THE RELATIONSHIP BETWEEN ENGLISH AS A SECOND LANGUAGE

LEARNERS' AWARENESS OF SYNTACTIC RELATIONSHIPS

AND READING COMPREHENSION

by

Ratana Hemniti

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Name: Ratana Hemniti

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Examining Committee

     Chairperson: T. Kazepides

                           J. R. Kendall
                           Senior Supervisor

                           K. Toohey
                           Assistant Professor

                           R. J. Anthony /
                           Sessional Lecturer
                           Faculty of Education
                           University of British Columbia
                           External Examiner

                                   Date approved ____ March 22, 1985 ____

Title of Thesis/Project/Extended Essay

THE RELATIONSHIP BETWEEN ESL LEARNERS' AWARENESS

OF SYNTACTIC RELATIONSHIPS AND READING COMPREHENSION

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_____

Author:

      (signature)

    Ratana Hemniti_____

       (name)

    22 March, 1985_____

       (date)

ABSTRACT

The present study examined the relationship between explicit
analysis of syntactic relationships in sentences and adult
(English as a second language (ESL) learners' reading
comprehension. Subjects included 127 immigrants from different
language backgrounds and different English language exposure
times. Subjects were enrolled in advanced classes in the English
Language Training Program at Vancouver Community College,
Vancouver, British Comlumbia. Subjects' syntactic analysis
ability was measured by the Sentence Elements Test(SET), a test
designed by the present researcher after O'Donnell's Structural
Test. Reading comprehension was measured by the Gates-MacGinitie
Reading Test, a commercial, standardized test. A positive
relationship of only .2 between syntactic analysis ability and
reading comprehension was found. Further, a comparison of ESL'
learners' and native speakers' scores on the SET revealed no
differences. These results demonstrate that ESL learners'
syntactic awareness is at least equal to that of native speakers.
Thus, differences in reading ability must be attributed to
factors other than syntactic awareness . No evidence was found
to support or reject the teaching of explicit analysis of
syntactic relationships in sentences to ESL learners.

A DEDICATION

To my family in Thailand
who have waited so long
for me to finish.

And

To my dear Bak
whose love I cherish.

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CHAPTER 1

INTRODUCTION

Reading is considered by many to be an extremely important activity in the language classroom. Rivers (1981) says that reading is not only "a source of information and a pleasurable activity" but also "a means of consolidating and extending one's knowledge of the language" (p.529). When second language (L2) learners read, they frequently encounter great difficulty in comprehending written text. Some researchers have suggested that to be able to cope with the comprehension barrier, L2 learners must be able to deal analytically and intelligently with all aspects of the language.

Many theorists claim that L2 learners cannot understand written sentences unless they possess considerable L2 syntactic awareness. According to Rivers (1981), L2 learners

Must be able to recognize structural clues: the indicators of words classes (or parts of speech) and of persons and tenses of the verb; the words that introduce phrases and clauses and the particular modifications of meaning these indicate; the adverbs and adverbial expressions which limit the action in time, place and manner; and ... the indicators of interrogation and

negation.   (p. 266)

The present study was intended to assess River's claim as it relates to adult ESL learners. Specifically, this study represents an attempt to determine if syntactic, or structural, knowledge facilitates ESL learners' reading comprehension.

Catford (1971) claims that, when they read, L2 learners must be able to recognize the differences between L1 and L2 sentence structures. This claim seems plausible in view of Catford's observation that the basic sentence patterns (active declaratives) may vary across languages, from SVO in English to, SOV in Hindi and Japanese, and to VSO in Arabic (S = Subject, V = Verb, O = Object). In addition, English lacks an extensive inflection system(e.g. case inflection) and, therefore, relies heavily on word order for understanding. Syntactic awareness therefore may aid the ESL learners in reading comprehension. As Saville-Troike (1979) explains, the analysis of simple sentence patterns (e.g. English SVO)

> will help,at least to the extent of discovering how a
> particular unit is recognized as the subject, how it
> relates to the rest of the sentence, and where it occurs
> in normal sentence order (p.31).

