (69.3)	20 (26.7)	18 (90.0)	2 (10.0)	16 (21.3)	9 (56.3)	7 (43.8)	54 (72.0)
#12	60 (80.0)	13 (17.3)	0 (0)	13 (100)	12 (16.0)	0 (0)	12 (100)	73 (97.3)
#14	45 (60.0)	30 (40.0)	30 (100)	0 (0)	22 (29.3)	14 (63.6)	8 (36.4)	45 (60.0)
#17	61 (81.3)	14 (18.7)	2 (14.3)	12 (85.7)	7 (9.3)	1 (14.3)	6 (85.7)	73 (97.3)
#33	48 (64.0)	27 (36.0)	17 (63.0)	10 (37.0)	18 (24.0)	12 (66.7)	6 (33.3)	58 (77.3)
<b>Total</b>	316 (70.2)	128 (28.4)	82 (64.1)	46 (35.9)	97 (21.6)	48 (49.5)	49 (50.5)	362 (80.4)

1) *n* (%) of C.A. = number and % of correct answers

2) *n* (%) of Chg = number and % of changes consistent with both interlanguage rules

3) *n* (%) of Chg L1 rule = number and % of changes consistent with the L1 interlanguage rule

4) *n* (%) of Chg L2 rule = number and % of changes consistent with the L2 interlanguage rule

5) *n* (%) of Expl. = number and % of explanations consistent with both interlanguage rules

6) *n* (%) Expl. L1 rule = number and % of explanations consistent with the L1 interlanguage rule

7) *n* (%) Expl. L2 rule = number and % of explanations consistent with the L2 interlanguage rule

8) *n* (%) Comb. Results = number and % of correct answers + changes consistent with the L2 rule

A more detailed look at the changes and explanations given for individual questions confirms this pattern. Table 13 (Columns 3 and 4: All 3 Groups) shows that for question #6 *Why do Children like McDonald's?*, 62.5% ( $n = 15$ ) of all the changes made were consistent with the L1 IL rule compared to 37.5% ( $n = 9$ ) for the changes that were consistent with the L2 rule. The majority of the L1 changes made (14/15) are identical *\*Why children like McDonald's?* and they show a strong influence of transfer from French in which the question would read *Pourquoi les enfants aiment McDonald's?* The same applies to the single remaining correction *\*Why the children like the McDonald's?* that is a direct rendition of the French *Pourquoi les enfants aiment le McDonald's?* Other changes (9/24), however, were consistent with the L2 rule. That is, the students proposed replacing the auxiliary “do” with “does” or adding “s” to the noun “children.” These changes either reflect an incorrect understanding of the 3<sup>rd</sup> person singular “s” rule or of the possessive case rule in English. In no way, however, do they call into question the principle of noun-subject inversion in questions.

Most of the explanations provided for questions #6, 54.5% ( $n = 12$ ), are consistent with the French IL rule and state, in various ways, that the auxiliary “do” is not necessary in the sentence (see Table 13, Column 6: All 3 Groups). The explanations that were consistent with the L2 rule ( $n = 10$ ) all address matters other than the principle of noun-subject inversion in questions (see Table 13, Column 7: All 3 Groups).

For question #9 *What is your brother doing?*, Table 13 (Column 3, All 3 Groups) shows that 90% ( $n = 18$ ) of the changes were consistent with the L1 IL rule and reflected a strong influence from French. Half of the students (9/18) wrote *\*What your brother is doing?*, in French, *Qu'est-ce que ton frère est en train de faire?*. Others (8/18) wrote *\*What is doing your brother?*, in French *Qu'est-ce qu'est en train de faire ton frère?*, and one student wrote *\*Why your brother doing?* a sentence that has no equivalent in French. All these changes show that the students operated under the French IL rule suggesting that there was something wrong with the word order. Not surprisingly, the majority of the changes made to question #9 (17/20) show an unwillingness on the part of the students to separate the auxiliary “is” from the main verb “doing” a grammatical pattern that does not exist in French.

Table 13 (Column 6, All 3 Groups) reveals that most of the explanations provided by the students (9/16) to question #9 also point to an awareness of L1 word order rule.

The explanations that were consistent with the L2 rule ( $n = 7$ ) (see Table 13, Column 7: All 3 Groups) all show an acceptance of noun-subject inversion although they do not address it directly.

For question #12 *Do the children want to play?*, Table 13 (Columns 3 and 6, All 3 Groups) reveals that none of the changes (0/13) or the explanations (0/12) provided were consistent with the L1 IL rule which indicates that the students accepted do-fronting questions more readily. The majority of the students (80%) accepted this grammatical question and those who did not ( $n = 13$ ), all corrected it in ways that are consistent with the L2 rule (see Table 13, Columns 1, 2, and 4: All 3 Groups). Many (7/12) suggested replacing the auxiliary “do” by “does” assuming the noun “children” to be singular instead of an irregular plural. One explanation (1/12) led to the addition of an “s” to the verb “want” and others (3/12) suggested the removal of the definite article “the” in front of the noun “children.” This shows an incorrect understanding of the rules for possessive determiners in English. Another explanation suggested that the auxiliary “are” be used instead of “do.” In short, noun inversion with “do-fronting” was highly accepted and the students who made changes to this type of question did it for reasons other than those consistent with the L2 rule.

As was the case with question #9 *What is your brother doing?*, the students had difficulty with correctly inverted question #14 *Where is the teacher going?*. In fact, even though the two sentences are structurally very similar (e.g. both sentences are in the present progressive), fewer students accepted this sentence (60% or  $n = 45$ ) (see Table 13, Columns 1: All 3 Groups). All the changes made ( $n = 30$ ) are consistent with the L1 IL rule and 63.6% ( $n = 14$ ) of the explanations provided refer to an awareness of French word order rules (see Table 13, All 3 Groups). The changes again show a strong influence of transfer from French with either \**Where the teacher is going?* (24/30), in French, *Où est-ce que le professeur s'en va?* or with \**Where is going the teacher?* (6/30), in French, *Où est-ce que s'en va le professeur?* All the changes (30/30) reflect an unwillingness to separate “is” from “going.” This suggests that the students may have assumed that these two words cannot be separated in English.

The explanations provided that were consistent with the L1 IL rule (14/22) show an awareness of French word order rule (see Table 13, Column 6: All 3 Groups). Most students (12/14) implied that the syntax was wrong in question #14 and two students

(2/14) said that the auxiliary verb had to be placed after the subject in the sentence. This indicates an explicit refusal of noun subject inversion in questions in English.

The next sentence, question #17 *Can the children speak Spanish?*, received the highest level of acceptance 81.3% ( $n = 61$ ) from the students (see Table 13 Column 1: All 3 Groups). Most of the changes made (12/14) showed an acceptance of noun subject inversion and proposed to replace the modal auxiliary “can” by the auxiliaries “do,” “is,” “\*cans” or “are.” Only two changes made by Secondary I students were consistent with the L1 IL rule and they were identical *\*The children can speak Spanish?* Furthermore, one of the explanations provided by a Secondary I student (“can” se place avant le verbe) provided clear evidence that the student operated on the basis of French rather than English order rules.

The last sentence, question #33 *When is my mother coming home?* was accepted by 64% ( $n = 48$ ) of the students (see Table 13, Columns 1: All 3 Groups). All in all, 63% ( $n = 17$ ) of the changes made (see Table 13, Columns 3: All 3 Groups) and 66.7% ( $n = 12$ ) of the explanations provided were consistent with the L1 IL rule (see Table 13, Column 6: All 3 Groups). Most of the changes consistent with the L1 IL rule (16/17) were *\*When my mother is coming home?*. One of the other changes was *\*When my mother will comes home?*. Explanations consistent with the L1 IL rule ( $n = 12$ ) all suggest one way or another that there was something wrong with the syntax in question #33 and that the auxiliary should have been placed after the subject.

Interestingly, the students tended to accept noun-subject inversion more readily for yes-no questions (#12 and #17) those that begin immediately with the auxiliary verb than for “wh” questions (#6, #9, #14, and #33). All the changes made to question #12 ( $n = 13$ ) as well as 85.7% ( $n = 12$ ) of the changes made to question #17 were consistent with the L2 rule (see Table 13, Column 4: All 3 Groups). It will be remembered that questions #12 and #17 also received the highest level of acceptance from the students, 80% for question #12 and 81.3% for questions #17 (see Table 13, Column 1: All 3 Groups).

Also noteworthy is the fact that the two questions for which the students relied most heavily on the French IL rule (#9 and #14) were both in the present progressive tense. As many as 90% ( $n = 18$ ) of the changes made to question #9 and all those made to question #14 ( $n = 30$ ) were consistent with the L1 IL rule (see Table 13, Column 3: All

3 Groups). This suggests that the students assumed that the auxiliary and the main verb could not be separated in questions, a usage that is not the rule in French.

The students also relied more heavily on the L1 IL rule for questions #6 and #33, two “wh” questions. As many as 62.5 % ( $n = 15$ ) of the students made changes consistent with the L1 rule for question #6, and 63% ( $n = 17$ ) of them did so for question #33 (see Table 13, Column 3: All 3 Groups). Conversely, the level of acceptance was much lower for “wh” questions: 60% for question #14, 64% for question #33, 66.7% for question #6, and 69.3% for question #9 (see Table 13, Column 1: All 3 Groups).

A similar pattern can be observed for the Lightbown and Spada (2000) students who showed less reliance on the L1 rule for the yes-no questions #12 (64%) and #17 (71%) than for “wh” questions #6 (77%), #9 (80%), and #33 (87%) (see Appendix E, Table 6). This may be due to the fact that L2 teachers generally tend to focus more on yes-no questions when teaching question formation in English than on “wh” questions because the former are less complex. The importance of the role played by yes-no and “wh” questions was not anticipated at the outset of this study and deserves further investigation.