Similarly, Pierce (1975) believes that sentence pattern exercises and subject recognition drills help ESL advanced

readers process "textual material prepared for native speakers" (p. 269). According to Pierce, such an approach should help ESL learners interpret complicated English sentences. Isohim (1979) adds that the understanding of syntactic structures is a prerequisite for "total paragraph or passage comprehension" (p.187).

Saville-Troike (1979) believes that reading should involve the recognition of words in groups rather than the recognition of words as individual items. Thus,

A good reader is by no means limited to a string of words as they pass in front of his nose. His eyes will jump back and forth, taking in just enough cues to anticipate what's coming next.... His eyes will check back frequently in a complex sentence in which much has been inserted between the begining of the subject and the verb, what linguists call "left embedding". (p. 27)

In addition, Eskey (1979), Rivers (1983), and Clarke and Siberstein (1979) suggest that readers who read word by word will not develop the ability to read complex sentences. Eskey also maintains that advanced learners probably favor syntactic analysis, whereas beginning learners probably favor lexical analysis. To enhance readers' processing strategies, Rivers recommends that students practise syntactic analysis because the operations occurring in the analysis involve decisions that are

"intimately connected with the contextual meaning" (p. 54).

Like Rivers, Wilson (1973) believes that structural analysis can facilitate L2 learners' comprehension of written sentences. According to Wilson, structural clues can help learners understand a sentence even if they are unfamiliar with the lexical items comprising the sentence. For example, given the sentence below,

Most people like durians and ramputan which thrive in Thailand.

and the awareness that relative clauses (e.g. "which thrive in Thailand"), modify immediately preceeding nouns("durians" and "ramputan"), ESL learners may be able to determine that "durians" and "ramputan" are grown in Thailand--even if the learners do not know the meanings of "thrive," "durians," and "ramputan".   •

To enhance ESL learners' conscious awareness of syntactic structures, Berman (1975) recommends a technique called "analytic syntax". This technique employs "structural paraphrase, where phrases and whole sentences are reworded and juggled about with a minimum of change in lexical context and hence in lexical load" (p. 180). In Berman's opinion, "analytic syntax" encourages ESL learners to use their syntactic knowledge as a means of disambiguating complex English sentences.

The rationale behind Berman's theory is similar to Pierce's (1975) and Rinne's (1967) notion that one's ability to recognize syntactic patterns in complex sentences aids reading comprehension. Pierce claims that certain English syntactic patterns (e.g., S-V-Adv.) and functional relationships (e.g., relation of subject to main verb) occur with great frequency in English textbooks. Thus, by studying features of these patterns and relationships, students will come to "expect" normal patterns, despite the structural complexities within a given sentence. In this way, "internal complexities are seen as expansions of expectancy" (Pierce, 1975, p.269). However, when Rinne (1967) devised a pattern awareness program which was used to teach students who had problems recognizing relationships between words or groups of words in written sentences, results revealed no improvement between pre-test and post-test reading scores.

Despite Rinne's findings, a number of theoretical (Allen, 1972; and Eskey, 1979) and empirical (Wisher, 1976, Isakson, 1979, Mason and Kendall, 1979, O'Shea, 1983) works in L1 learning suggest that syntactic awareness plays an integral role in reading comprehension. Allen (1964; 1972) demonstrates how syntactic relationships signal structural functions, which, in turn, facilitate reading comprehension. For example, the two sentences below may seem similar on the surface.

1. I took the book from the table.

2. I took the book on the table.

However, when learners analyse these syntactic structures, they will find that they convey different underlying meanings. In the first sentence, "from the table" is a prepositional phrase functioning as a modifier of the verb "took". In the second sentence, "on the table" functions as a relative clause modifying the noun phrase "the book" ("relative deletion" of "that" and "was" having taken place at the underlying level).

Empirically, the awareness of syntactic relationships between sentence elements in reading is supported by L1 study conducted by O'Donnell (1961) (see Chapter 2). Results showed that native English-speakers' awareness of syntactic relationships is related to their reading ability. This study suggests that similar study should be done using ESL learners.

The subjects of the present study included adult ESL learners from Vancouver, B.C.. Their awareness of syntactic relationships between sentence elements was measured by the Sentence Elements Test; their reading comprehension ability was measured by the Gates MacGinitie Reading Test. The relationships among the scores of these two tests and certain demographic characteristics were examined. Further, the subjects' Sentence Elements Test scores were compared to those of adult native speakers of English. The purpose of this comparison was to determine if either group evidenced superior syntactic analysis abilities.