#### Non-Inversion with Noun-Subjects

Table 14 shows how the students responded to the two questions in which noun subjects were not inverted, question #7 *\*Why fish can live in water?* and question #26 *\*What the chef likes to cook?*. These are questions that are ungrammatical in English but grammatical in French. The first column of Table 14 shows the number and percentage of acceptance for both questions #7 and #26. The scores indicate that 70% ( $n = 42$ ) of the Secondary I students, 48.2% ( $n = 27$ ) of the Secondary II students, 52.9% ( $n = 18$ ) of the Sec. IV, and 58.0% ( $n = 87$ ) of the students for all 3 groups combined accepted both ungrammatical questions #7 and #26 and operated under the L1 IL rule that precludes inversion with noun-subjects.

Table 14

Ungrammatical Questions: Number and Percentage of Correct Answers, and Changes and Explanations Consistent with the L1 and L2 Interlanguage Rules on the Combined Task

	1	2	3	4	5
SEC. I ( <i>n</i> = 30)	<i>n</i> (%) of Acc.	<i>n</i> (%) of Chg L1 rule	<i>n</i> (%) of Chg L2 rule	<i>n</i> (%) of Expl L1 rule	<i>n</i> (%) of Expl L2 rule
#7	19 (63.3)	0 (0)	11 (100)	6 (60.0)	4 (40.0)
#26	23 (76.7)	3 (42.9)	4 (57.1)	2 (40.0)	3 (60.0)
Total	42 (70.0)	3 (16.7)	15 (83.3)	8 (53.3)	7 (46.7)
SEC. II ( <i>n</i> = 28)	<i>n</i> (%) of Acc.	<i>n</i> (%) of Chg L1 rule	<i>n</i> (%) of Chg L2 rule	<i>n</i> (%) of Expl L1 rule	<i>n</i> (%) of Expl L2 rule
#7	10 (35.7)	1 (5.6)	17 (94.4)	13 (72.2)	5 (27.8)
#26	17 (60.7)	0 (0)	11 (100)	10 (100)	0 (0)
Total	27 (48.2)	1 (3.4)	28 (96.6)	23 (82.1)	5 (17.9)
SEC. IV ( <i>n</i> = 17)	<i>n</i> (%) of Acc.	<i>n</i> (%) of Chg L1 rule	<i>n</i> (%) of Chg L2 rule	<i>n</i> (%) of Expl L1 rule	<i>n</i> (%) of Expl L2 rule
#7	8 (47.1)	1 (11.1)	8 (88.9)	5 (62.5)	3 (37.5)
#26	10 (58.8)	0 (0)	7 (100)	4 (80.0)	1 (20.0)
Total	18 (52.9)	1 (6.2)	15 (93.8)	9 (69.2)	4 (30.8)
All 3 Groups ( <i>n</i> = 75)	<i>n</i> (%) of Acc.	<i>n</i> (%) of Chg L1 rule	<i>n</i> (%) of Chg L2 rule	<i>n</i> (%) of Expl L1 rule	<i>n</i> (%) of Expl L2 rule
#7	37 (49.3)	2 (5.3)	36 (94.7)	24 (66.7)	12 (33.3)
#26	50 (66.7)	3 (12.0)	22 (88.0)	16 (80.0)	4 (20.0)
Total	87 (58.0)	5 (7.9)	58 (92.1)	40 (71.4)	16 (28.6)

1) *n* (%) of Acc. = number and percentage of acceptance

2) *n* (%) of Chg L1 rule = number and percentage of changes consistent with the L1 interlanguage rule

3) *n* (%) of Chg L2 rule = number and percentage of changes consistent with the L2 interlanguage rule

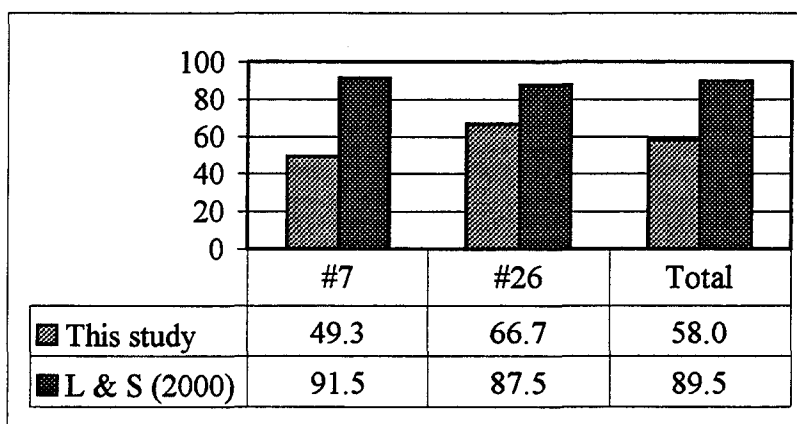
4) *n* (%) of Expl L1 rule = number and percentage of explanations consistent with the L1 interlanguage rule

5) *n* (%) of Expl L2 rule = number and percentage of explanations consistent with the L2 interlanguage rule

Question #7: *\*Why fish can live in water?*

Question #26: *\*What the chef likes to cook?*

Lightbown and Spada (2000) obtained much higher acceptance scores for the items. They found that 91.5% of their students accepted question #7 and 87.5% accepted question #26 on both the Explanation and Correction Tasks combined (see Figure 5). The contrast with the students in this study is striking given that 49.3% of them accepted question #7 and 66.7%, question #26. This represents an overall difference of 31.5% between the students in this study and Lightbown and Spada's (2000) students. Such a large difference was not expected at the outset of this study.



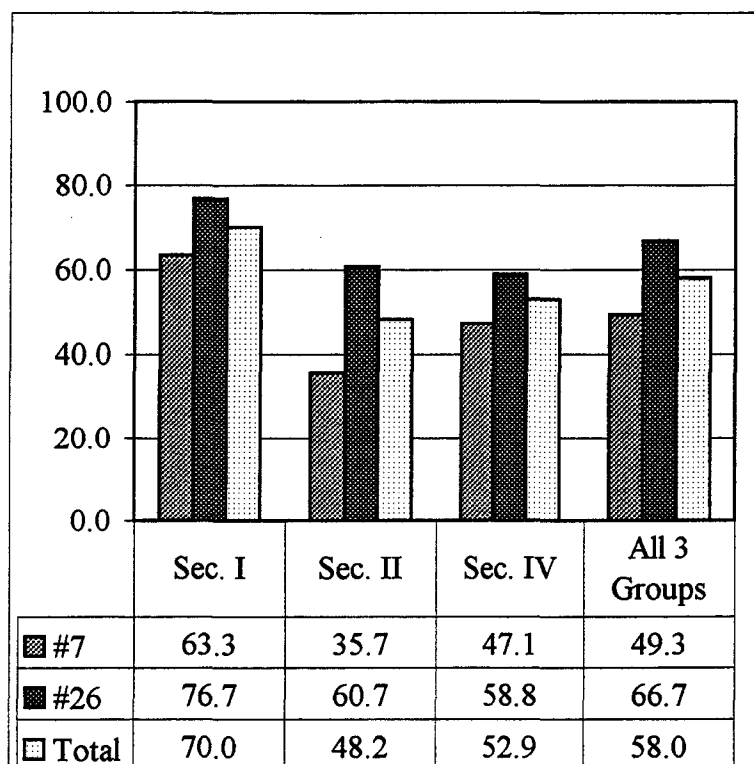
**Figure 5.** Percentage of answers consistent with the L1 interlanguage rule for the students in this study and in Lightbown and Spada (2000).

Question #7: *\*Why fish can live in water?*

Question #26: *\*What the chef likes to cook?*

In general, the students in this study tended to accept ungrammatical questions less readily than grammatical questions. It will be recalled that the students in this study had an acceptance level of 73.9% for the 7 grammatical questions combined and an acceptance level of 47.1% for the 3 ungrammatical questions on the Combined Task (see Table 3). This represents an accuracy percentage difference of 26.8% between grammatical and ungrammatical questions in this study.

Figure 6 shows that ungrammatical sentence #7 *\*Why fish can live in water?* proved to be the easiest of the two. That is, it was accepted by 63.3 % of the Secondary I students compared to 35.7% for the Secondary II students, 47.1 % for the Secondary IV students, and 49.3% for all 3 groups of students combined.



**Figure 6.** Percentage acceptance of ungrammatical questions with noun-subject inversion on the Combined Task.

Question #7: *\*Why fish can live in water?*

Question #26: *\*What the chef likes to cook?*

The students had more problems with question #26 *\*What the chef likes to cook?* probably due to the fact that the verb “likes” was immediately followed by the infinitive “to cook” a language structure with which they were less familiar. In the Secondary I group, 76.7% accepted this question compared with 60.7% for the Secondary II group, and 58.8% for the Secondary IV group, for a total average of 66.7% for all 3 groups combined (see Figure 6). Again, it can be seen that the Secondary II students’ performance is close to that of the Secondary IV students. This is probably due to the fact that they were taught question formation in English while they were in Secondary I.