Because the present study was correlational in nature, cause and effect relationships between the variables could not be determined. In addition, the study did not take into consideration the intelligence, attitudes, or cognitive styles of the students. Thus, the study attempted to determine only the extent of the subjects' syntactic awareness -- only one aspect of the knowledge that learners bring to the task of reading.

For purposes of clarity, those terms which appear most frequently in the present study are defined below.

1.   Syntax: "pattern or structure of word order in sentences, clauses, and phrases" (Harris and Hodges, 1981, p. 321).

2.   Syntactic/Structural: refering to "the grammatical relations and functions of sentence components" (Harris and Hodges, 1981, p. 321).

3.   Syntactic/Structural knowledge: knowledge of formal (e.g., transformational, pedagogical) syntactic rules.

4.   Syntactic/Structural awareness: knowledge of syntactic relationships irrespective of formal rule knowledge.

5.   (Explicit) syntactic/structural analysis: explicit use of syntactic/structural awareness in analysing sentence structures.

The present study was designed to test the following hypotheses:

1. There is a strong relationship between reading comprehension and syntactic awareness in adult ESL learners in Vancouver.

2. There is a strong relationship between syntactic awareness ability and the following demographic variables: age; sex; first language; length of time studying English in the learners' home countries; length of time studying English in Canada; and length of time living in Canada.

3. There is a strong relationship between reading comprehension and the following demographic variables: age; sex; first language; length of time studying English in the learners' home countries; length of time studying English in Canada; and length of time living in Canada.

4. The use of explicit syntactic awareness may not be as crucial to native speakers' reading comprehension as it is to non-native speakers. According to B.C. Ministry of Education (1981), native speakers have naturally internalized syntactic rules during the process of their language development. Non-native speakers, on the other hand, it is believed, have to be

formally trained in syntactic awareness of the written text. As a result, non-native speakers may outperform native speakers in explicit syntactic awareness.

CHAPTER 2

LITERATURE REVIEW

Reading, Syntax, and L1 Learners

The relationship between reading comprehension and syntax has long been a focus of researchers in the area of first language learning. Among the empiricists and theorists who have investigated this particular subject, Storm (1955, 1956) and O'Donnell (1961) provide many useful conceptual and methodological insights.

Storm's (1955, 1956) investigation, the baseline of empirical research in this area, tested grammatical and syntactic knowledge relative to the reading ability of grade ten English students (N=327) from nine different states in the U.S. The test, "How Well Do You Read ?", included the following three subtests: reading comprehension, vocabulary, and grammar/syntax. The grammar/syntax section of the test required subjects to classify certain grammatical and syntactic elements in written prose and poetry passages. Analysis of the relationship between reading scores and grammar/syntax scores revealed correlations of .57 for public school subjects and .39 for private school subjects. When the same data were analysed relative to socioeconomic status,

correlations proved higher for students from low socioeconomic backgrounds. The study showed that males and females performed similarly on each of the subtests. However, certain methodological problems in the grammar/syntax subtest suggest that Storm's findings may have been affected by design factors. As can be seen in the example below, Storm's test relies heavily on grammatical terminology.

1   In the night time he was sharply aware of movement.

2 Ramrod insisted that the river current was faster at

3 night, they had waited for a full moon for the trip and

4 the river was as plain as by day. Lant liked the

5 swirling progress in the moon light between the dark

6 banks.

Sample Question 1) plain in line 4 is

    (1)   an indirect object

    (2)   an objective complement

    (3)   a predicate adjective

    (4)   a predicate noun

Sample Question 2) the group of words in lines 4

and 6, Lant through banks is a

    (1)   subordinate clause

    (2)   simple sentence

    (3)   compound sentence

    (4)   complex sentence

Learners may not be able to carry out Storm's test requirements if they fail to remember or understand exactly what a "clause", an "indirect object" and so on, are. That is, there is a considerable distinction between knowing pedagogical rules and being able to apply them to specific syntactic items, and not knowing pedagogical rules but being able to construct, produce, or complete specific syntactic items/structures successfully (See pp. 33-35 below, for further discussion of this point.). Consequently, language learners unfamiliar with the terminology and pedagogical rules employed in Storm's task may have been at a considerable disadvantage.

To avoid this problem, O'Donnell (1961) eliminated terminology from his Structural Test, which he used to study the relationship between English reading comprehension and English syntactic awareness. O'Donnell claimed that the ability to comprehend written materials was related to the ability to recognize structural relationships. Moreover, he predicted that there would be a higher correlation between reading comprehension and structural awareness than there would be between reading comprehension and structural knowledge (One should note that Storm, in effect, was testing this latter relationship.). O'Donnell based his premise on the following sets of principles derived from Whitehall's "Structural Essentials of English" (1956), Francis's "The Structure of American English" (1958), and

Hill's "Introduction to Linguistic Structures" (1958):

1. Language conveys two types of meaning -- lexical and structural.

2. Syntactic structure is signalled by word order, function words, inflections (suffixes), derivations (prefixes and suffixes), and prosody.

3. Sentences are composed of three major elements -- subject, predicate, and complement.

4. Syntax is composed of four types of structures -- modification, predication, complementation, and co-ordination.

5. Syntax involves cross-reference -- the connection to, or substitution for, preceding or following elements in the text.

The Structural Test consisted of fifty questions. Each question was comprised of a pattern sentence and three alternative sentences in which specific words were underlined. Subjects were required to select the alternative sentence in which the underlined words were related in the same manner as the underlined words in the pattern sentence. As can be seen in the example below, nonsense words are used in the three alternatives to replace nouns, verbs, adjectives, and adverbs. However, function words, inflections, and derivations accompany nonsense words to facilitate the identification of structural relationships in the underlined phrases.

(Pattern sentence) <u>Roosevelt</u> <u>fought</u> in the
Spanish-American war.

1. The three <u>berls</u> <u>ergled</u> in the same fostle.

2. She is the <u>alpest</u> <u>garsil</u> in the skaven.

3. Our <u>lalkoss</u> was <u>mandering</u> his barsties.

(p. 95)

Sentence one should be selected as the correct response
because "berls" is related to "ergled" (in sentence A) in the same
way that "Roosevelt" is related to "fought" (in the pattern
sentence). Thus, the Structural Test eliminates reference to
specific syntactic elements (e.g. pronoun, passive). Further, by
using nonsense words, the test eliminates semantic clues.
Consequently, the Structural Test relies on the reader's awareness
of the syntactic relationships inherent in sentences, rather than
relying on the reader's ability to define structures or use   .
semantic cues to determine syntactic relationships.

Of the fifty items tested, six items measured the reader's
ability to recognize the relationship between subject and
predicate, ten items measured the reader's ability to recognize
the relationship between verb and complement, four items measured
the reader's ability to recognize the relationship between
coordinate elements, twenty-four items measured the reader's
ability to recognize the relationship between various types of
modifiers and elements modified, and six items measured the

reader's ability to recognize the relationship between elements involved in cross-reference. Both types and occurrences of the structural units tested were based on frequency counts established by Stormzand and O'Shea (1924) for written English. The subjects' reading ability was measured by Test C1: Reading Comprehension (New Jersey Educational Testing Service, 1953), a standardized test consisting of vocabulary and reading comprehension subtests. Because O'Donnell wanted to compare the relative effects that the use of syntactic awareness and syntactic knowledge have on reading comprehension, subjects also were required to write the Iowa Grammar Information Test (Iowa Bureau of Educational Research and Service Extension Division, 1935), a standardized test that measures "retention" of previously taught grammatical information. Table 1, below, presents correlation coefficients obtained between the various test scores in O'Donnell's study.