### Changes and Explanations Provided by the Students for Ungrammatical Questions with Noun-Subject Inversion

Table 14 (Column 1, All 3 Groups) reveals that for question #7, nearly half of the students accepted noun-inversion in English (49.3% or  $n = 37$ ). In the majority of L2 changes (29/36), students provided the grammatical form itself while in other cases (6/36) they proposed the replacement of the modal auxiliary “can” by “do,” “does” or “did.” One single change added the definite article “the” before the noun “water.” All in all, 94.7% (36/38) of the changes made were consistent with the L2 rule and two changes were consistent with the L1 IL rule (see Table 14, Columns 2 and 3: All 3 Groups). One of these was made by a Secondary II student who wrote *\*Why fishes can live in water?*. The other was from a Secondary IV student who wrote *\*Why fish can lives in water?*

In a similar way, the majority of the changes made for question #26 (88% or  $n = 22$ ) also denote the acceptance of noun-inversion in English (see Table 14, Column 3: All 3 Groups). In most cases (17/22) the students corrected the question accurately while in other cases (5/22) they provided changes reflecting an acceptance of the principle of noun subject inversion. For example, 3 students wrote *\*What do / does the chef likes to cook?*, one student wrote *\* What likes the chef to cook?*, and, another student wrote *\*What likes to cook the chef?* . Only 3 changes made by Secondary I students were consistent with the L1 IL rule (see Table 14, Column 2: All 3 Groups). Overall, 88% ( $n = 22$ ) of the changes made to question #26 were consistent with the L2 rule compared to 12% ( $n = 3$ ) for the L1 IL rule (see Table 14, Columns 2 and 3: All 3 Groups).

A closer look at the explanations provided for question #7 is revealing since more than 2/3 of them (66.7%) show an awareness of correct word order in English (see Table 14, Column 4: All 3 Groups). Table 15 provides the explanations that are subdivided into four types for question #7. All of them suggest that the students were metalinguistically aware of the correct formation of questions in English. As was the case with the corrections, the Secondary II students seemed to be more capable of providing metalinguistic explanations to account for their L2 performance than were the two other groups.

Table 15

Type and Number of Metalinguistic Explanations Consistent with the L2 Interlanguage Rule for Question #7 for Each of the 3 Groups on the Combined Task

EXPLANATIONS ( $n = 24$ )	Sec. I	Sec. II	Sec. IV
"Can" is used before the "noun" or the "pronoun."	1	0	1
We must put the "verb" or the "auxiliary" before the "subject" in questions.	3	8	2
"Verbs" and "subjects" are inverted in questions.	1	1	0
Incorrect syntax.	1	4	2
<b>Total</b>	6	13	5

Question #7: *Why fish can live in water?*

Although no students could formulate the correct rule for noun-subject inversion in questions in English, the majority of the explanations provided (80% or  $n = 16$ ) for question #26 *\*What the chef likes to cook?* show an awareness of correct word order usage (see Table 14, Column 4: All 3 Groups). Table 16 shows that the explanations can be subdivided into four types for question #26.

Table 16

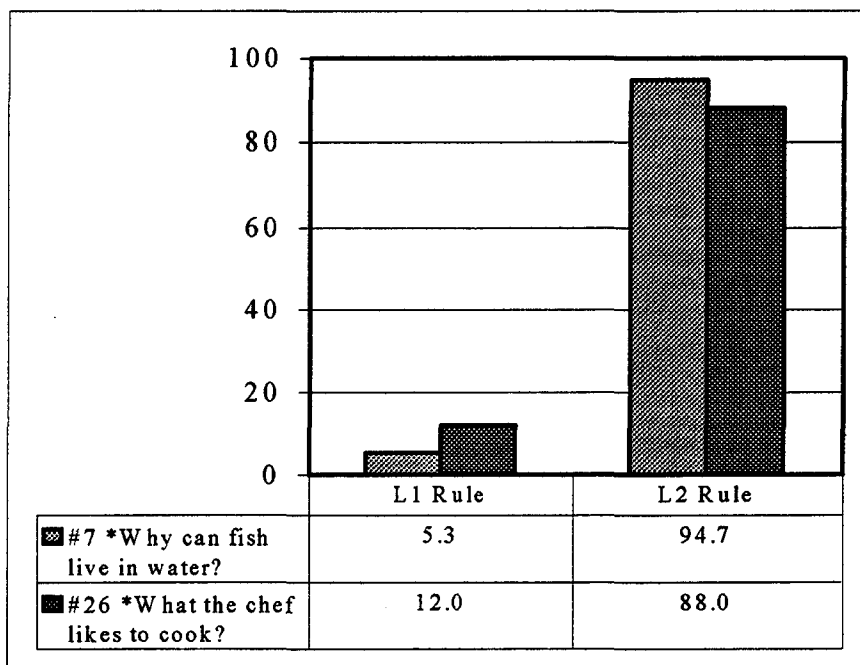
Type and Number of Metalinguistic Explanations Consistent with the L2 Interlanguage Rule for Question #26 for Each of the 3 Groups on the Combined Task

EXPLANATIONS ( $n = 16$ )	Sec. I	Sec. II	Sec. IV
"To do" + noun inversion.	2	7	0
The auxiliary goes before the "subject" in questions.	0	3	2
Word order is incorrect for questions.	0	0	1
Incorrect syntax.	0	0	1
<b>Total</b>	2	10	4

Question #26: *\*What the chef likes to cook?*

Again, it is the Secondary II students ( $n = 10$ ) who show the greatest awareness of word order rules probably due to the fact that they were taught noun inversion as well as

correct grammatical usage for questions in English when they were in Secondary I the year before. What is particularly interesting is that the students from all 3 groups seem to be aware not only of L1 IL rules, as was the case for the students tested by Lightbown and Spada (2000), but also of L2 rules. Figure 7 illustrates the respective percentages of L1 and L2 consistent metalinguistic explanations provided by all the students for items #7 and #26 on the Combined Task.



**Figure 7.** Percentage of L1 and L2 consistent metalinguistic explanations provided by the students on the Combined Task for all 3 groups.

Figure 7 indicates that the students relied more heavily on correct L2 rules than on L1 rules in their explanations. As much as 94.7% of the explanations for question #7 and 88% for question #26 pointed to the acceptance of noun-subject inversion in English.

#### SVAO and SAVO Sentences

In general, the students in this study were also more metalinguistically aware of L2 rules for adverb placement in English than were the students tested by Lightbown and Spada (2000). Consequently, most of the changes and explanations provided are consistent with the L2 rather than L1 IL rule.

### Ungrammatical SVAO sentences

Table 17 (see Columns 4 and 6) shows that the numbers of both changes and explanations consistent with the L1 IL rule provided by the students are very small ranging from 0 to 5. The majority of the students accepted the two ungrammatical SVAO sentences (#15 and #30) readily. As many as 75% ( $n = 45$ ) of the Secondary I students, 60.7% ( $n = 34$ ) of the Secondary II students, and 52.9% ( $n = 18$ ) of the Secondary IV students accepted the ungrammatical SVAO sentences for a total average of 64.6% ( $n = 97$ ) for all 3 groups combined (see Table 17, Column 2). However, few of the changes made (4/53) and the explanations provided (5/40) were consistent with the L1 rule predicting that the students would tend to accept the French SVAO pattern (see Table 17, Columns 3 to 6: All 3 Groups). No comparison can be made with corresponding findings in Lightbown and Spada (2000), as they did not analyse their results in ways that would permit comparison.

The nature of the changes made by the students that are consistent with the L1 IL rule is revealing. Overall, 70.7% ( $n = 53$ ) of the students accepted the ungrammatical form of questions #15 *\*John does quickly his homework.* and 30.7% ( $n = 23$ ) of them rejected it (see Table 17, Columns 1 and 2). As much as 82.6% (19/23) of the changes made were accurate corrections and the four inaccurate changes (4/23) were all made by Secondary I students. Three of them wrote *\*John do quickly his homework.* which shows an incorrect understanding of the 3<sup>rd</sup> person singular “s” rule in English. The fourth student wrote *\*John does quickly his homeworks.* and pluralized the noun “homework” unaware that “homework” is a collective noun in English. All four inaccurate changes suggest that the students were influenced by the corresponding French sentence *John fait rapidement ses devoirs.* Moreover, if we combine the number of students who accepted sentence #15 (Column 2) to that of the corrections they made that were consistent with the L1 IL rule (Column 4), the pattern of responses and changes made by the students to question #15 increases to 76% (57/75) (see Table 17, Column 7: All 3 Groups). This means that 76% of the students operated under the L1 IL rule compared to 24% ( $n = 18$ ) for the L2 rule.

Table 17

Number and Percentage of Correct Answers, Acceptance, and Changes and Explanations Consistent with the L1 Interlanguage Rule on the Combined Task

UNGRAMMATICAL SVAO SENTENCES ( $n = 2$ )							
	1	2	3	4	5	6	7
SEC. I ( $n = 30$ )	$n$ (%) of C.A.	$n$ (%) of Acc.	$n$ of Chg	$n$ of Chg L1 rule	$n$ of Expl	$n$ of Expl L1 rule	$n$ (%) Comb. Results
#15	8 (26.7)	22 (73.3)	8	4	8	0	26 (86.7)
#30	7 (3.3)	23 (76.7)	7	0	6	0	23 (76.7)
Total	15 (25.0)	45 (75.0)	15	4	14	0	49 (81.7)
SEC. II ( $n = 28$ )	$n$ (%) of C.A.	$n$ (%) of Acc.	$n$ of Chg	$n$ of Chg L1 rule	$n$ of Expl	$n$ of Expl L1 rule	$n$ (%) Comb. Results
#15	8 (28.6)	20 (71.4)	8	0	7	0	20 (71.4)
#30	14 (50.0)	14 (50.0)	14	0	11	0	14 (50.0)
Total	22 (39.3)	34 (60.7)	22	1	18	0	35 (62.5)
SEC. IV ( $n = 17$ )	$n$ (%) of C.A.	$n$ (%) of Acc.	$n$ of Chg	$n$ of Chg L1 rule	$n$ of Expl	$n$ of Expl L1 rule	$n$ (%) Comb. Results
#15	7 (41.2)	10 (58.8)	7	0	4	0	10 (58.8)
#30	9 (52.9)	8 (47.1)	9	0	4	0	8 (47.1)
Total	16 (47.1)	18 (52.9)	16	0	8	0	18 (52.9)
All 3 Groups ( $n = 75$ )	$n$ (%) of C.A.	$n$ (%) of Acc.	$n$ of Chg	$n$ of Chg L1 rule	$n$ of Expl	$n$ of Expl L1 rule	$n$ (%) Comb. Results
#15	23 (30.7)	53 (70.7)	23	4	19	5	57 (76.0)
#30	30 (40.0)	45 (60.0)	30	0	21	0	45 (60.0)
Total	53 (35.3)	97 (64.7)	53	4	40	5	101 (67.3)

1)  $n$  (%) of C.A. = number and percentage of correct answers

2)  $n$  (%) of Acc. = number and percentage of acceptance

3)  $n$  of Chg = number of changes

4)  $n$  of Chg L1 rule = number of changes consistent with the L1 interlanguage rule

5)  $n$  of Expl. = number of explanations

6)  $n$  of Expl L1 rule = number of explanations consistent with the L1 interlanguage rule

7)  $n$  (%) Comb. Results = number and % of acceptance + changes consistent with the L1 rule

Question #15: \*John does quickly his homework.