TABLE 1

CORRELATION COEFFICIENTS OF THE TESTS IN O'DONNELL'S STUDY

	Reading Level	Reading Vocab.	Iowa Grammar	Structure
Reading Level	--			
Reading Vocab.	.76	--		
Iowa Grammar	.46	.90	--	
Structure	.44	.46	.75	--

(p. 84)

The high correlation (.75) between the Structure Test and the Iowa Grammar Test scores seems to imply that grammatical knowledge scores rise and fall coincident with grammatical awareness scores. As O'Donnell (1961) suggests:

While it is possible that teaching of conventional

grammar contributes to ability to recognize structural
relationships, it is also possible that ability to
recognize structural relationships enables the students
to learn grammatical rules and terminologies more
readily. (p.86)

In order to determine whether there was a higher correlation
between structural awareness and reading comprehension than there
was between structural knowledge and reading comprehension, a
partial correlation was used to control for subject' varying
degrees of vocabulary knowledge. After the vocabulary variables
were controlled, the correlation between the Structural Test score
and reading comprehension was .15, and the correlation between the
Iowa Grammar Test and reading comprehension was -.79. Thus, with
vocabulary knowledge held constant, the correlation between the
Structural Test and reading comprehension score, although small,,
was positive, whereas the correlation between the Grammar Test
scores and reading comprehension, although high, was negative.
That is, according to the latter correlation, reading
comprehension scores declined as syntactic knowledge scores rose,
and vice versa. On one hand these results suggest that syntactic
knowledge does not contribute significantly to improved reading
comprehension performance. On the other hand, the positive
relationship between structural awareness of English sentence
patterns and reading comprehension does not appear to be
sufficiently high to recommend the teaching of syntactic awareness

as an aid to reading comprehension in the first language.

Rinne (1967) also found similarly low correlations between syntactic awareness and reading comprehension when he administered his Pattern Awareness Test to adolescent native speakers of English. The Pattern Awareness Test (PAT) was designed to measure readers' recognition of four basic sentence patterns. The sentences below represent the four patterns which Rinne believed would assist learners in their recognition of overall sentence structures.

1. Noun   Linking Verb   Noun
    (John   is   a student.)

2. Noun   Linking verb   Adjective
    (John   is   sad.)   .

3. Noun   Transitive Verb   Noun
    (John   is carrying   his books.)

4. Noun   Verb
    (John   sings.)

Once the pretest was administered, a teacher trained the subjects to recognize function words, word form classes, and the four sentence patterns outlined by Rinne. After this period of

training, Rinne administered the post test. A sample question

follows.

The test takers were required to select alternative a, b, c,

or d which contained a similar sentence pattern to that of the

test item.

  a. John is a student.

  b. John is sad.

  c. John is shutting his book.

  d. John is leaving.

Sample questions:

  Test item no. 1. Mary is a girl.

  Test item no. 10. I mailed your letter.

  Test item no. 28. This test isn't very easy for me now.

Results revealed that scores did not vary between pretest and

post test. Rinne speculated that possible causes for the failure

of the training were the learners' low motivation during the

training program and the teachers' lack of familiarity with the

type of grammar Rinne introduced.

However, one might also attribute the program's failure to

the fact that Rinne's subjects were poor readers who, although

they understood individual words, had difficulty understanding the

context in which these words occurred. Moreover, Rinne's pattern sentences were not based on frequency counts. Consequently, the patterns Rinne selected may not have prepared students for the kind of syntactic patterns they typically encountered in their reading material. For example, the following four sentence structures, which Pierce (1975) found to occur most frequently in a sampling of fifty English textbooks, differ considerably from those of Rinne.

1.	Subject	Main Verb		Optional adverbial
	(The sun	has set		slowly in the west.)
2.	Subject	Main Verb	Direct Object	
	(My dog	has	fleas	all over.)
3.	Subject	Main Verb	Indirect Object/ Direct object	
	(John	gave	Mary a watch for her birthday.)	
4.	Subject	Main ("linking") Verb	Complement	
(a.	The weather	is	(adj.)changeable (in Texas.)	
(b.	Harry	is	(N.P.) my dog.)	

Although O'Donnell's and Rinne's studies seem to suggest that the relationship between explicit analysis of sentence structures and reading comprehension is fairly negligible, Mason and Kendall (1979) found that intrasentence junctures providing obvious structural clues aid reading comprehension. In this study, ten to

twelve year old native speakers of Canadian English (N=98) were asked to read a passage composed of standard, parsed, or short sentences. The example, below, illustrate the three types of sentences used in Mason and Kendall's study.

Standard

Dick will be in Grade Five and though he enjoys math he likes art class best.