Question #30: \*Alexandra cleans sometimes her room.

Thirty changes were made to ungrammatical SVAO question #30 \*Alexandra cleans sometimes her room. This item was accepted by 60% ( $n = 45$ ) of the students (see Table 17, Column 2: All 3 Groups). All the changes made were accurate corrections, which indicates that the students were aware of the rules regulating adverb placement in English. Overall, for question #30, 60% of the students operated under the L1 rule compared to 40% for the L2 rule.

### Grammatical SAVO sentence

When we look at Table 18, a similar trend can be observed for grammatical SAVO question #32 that was accepted by 84% ( $n = 63$ ) of the students.<sup>16</sup> Overall, 5 of the changes made and 3 of the explanations provided were consistent with the L1 rule. The students who made changes (3 in Secondary I and 2 in Secondary IV) all wrote *\*Lucy watches always television after school*, which is a direct translation of its French counterpart *Lucy regarde toujours la télévision après l'école*.

Table 18

Number and Percentage of Correct Answers, and Changes and Explanations Consistent with the L1 Rule on the Combined Task

GRAMMATICAL SAVO SENTENCE ( $n = 1$ )						
	1	2	3	4	5	6
SEC. I ( $n = 30$ )	$n$ of C.A.	$n$ of Chg.	$n$ of Chg L1 rule	$n$ of Expl.	$n$ of Expl L1 rule	$n$ (%) Comb. Results
#32 Lucy always watches television after school.	22 (73.3)	7	3/7	6	2/6	26 (73.3)
SEC. II ( $n = 28$ )						
#32 Lucy always watches television after school.	27 (96.4)	1	0/1	1	0/1	28 (100)
SEC. IV ( $n = 17$ )						
#32 Lucy always watches television after school.	14 (82.4)	3	2/3	2	1/2	15 (88.2)
ALL 3 GROUPS ( $n = 75$ )						
#32 Lucy always watches television after school.	63 (84.0)	11	5/11	9	3/9	69 (92.0)

1)  $n$  (%) of C.A. = number and percentage of correct answers

2)  $n$  of Chg. = number of changes

3)  $n$  of Chg L1 rule = number of changes consistent with the L1 interlanguage rule

4)  $n$  of Expl. = number of explanations

5)  $n$  of C. Expl. = number of explanations consistent with the L1 interlanguage rule

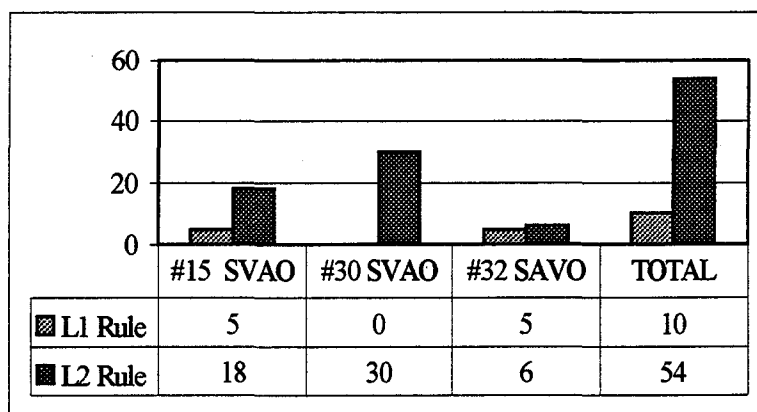
6)  $n$  (%)Comb. Results = number and % of correct answers + changes consistent with the L2 rule

The other changes made by the students (6/11) were consistent with the L2 rule. Four Secondary I students accepted the SAVO syntax but replaced the verb “watches” by “\*watches” (1 student) or “\*watch” assuming (incorrectly) that there was an error with the verb. The single Secondary II student who corrected sentence #32 wrote *After school*,

<sup>16</sup> One Secondary I student said that question #32 was incorrect but made no change to it. For that reason, results are calculated on 74 instead of 75 students.

*Lucy always watches television.* assuming (again, incorrectly) that the error was in the prepositional phrase. The single Secondary IV student who made a change wrote *Lucy is always watching television after school.* assuming that the error was with the verb tense (i.e., that the present progressive had to be used in place of the simple present). If we combine the number of corrections consistent with the L2 rule (6/11) to that of correct answers ( $n = 63$ ) this results in 92% (69/75) of students who operated under the L2 rule for question #32 (see Table 18, Column 6). This means that only 6.7% (5/75) of the students operated under for the L1 IL rule for that question. The corrections made concerned both the L1 IL rule 45.5% (5/11) and the L2 rule 54.5% (6/11). No comparison can be made with corresponding findings in Lightbown and Spada (2000) who did not analyze their data in that way.

Figure 8 shows that the majority of the changes made by the students for sentences #15, #30, and #32 are consistent with the L2 rule. Only question #32, shows an almost equal number of changes that are consistent with both the L1 and L2 rules. The high level of acceptance (84%) given to this item helps to explain this (see Table 18, Column 1: All 3 Groups). It also indicates that the students were more likely to accept the SAVO structure that is grammatical in English but ungrammatical in French.



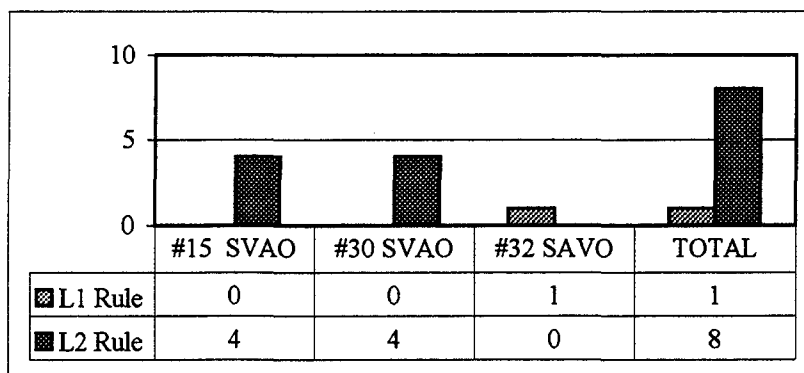
**Figure 8.** Number of changes consistent with the L1 and L2 interlanguage rules for SVAO and SAVO sentences on the Combined Task for all 3 groups.

Sentence #15: *\*John does quickly his homework.*

Sentence #30: *\*Alexandra cleans sometimes her room.*

Sentence #32: *Lucy always watches television after school.*

A similar pattern can be observed for the number of consistent explanations provided by the students. Figure 9 reveals that only the explanations that were consistent with the L2 rule were provided for the SVAO sentences (#15 and #30). The students for item #32 gave no L2 explanations, which may be partly explained by the fact it was accepted to a high degree (84%) (see Table 18, Column 1: All 3 Groups).



**Figure 9.** Number of explanations consistent with the L1 and L2 interlanguage rules for SVAO and SAVO sentences on the Combined Task for all 3 groups.

Sentence #15: *\*John does quickly his homework.*

Sentence #30: *\*Alexandra cleans sometimes her room.*

Sentence #32: *Lucy always watches television after school.*

In short, as was the case for question formation in English, the students in this study showed that they possessed greater metalinguistic awareness of adverb placement in English than was originally anticipated. The results for both question formation and adverb placement are discussed in Chapter 5.

## CHAPTER 5

### Conclusions

This research, a replication and expansion of Lightbown and Spada (2000), investigated the metalinguistic awareness of francophone students (age 12 to 16) attending secondary I, II, and IV regular ESL classes in Quebec. Results from this population were compared with the findings from the younger francophone learners (age 11-12) enrolled in English in intensive communicative ESL classes in Quebec reported in Lightbown and Spada (2000). Two specific goals of this study were: 1) to determine whether older, more proficient francophone learners of English were more able to provide explicit metalinguistic explanations about L1 and L2 rules that seemed to influence their L2 performance than younger, less proficient learners and 2) to determine whether the rules constrained their performance in English with or without their awareness. The linguistic features examined were adverb placement and question formation. To accomplish these goals, a comparison between the two studies was made in terms of: a) the degree of accuracy on test scores in relation to sentence types; b) the extent to which L1 rules from French were being transferred to English; and c) the extent to which learners' judgements of grammaticality corresponded to stages of development in the acquisition of question forms. This permitted an investigation of the two other research questions in the study which were: 3) to determine whether learners were more accurate in their grammaticality judgements when test items in English closely paralleled French language structures and 4) to determine whether the profile of older learners judgements of grammatical and ungrammatical question forms corresponded with the developmental stages reported in the L2 literature and how this compared with the younger learners observed in the Lightbown and Spada (2000) study. The findings are discussed in the context of Lightbown and Spada's (2000) hypothesis that explicit contrastive metalinguistic instruction and corrective feedback which is timed to coincide with learners' developmental "readiness" might be necessary to help learners overcome transfer problems and move into more advanced developmental stages.

It will be recalled that Lightbown and Spada's (2000) results showed that the students' performance was systematic, non-target like, and that there was a clear and consistent pattern of the transfer from French in their use of questions and adverbs. There

was, however, no evidence that students were aware of the ways in which word order patterns in their interlanguage contributed to their L2 performance. Furthermore, because the Secondary II learners had received explicit instruction from a teacher who is also the researcher, it could be argued that this affected the overall findings. Although the teacher/researcher did provide explicit instruction to some of the students involved in the study, one cannot assume a cause/effect relationship in a descriptive study such as this. Indeed, there are several other factors that could have contributed to the higher levels of metalinguistic knowledge on the part of these learners (e.g. higher levels of proficiency, age, metalinguistic proficiency in the L1). Only future experimental research will be able to tease apart the potential contribution of these variables.

Results from this study also show that the students's performance was systematic, non-target like, and that there was a clear and consistent pattern of the transfer of French in their use of questions and adverbs. However, they were far more capable of reflecting metalinguistically on the ways in which knowledge of their L1 contributed to their L2 performance than were the students investigated by Lightbown and Spada (2000). These results suggest that more advanced levels of proficiency and the potential effects of instruction are more likely explanations for the learners' metalinguistic awareness in the present study. The results also suggest that L1 influence rather than stage of development is a better explanation for the learners' performance. Each of the four hypotheses investigated in this research has been supported by the results. These are discussed in more detail below.

### Hypothesis 1

The findings provide support for Hypothesis #1: that the older learners (12 to 16) in this study, like the younger learners (11-12) in Lightbown and Spada (2000), would be constrained by interlanguage rules regulating their use of question formation and adverb placement. That is, they would tend to accept the sentences as "grammatical" or reject them as "ungrammatical" on that basis. Results show that the students in this study were constrained by interlanguage rules brought over by their L1, but that because they were more advanced in their knowledge of English, they were constrained to a lesser degree than the learners reported in Lightbown and Spada (2000).

As was the case in Lightbown and Spada (2000), the overall pattern of responses on question-items showed that the students were more likely to accept grammatical questions in which pronoun subject and auxiliary verbs were inverted than grammatical questions in which the noun subject and auxiliary were inverted. Although the students in this study accepted questions with noun inversion to a greater extent than did the students in Lightbown and Spada (2000), the findings are nevertheless consistent with the overall pattern of results in previous studies with francophone learners of English (Lightbown & Spada, 2000; Spada & Lightbown, 1999; Zobl, 1979).

The fact that the students in this study had received some explicit instruction on question forms may have contributed to this finding. This seems to be particularly evident for the Secondary II students who consistently did better on question formation. The year before, the same learners had received an average of 5 to 10 hours in each of the 4 terms of the school year of explicit instruction (including contrastive metalinguistic analysis) on verb tenses in English. This included instruction in subject / verb (auxiliary) inversion.

The results also provide evidence that influence from French also appears to have constrained the students in their judgements and metalinguistic reflections concerning adverb placement. The students tended to accept both English sentences in which adverbs of manner and frequency are placed between verb and object (SAVO) and English sentences with the adverb between subject and verb (SVAO).

These results confirm previous findings reported in Lightbown and Spada (2000), Spada and Lightbown (1999), Trahey and White (1993), and White (1991). White (1991) hypothesised that while ESL students could learn to accept the English SAVO structure (correct in English but ungrammatical in French) without having to be taught that it is incorrect in English (i.e. in the absence of “negative evidence”), students would need negative evidence to get rid of the French SVAO structure in their use of English. Results from this study suggest that this may be a requirement for the students in this study as well.

## Hypothesis 2

The second hypothesis that the older (12-16 year-old) learners in this study would be more metalinguistically aware of interlanguage rules regulating their use of adverb placement and question formation in English, than were the younger (11-12 year-old) learners studied in Lightbown and Spada (2000), was also confirmed.

The learners in this study provided far more explicit metalinguistic explanations for question formation and adverb placement than those tested in Lightbown and Spada (2000). Furthermore, they were more capable of making explicit reference to L1 and L2 rules that accounted for their L2 knowledge of question formation and adverb placement. It will be recalled that the less proficient students tested by Lightbown and Spada (2000) provided very few metalinguistic judgements on the same target features, and that their judgements only included reference to L1 interlanguage rules. The students in this study, however, provided many more explicit metalinguistic explanations about the target features. Moreover, these tended to be consistent with the L2 rather than the L1 IL rule. That is, their metalinguistic explanations often indicated an acceptance of the target L2 rule permitting noun-subject inversion in English while pointing to other perceived problems in the test items. This is further evidence that the students in this study were more advanced and more metalinguistically aware than those in Lightbown and Spada (2000) and also that they had acquired a solid grasp of the grammaticality of noun-subject inversion in English.

What is particularly interesting is that the Secondary II students seemed to be more capable of providing metalinguistic explanations to account for their L2 performance than the two other groups. As indicated above, these were the students who had received explicit instruction on question formation and negative sentence construction (and other linguistic features) the year before when they were in Secondary I. Such explicit teaching (5 to 10 hours per term depending on the group) included contrastive metalinguistic analysis as well as some additional practice via communicative language activities. During the first school term, the students were taught the simple present as used with both the auxiliaries “to be” and “to do” in relation to the present progressive tense. During the second term, the students reviewed the above-cited features in addition to receiving additional explicit teaching and communicative practice on the

use of the simple past in relation to the present perfect tense in English. The third term was devoted to a revision of the previously cited material in addition to explicit teaching of the future tense as used with both the auxiliaries “will” and “going to.” During the last term of the school year, the students briefly reviewed what they had been taught during previous terms, and were then briefly introduced to the use of some modal auxiliaries (“can,” “could,” “should,” “would,” “may” and “might”).

Even though, the exact number of hours devoted to the explicit teaching of question formation cannot be precisely assessed, the students received between 20 to 25 hours of explicit instruction on sentence formation in declarative, negative and interrogative sentences throughout the entire academic year. Furthermore, each term they took a grammar exam that included all the materials that had been taught in previous terms. Thus, the more developed metalinguistic ability of the Secondary II learners is likely related to this extended explicit form-focussed instruction.

The students in this study were also more metalinguistically aware of L2 adverb placement in English than were the students tested by Lightbown and Spada (2000). Unlike the Lightbown and Spada (2000) students, the students in the present study provided a considerable number of metalinguistic judgements to account for their L2 performance. Again, most of the changes and explanations were consistent with the L2 rather than with the L1 IL rule. That is, the students tended to correct and/or comment on other features of the language suggesting they accepted the target language rule for adverb placement.

Interestingly, the more advanced the students, the less likely they were to accept the two SVAO ungrammatical sentences. The Secondary II students did not perform as well as the more advanced Secondary IV students who were more aware of correct adverb placement in English. This may be explained by the fact that the Secondary II students were not taught correct adverb placement when they were in Secondary I the year before.

Unlike the students observed in Lightbown and Spada (2000), the students in this study showed that they were capable of considerably more metalinguistic reflection. One factor that may have contributed to this is their more advanced knowledge of English. The provision of some explicit instruction on question formation to the Secondary II students, prior to the beginning of this study, may have also contributed to their greater

level of metalinguistic performance. This would be consistent with the findings of White and Ranta (1999) who reported high levels of metalinguistic awareness on the part of younger learners (i.e. the same age as those reported in Lightbown & Spada, 2000) on both written and oral production measures. It will be recalled that the learners in the White and Ranta study received explicit instruction that included a contrastive component. This would lend support to Lightbown and Spada's (2000) hypothesis that explicit contrastive metalinguistic instruction might be necessary to help learners overcome L1 influence and progress into more advanced stages of development.

The fact that the students in the present study and in the Lightbown and Spada (2000) study seemed to rely more heavily on the L1 rule for "yes-no" questions than for "wh" questions also points to a potential influence of instruction. As previously stated, in general, L2 teachers tend to focus more on "yes-no" than on "wh" questions in their teaching because the former are less complex. Due to the fact that only a limited amount of time can be devoted to the provision of explicit instruction within ESL communicative classrooms, L2 teachers (at the Secondary I level) usually tend to focus first on the teaching of both the simple present tense and a review of the personal pronouns (in the both the nominative and objective cases) in English. For this reason, the majority of the examples presented to the students deal with "yes / no" questions in which pronoun subjects and auxiliary verbs are inverted. Only later, when the students become more proficient with "yes / no" questions, are they introduced to the more structurally complex "wh" questions in the simple present as well as in other English verb tenses through examples including both sentences in which pronoun and noun subjects and auxiliary verbs are inverted. As a consequence, students tend to receive more practice for "yes / no" questions in which pronoun subject and auxiliary verbs are inverted (grammatical in both French and English), than for "yes / no" questions in which noun subjects and auxiliary verbs are inverted (grammatical in English but ungrammatical in French). Thus, the fact that the students were already familiar with pronoun-subject inversion in their first language combined with the provision of more explicit instruction on that feature in the L2, seems like a reasonable explanation for the overall higher performance of the learners for "yes / no" questions: The differences between "yes-no" and "wh" questions was not anticipated at the outset of this study and deserves further investigation.

The results from this study are also consistent with findings in L1 acquisition research. The metalinguistic profile of the less advanced students from both this study and Lightbown and Spada (2000) is similar to the behavior of very young children learning English as their first language. It will be recalled that de Villiers and de Villiers (1972, 1974), Gleitman, Gleitman and Shipley (1972), and Hakes (1980) observed that very young children (age 2 to 5) seemed to be relatively insensitive to word order rules and that they tended to consider mainly the semantic aspect in sentences. More specifically, the children tended to focus mostly on the meaning of the words rather than on the correctness of word order itself. As a result, they tended to accept only sentences that they thought they understood and to reject sentences they found incomprehensible whether they were grammatical or not. Like young L1 learners, the learners in this study and those in Lightbown and Spada (2000) also appeared to focus on the semantic rather than the syntactic aspect of sentences. They tended to accept mainly sentences that they thought they understood (i.e. for which there was a structural equivalent in their L1) and to often reject grammatical sentences merely because they found them incomprehensible (i.e. for which there was no equivalent in their L1). As they become more proficient in the target language, both L1 and L2 learners are increasingly able to attend to syntactic aspects of the language (i.e. word order).

### Hypothesis 3

Hypothesis #3, that learners would more often correctly answer grammatical questions for which there exists a similar linguistic structure in French, was also supported by the findings from this study. The majority of the students were more accurate in their grammaticality judgements for questions that closely paralleled French language structures than they were for questions that did not parallel French structures. As indicated in Chapter 4, six of the 10 grammatical questions added to the Combined Task had pronouns as subjects and the other four had nouns. The results indicated that the students were more likely to accept these questions based on their similarity to French structures rather than on the basis of whether they had nouns or pronouns as subjects. That is, they tended to textually translate into French the English sentences that they were asked to judge, a learning strategy that is often used by both child and adult learners.

The way in which students in the Lightbown and Spada (2000) and in the present study responded to correctly inverted questions that did not parallel French structures lends further support to this observation. A direct comparison with Lightbown and Spada (2000) is possible for six of these questions. The students in this study did not perform as well for these questions (74% for all 3 groups combined) as they did for the 10 added questions paralleling French structures (84%). This difference again suggests that the learners were constrained by transfer from French. The students in the Lightbown and Spada (2000) study obtained a much lower score (60%) for the same six questions.

The addition of ten grammatically correct questions that closely parallel French language structures is an important feature of this study and represents an expansion of the design of Lightbown and Spada (2000). The inclusion of these items enabled a more precise test of the hypothesis that the learners' performance was constrained by their L1. The fact that the learners in this study were more likely to accept sentences that "looked more like French than English," strongly suggests that transfer from the L1 is the most likely explanation for their performance.

#### Hypothesis 4

The last hypothesis -- that the profile of the learners' responses on the Explanation and the Correction Tasks and the Combined Task for both populations would not coincide with the hierarchy of developmental stages in English Questions proposed by Pienemann, Johnson and Brindley (1988) and adapted in Spada and Lightbown (1999), is also supported by present findings.

Two important caveats remain in order however. First, no conclusions can be made about the interaction between developmental processes and L1 transfer because the students' developmental stages were not determined at the outset of this study. Second, Pienemann's developmental sequence was developed from oral interview data, whereas the data from this study were drawn from formal paper-and-pencil tasks that do not necessarily reflect the way students might have performed on more spontaneous oral tasks. Nonetheless, the findings suggest that developmental stages played a minor role in the students' grammaticality judgements of the questions.

The six common questions that did not parallel French structures in Lightbown and Spada (2000) and this study, were at the most advanced stage (stage 5) on Pienemann's developmental scale. However, the levels of acceptance for the students varied greatly from question to question ranging from 45% to 90%. Such percentage discrepancies suggest that the students seem to have been more influenced by interlanguage rules brought over from their L1 in their judgements of the grammaticality of stage-5 questions in English rather than by stage of development.

A similar pattern was observed for the 10 correctly inverted questions paralleling French structures that were added to the Combined Task in this study. These questions span three of Pienemann's developmental stages and the students' acceptance of them varies greatly. Although the students tended to accept the less advanced questions more readily than more advanced questions, a closer look at this finding also shows that this tendency seems to have been based more on similarities to French structures rather than in terms of a developmental sequence of question formation.

These results are compatible with some of the findings from an earlier study that investigated the interaction between "developmental readiness" and instruction (Spada & Lightbown, 1999). Results on an oral task revealed that learners who were "more developmentally ready" (i.e. stage 3 learners) did not progress to the next more advanced question stage more readily than learners who were "less developmentally ready" (i.e. stage 2 learners). There was evidence, however, that some of the students had some knowledge of more advanced question stages (i.e. stages 4 and 5) as measured on paper and pencil tasks. This knowledge nevertheless appeared to be constrained by the same French question formation rule investigated in this study. The apparent contradiction between the performance on the oral and written tasks led Spada and Lightbown (1999) to argue that the influence of the L1 rule appeared to block the learners' developmental progress, thus preventing them from moving to stages 4 or 5 as was expected. Consequently, it was hypothesized that explicit instruction and corrective feedback that is timed to coincide with learners' developmental "readiness" might be necessary to help learners overcome L1 transfer problems and move into more advanced developmental question stages (Lightbown & Spada, 2000; Spada & Lightbown, 1999). The present study lends some indirect support for this hypothesis.

### Limitations of the study

Only so much can be accomplished in the course of any study. Ideal research conditions are hard to come by and, as with all, this study has limitations. First, it would have been interesting to compare the ways in which the students performed not only on formal paper-and-pencil grammaticality judgement and explanation tasks, as used in this study, but also on oral tasks. Grammaticality judgement / explanation tasks only tap a limited range of L2 learners' overall language proficiency. Using both paper and pencil as well as oral performance tasks, which would permit more extensive probing of the learners' metalinguistic awareness in a less formal manner, might have permitted us to explore other explanations for the learners' performance.

Second, it would have been useful to have had more information about the precise amount of explicit instruction that was provided to the Sec. I and IV groups of students prior to the beginning of this study. This would have strengthened the claim that explicit instruction brought about increased metalinguistic awareness on the part of the learners. Unfortunately, it was only possible to obtain this information for the Secondary II learners.

Third, it may be argued that a larger sample of items for pronoun subject inversion in questions should have been included in this study that comprised only 2 (one grammatical, the other ungrammatical). The same could be said for the limited number of adverb items (only 3). However, results for both features are consistent with those of other studies with francophone learners in which many more items for both target features were tested and that yielded similar results (e.g. Lightbown & Spada, 2000; Spada & Lightbown, 1993; White et al., 1991; Zobl, 1979). There is no reason to assume that the participants in this study would behave differently.

Lastly, if the students' developmental stages in question formation had been determined at the outset of this study, it would have been possible to explore the ways in which L1 influence and stage of development interacted to influence the learners' performance. Such a design would have also permitted a more precise investigation of the contribution of each factor to the interaction. This might have lent further support to the finding that influence from French may have constrained the students to a greater extent than developmental "readiness."

### Implications and Future Directions

The results of this study suggest that it is important not to underestimate the school-aged learners' ability to reflect metalinguistically, even for students learning English in regular ESL programs in Quebec, a population that tends to be generally overlooked by researchers. This is probably due to the widespread assumption that the language ability of these students is not sufficiently developed for them to be able to reflect metalinguistically on their L2 performance. This might also be due to the low-esteem in which regular programs in Quebec are generally held because of the very limited number of hours (an average of 100 to 110 hours of ESL instruction per year) they allot to the teaching of English. Further classroom research should be conducted with this population of learners who represent the great majority of ESL learners in Quebec. They are also potentially the ones who might benefit the most from SLA research findings and the implications these have for ESL pedagogy.

It would also be useful to investigate other language features known to be problematic for francophone learners. These should address verb tenses, in general, and not only "questions" but also declarative and negative sentences. Other difficulties L2 learners experience should also be examined: 1) the simple present (especially in the third person of the singular) in relation to the present progressive tense; 2) the simple past in relation to the present perfect and the past perfect tenses; 3) the future simple and the use of the auxiliary "will" in relation to the future tense with "going to"; 4) personal pronouns in the nominative and subjective cases especially in the third person of the singular; and 5) the use of definite and indefinite articles in English. Furthermore, research items should more often be directly drawn from the official curriculum taught by ESL teachers in schools. This would permit researchers to more closely investigate what is actually being taught in ESL classrooms. Such a contribution could go a long way to narrowing the present gap between research, pedagogy and teaching.

The findings moreover suggest that more research is needed on "yes-no," and "wh" questions, as well as on questions in the present progressive, for which there is no structural equivalent in French. This might help shed new light on the respective roles of transfer and developmental readiness in the interlanguage of francophone learners of English.

The surprisingly high metalinguistic performance of the Secondary II students in this study moreover suggests that researchers should pay greater attention to the amount of explicit instruction (including contrastive analysis) to be provided to L2 learners, as well as the manner in which this should be imparted. It will be recalled that the Secondary II students were taught question formation on an ongoing basis and that they had to undergo cumulative reviews on the target features throughout the academic year. This represents an average of 20 to 25 hours of explicit teaching solely for question formation depending on the group. The amount of explicit instruction as well the way in which it was provided appears to be a likely explanation for the higher metalinguistic performance of the Secondary II learners.

A common complaint from high school ESL teachers in Quebec is that because there is just so little time allotted to English instruction, it is better to focus on the communicative rather than on the formal aspects of language. Results from this study suggest that more explicit instruction might be beneficial. The pedagogical implications for ESL pedagogy in Quebec is that a balance has to be found between time devoted to explicit instruction (including contrastive analysis) and time devoted to communicative practice in classrooms. Explicit instruction may be particularly appropriate for linguistic features (such as those investigated in this study) that are known to be problematic for school-aged francophone learners. Whereas there is ample room for new studies on metalinguistic awareness and explicit instruction in SLA, there is also mounting evidence from previous research that calls for a thorough revision of communicative practice in ESL classrooms in Quebec. A pedagogical shift is in order, and it points in the direction of form-focussed instruction.

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**Appendix A**  
**Student Consent Form**

**STUDENT CONSENT FORM**

Dear student:

Should you agree to participate in this study, total confidentiality and anonymity will be ensured. The results of your tests will be used for research purposes only and not as part of your evaluation. No reports or publications of the findings will use any individual student's name or contain any information by which a particular student may be identified. Also, it is important to inform you that you are under no obligation to participate or may decide to withdraw from the study at any time. A report of the results will be made available to the school, to your parents, and to you as soon as they are available.

**Student's name:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

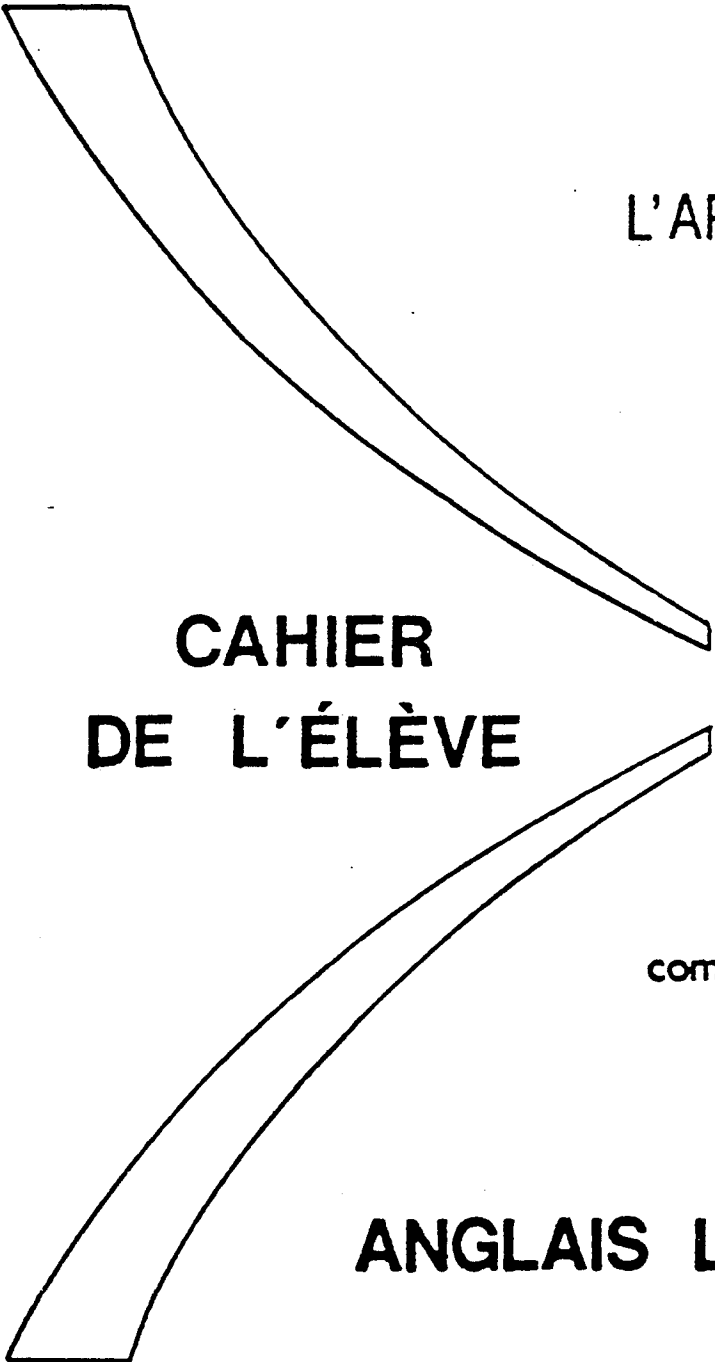
\_\_\_\_\_ I grant permission to Christine Lépine to use the results of my tests in her research project.

\_\_\_\_\_ I do NOT grant permission to Christine Lépine to use the results of my tests in her research project.

\_\_\_\_\_ I am uncertain and would like more information before making my decision.

**N.B.** This study will be conducted by Christine Lépine, a teacher of English as a second language at the International School of Montreal and an M.A. student in the department of Education in Second Languages at McGill University. Ms. Lépine works under the supervision of Dr. Nina Spada, Professor in the Department of Education in Second Languages at McGill University.

Appendix B  
Excerpts from the MEQ Test (53 items)



# TESTS RELATIFS À L'APPRENTISSAGE SCOLAIRE ET PARASCOLAIRE

**CAHIER  
DE L'ÉLÈVE**

niveau  
secondaire III

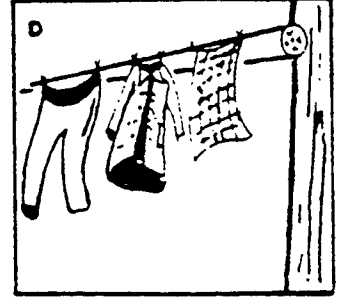
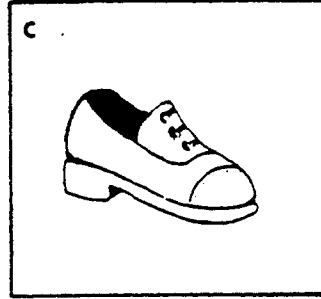
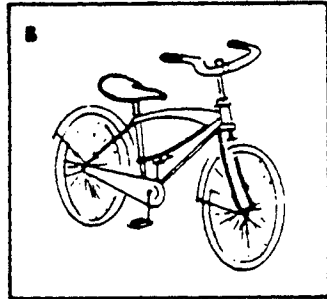
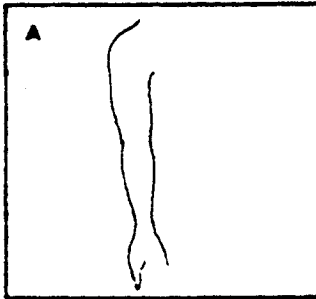
compréhension de la langue orale

(Durée de l'enregistrement : 35 minutes)

**ANGLAIS LANGUE SECONDE**

DIRECTIVES: Indique quelle illustration convient le mieux à la phrase que tu auras entendue.

Exemple:.....

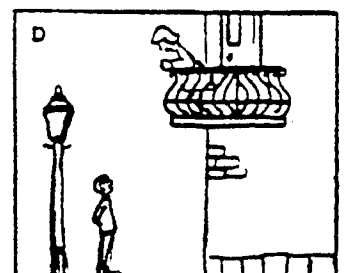
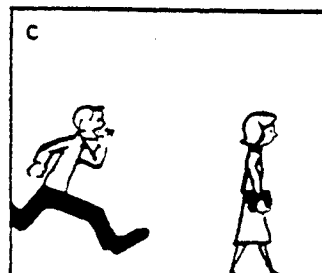
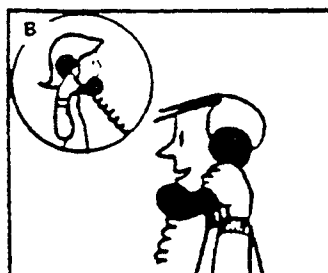
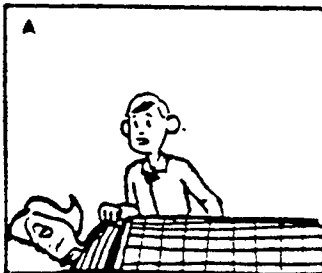


La réponse est:

A	B	C	D	E
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Nous commençons.

1. ....



## ENGLISH TEST - FEUILLE DE RÉPONSES

Nom de l'élève \_\_\_\_\_

École \_\_\_\_\_

Date \_\_\_\_\_

Professeur \_\_\_\_\_

1. A B C D
2. A B C D
3. A B C D
4. A B C D
5. A B C D
6. A B C D
7. A B C D
8. A B C D
9. A B C D
10. A B C D
11. A B C D
12. A B C D
13. A B C D
14. A B C D
15. A B C D
16. A B C D
17. A B C D
18. A B C D
19. A B C D
20. A B C D
21. A B C D
22. A B C D
23. A B C D
24. A B C D
25. A B C D

26. A B C D
27. A B C D
28. A B C D
29. A B C D
30. A B C D
31. A B C D
32. A B C D
33. A B C D
34. A B C D
35. A B C D
36. A B C D
37. A B C D
38. A B C D
39. A B C D
40. A B C D
41. A B C D
42. A B C D
43. A B C D
44. A B C D
45. A B C D
46. A B C D
47. A B C D
48. A B C D
49. A B C D
50. A B C D
51. A B C D
52. A B C D
53. A B C D

## Appendix C

Except from the Yes /No Vocabulary Recognition Test (Meara, 1992)

Name: \_\_\_\_\_

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

Teacher: \_\_\_\_\_

Read through the lists of words carefully.

For each word:

- if you know what it means, place a check mark ( ☒ ) beside the word.
- if you don't know what it means, or if you are not sure, leave the box blank.

**Do not guess.** Put a check mark beside the word **only** if you are sure you know the word in English. **Some of these words are not real English words.**

Here are some examples in French.

1. ( ☒ ) chat2. ( ☒ ) école

3. (     ) couqu岸

You know what **chat** means. You know what **école** means. You do not know what **couqu岸** means. **Couqu岸** looks like a French word, but it is not a real French word.

- |                    |                    |                   |
|--------------------|--------------------|-------------------|
| 1. ( ) wallage     | 21. ( ) condick    | 41. ( ) rather    |
| 2. ( ) foot        | 22. ( ) look after | 42. ( ) trust     |
| 3. ( ) hallett     | 23. ( ) hear       | 43. ( ) pocock    |
| 4. ( ) west        | 24. ( ) pencil     | 44. ( ) churchlow |
| 5. ( ) hospite     | 25. ( ) roof       | 45. ( ) group     |
| 6. ( ) insect      | 26. ( ) farm       | 46. ( ) open      |
| 7. ( ) prowtt      | 27. ( ) price      | 47. ( ) savourite |
| 8. ( ) polythetic  | 28. ( ) garrisotte | 48. ( ) birth     |
| 9. ( ) share       | 29. ( ) roy        | 49. ( ) school    |
| 10. ( ) come       | 30. ( ) hold       | 50. ( ) sound     |
| 11. ( ) difficulty | 31. ( ) turn       | 51. ( ) mountain  |
| 12. ( ) edge       | 32. ( ) smell      | 52. ( ) haime     |
| 13. ( ) andow      | 33. ( ) gamage     | 53. ( ) taste     |
| 14. ( ) cruel      | 34. ( ) child      | 54. ( ) cat       |
| 15. ( ) divide     | 35. ( ) doubtly    | 55. ( ) thin      |
| 16. ( ) own        | 36. ( ) expensive  | 56. ( ) sloggett  |
| 17. ( ) strange    | 37. ( ) alone      | 57. ( ) kitchen   |
| 18. ( ) jarvis     | 38. ( ) back       | 58. ( ) pegler    |
| 19. ( ) board      | 39. ( ) meal       | 59. ( ) dunster   |
| 20. ( ) bamber     | 40. ( ) live       | 60. ( ) quality   |

**Appendix D**  
**Excerpts from the Combined Task**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Consignes:

Regarde bien ces phrases. Certaines sont correctes. D'autres contiennent des fautes.

Attention:

Les fautes ne sont pas dans l'orthographe.

Les fautes sont dans le choix des mots ou dans l'ordre des mots.

Il n'y a jamais plus qu'une faute dans une phrase.

- 1) Trouve les bonnes phrases et corrige les mauvaises.
- 2) Trouve les bonnes phrases et explique pourquoi les autres sont mauvaises.

Exemple: My brother said that she would give me a bicycle.

\_\_\_\_\_ La phrase est correcte.

X La phrase n'est pas correcte. La bonne phrase est:

1) My brother said that he would give me a bicycle.

X La phrase n'est pas correcte parce que:

2) Il faut dire he pour un garçon.

5. Can you speak Spanish?

\_\_\_\_\_ La phrase est correcte.

\_\_\_\_\_ La phrase n'est pas correcte. La bonne phrase est:

\_\_\_\_\_

\_\_\_\_\_ La phrase n'est pas correcte parce que:

\_\_\_\_\_

6. Why do children like McDonald's?

\_\_\_\_\_ La phrase est correcte.

\_\_\_\_\_ La phrase n'est pas correcte. La bonne phrase est:

\_\_\_\_\_

\_\_\_\_\_ La phrase n'est pas correcte parce que:

\_\_\_\_\_

15. John does quickly his homework.

\_\_\_\_\_ La phrase est correcte.

\_\_\_\_\_ La phrase n'est pas correcte. La bonne phrase est:

\_\_\_\_\_

\_\_\_\_\_ La phrase n'est pas correcte parce que:

\_\_\_\_\_

Appendix E  
Lightbown and Spada (2000) Study: Results

Table 1

*Group Comparisons for MEQ and Yes/No Vocabulary Recognition Tests*

	Group	<i>n</i>	<i>M</i> (%)	<i>s.d.</i>	<i>t</i>	<i>p</i>
MEQ test	Explanation	150	77.05	12.47	.17	ns
	Correction	145	76.79	13.67		
Yes/No test	Explanation	144	70.00	15.00	-1.82	ns
	Correction	142	73.10	14.00		

Table 2

*Overall Percentage of Acceptance of Grammatically Correct and Incorrect Items on the Explanation and Correction Tasks*

QUESTIONS	Correct	Incorrect
	Inverted questions	Non-inverted questions
Explanation Task	62	80
Correction Task	61	78

ADVERB	Correct	Incorrect
	SAVO	SVAO
Explanation Task	76	79
Correction Task	76	74

Table 3

*Percentage Acceptance of Sentences with SAVO and SVAO*

	Explanation Task	Correction Task
Lucy always watches TV after school.	74	71
The doctor always washes her hands. *		81
Alexandra cleans sometimes her room.	69	66
John does quickly his homework.	84	82

\*Correction Task only

Table 4

*Percentage Acceptance of Grammatical Questions with Noun and Pronoun Subjects on the Explanation and Correction Tasks*

	Explanation Task	Correction Task
Pronouns: Inversion		
Do they like pepperoni pizza?	90	90
Can they work on the computer?*		90
Nouns: Inversion		
Why do children like McDonald's?	54	48
What is your brother doing?	51	46
Do the children want to play?	66	65
When is my mother coming home?	51	39
Can the children speak Spanish?	61	51
Where are your parents working?*		56

\*Correction Task only

Table 5

*Percentage Acceptance of Ungrammatical Questions with Noun and Pronoun Subjects on the Explanation and Correction Tasks*

	Explanation Task	Correction Task
Pronouns: non-inversion		
What we can watch on TV tonight?	62	62
When you are going to eat breakfast?*		61
Why he's at home today?*		82#
Nouns: non-inversion		
Why fish can live in water?	91	92
Where the teacher is going?	77	87
What the chef likes to cook?	89	86

\*Correction Task only

# This item yielded results which were perplexing because they violated the students' apparent preference for inversion with pronoun subjects. The reason for this is not clear and merits further investigation.

Table 6

*Changes Made by Students Which Are Consistent with the Implicit Interlanguage Rule  
(Inversion with Pronoun Subjects and Non-inversion with Noun Subjects)*

Correction Task	Number of students (out of 145) who made "corrections"	Percentage of "corrections" consistent with interlanguage rule
<b>Inversion with Pronoun Subjects</b>		
Do they like pepperoni pizza?	48	85#
*What we can watch on TV tonight?	70	76
*When you are going to eat breakfast?	84	80
*Why he's at home today?	26	35
<b>Non-inversion with Noun Subjects</b>		
Why do children like McDonald's?	88	77
What is your brother doing?	86	80
Do the children want to play?	64	64
When is my mother coming home?	92	87
Can the children speak Spanish?	83	71
Where are your parents working?	73	80
*Why fish can live in water?	61	85
*Where the teacher is going?	44	57
*What the chef likes to cook?	38	50

#When students made changes to this item, they most often changed "they" to another pronoun, usually "you".

*Note.* Items preceded by an asterisk were presented on the tasks in the ungrammatical form.

Appendix F  
Pienemann's Developmental Scale for Questions

---

**STAGE 1**

Single words or fragments

A spot on the dog?

A ball or a shoe?

**STAGE 2**

SVO with rising intonation

A boy throw the ball?

Two children ride a bicycle?

**STAGE 3<sup>a</sup>**

Fronting

Do-fronting

Do the boy is beside the bus?

Do you have three astronaut?

Wh-fronting

What the boy is throwing?

Where the children are standing?

Other fronting

Is the boy is beside the bus?

**STAGE 4**

Wh- with copula BE

Where is the ball?

Where is the space ship?

Yes/No questions with aux inversion

Is the boy beside the garbage can?

Is there a dog on the bus?

**STAGE 5**

Wh- with auxiliary second

What is the boy throwing?

How do you say "lancer"?

---

<sup>a</sup>Stage 3 questions can be grammatical or ungrammatical. They are categorized by their word order, not their grammaticality or ungrammaticality.

## Appendix G

### Excerpts from Lightbown and Spada's (2000) Correction Task

Name: \_\_\_\_\_ Teacher: \_\_\_\_\_

Consignes:

Regarde bien ces phrases. Certaines sont correctes. D'autres contiennent des fautes. Trouve les bonnes phrases et corrige les mauvaises.

Attention:

Les fautes ne sont pas dans l'orthographe.

Les fautes sont dans le choix des mots ou dans l'ordre des mots.

Il n'y a jamais plus qu'une faute dans une phrase.

Exemple: My brother said that she would give me a bicycle.

\_\_\_\_\_ La phrase est correcte.

X La phrase n'est pas correcte. La bonne phrase est:

*My brother said that he would give me a bicycle.*

5. Why fish can live in water?

\_\_\_\_\_ La phrase est correcte.

\_\_\_\_\_ La phrase n'est pas correcte. La bonne phrase est:

\_\_\_\_\_

29. What we can watch on TV tonight?

\_\_\_\_\_ La phrase est correcte.

\_\_\_\_\_ La phrase n'est pas correcte. La bonne phrase est:

\_\_\_\_\_

31. Alexandra cleans sometimes her room.

\_\_\_\_\_ La phrase est correcte.

\_\_\_\_\_ La phrase n'est pas correcte. La bonne phrase est:

\_\_\_\_\_

## Appendix H

Excerpts from Lightbown and Spada's (2000) Explanation Task

Name: \_\_\_\_\_

Teacher: \_\_\_\_\_

## Consignes:

Regarde bien ces phrases. Certaines sont correctes. D'autres contiennent des fautes. Trouve les bonnes phrases et explique pourquoi les autres sont mauvaises.

## Attention:

Les fautes ne sont pas dans l'orthographe.

Les fautes sont dans le choix des mots ou dans l'ordre des mots.

Il n'y a jamais plus qu'une faute dans une phrase.

Exemple: My brother said that she would give me a bicycle.

\_\_\_\_\_ La phrase est correcte.

X La phrase n'est pas correcte parce que:

Il faut dire "he" pour un garçon.

2. Do they like pepperoni pizza?

\_\_\_\_\_ La phrase est correcte.

\_\_\_\_\_ La phrase n'est pas correcte parce que:

\_\_\_\_\_

7. What is your brother doing?

\_\_\_\_\_ La phrase est correcte.

\_\_\_\_\_ La phrase n'est pas correcte parce que:

\_\_\_\_\_

24. Lucy always watches television after school.

\_\_\_\_\_ La phrase est correcte.

\_\_\_\_\_ La phrase n'est pas correcte parce que:

\_\_\_\_\_