Parsed

Dick will be in Grade Five

and though he enjoys math

he likes art class best.

Short Sentence

Dick will be in Grade Five. He enjoys math. He enjoys art. He likes art class best. (p. 71)

After reading a story in one of the three versions, subjects were required to write a reading comprehension test. A sample test question follows.

What is Dick's best subject?

(a) math (b) reading (c) art (d) science (Mason and Kendall, 1979, p.71).

Although subjects had sufficient time to read the story and answer questions, they were not allowed to reread the story during

the question section. This provision encouraged explicit analysis of sentence structures at the time of reading, rather than encouraging copying of information from passage to question/responses.

The simplified passages did not affect high performance readers in Mason and Kendall's study, probably because these readers already possessed sufficient syntactic awareness to recognize syntactic relationships in standard passages. However, the effect of the simplified passages was significantly pronounced for the low performance readers in Mason and Kendall's study. Thus, one might suggest that this type of reader may benefit from syntactic awareness instruction.

In addition to the above findings, Mason and Kendall reported that low performance readers took more time to read short and parsed sentences than they took to read standard sentences. The researchers conjectured that, because of the complicated structuring of standard sentences, low performance readers may have given such sentences only a cursory reading, moving on to sentences that were syntactically easier for them to understand. In other words, low performance readers may tend to pass over standard passages because they possess insufficient syntactic awareness to carry out an explicit analysis of standard sentences' complicated structures.

A study conducted by O'Shea and Sindler (1983) may provide an explanation for Mason and Kendall's findings that high performance readers evidenced no reading comprehension improvement in either parsed or short sentence passages. O'Shea and Sindler administered a test, similar in design to Mason and Kendall's test, to first, second, and third grade native speakers of English. Subjects' reading ability was identified in terms of accuracy and fluency. Canonical correlations revealed that children who read accurately, but slowly, tended to score higher in the simplified passage than they did in the standard passage. This seems logical in view of the possibility that slow readers will concentrate more closely on syntactic forms with which they are familiar. In addition, there were no differences between standard and simplified passage scores for highly fluent and accurate readers.

The studies outlined above suggest that awareness of syntactic structures can facilitate reading comprehension. They also demonstrate that L1 individuals are likely to use explicit analysis when they encounter problems in understanding and when they possess sufficient knowledge to be used in monitoring reading comprehension. According to Baker and Brown (1980), "learners of any age are more likely to take active control of their own cognitive endeavors when they are faced with a task of intermediate difficulty (since if the task is too easy, they need not bother; if the task is too hard, they give up)" (p.4). Brown

suggests that the good reader differs from the poor reader in that the former

> Engages in a variety of deliberate tactics to ensure efficiency. Note that such efficiency involves cognitive economy as well as expenditure of effort. The efficient reader learns to evaluate strategy selection not only in terms of final outcome but in terms of the pay off value of the attempt; information is analyzed only to the depth necessary to meet current needs. This ability implicates a subtle monitoring of the task demands, the reader's own capacities and limitations, and the interaction between the two. (p.56).

Although it seems likely that some native speakers will consciously apply syntactic awareness when they encounter difficulty in comprehension, the extent to which they use such awareness to monitor sentence structures is still unknown. Further, because the native speaker's awareness of grammar is, in most cases, implicit (MacMohale, 1964), .s/he might not be able to use it effectively at the conscious level.

Reading, Syntax, and L2 Learners

Like many of their L1 counterparts, a considerable number of

L2 researchers also believe that syntactic analysis may aid

reading comprehension. Wardhaugh (1969), for example, believes

that reading requires L2 learners to be more deliberate than they

are when speaking because "written language is more deliberate,

more complex, more heavily edited, and less redundant than spoken

language, and it offers no opportunity to question the writer in

order to seek clarification of his statements" (p. 137). Although

the same kinds of problems face the L1 reader, the problems are

magnified for the L2 reader who lacks much of the semantic and

cultural information to which the L1 reader has recourse. When

such information is lacking, the L2 reader may resort to syntactic

analysis as a means of disambiguating sentences and/or passages.

Nilagupta (1978) conducted two studies in an effort to

address this issue. In the first study, she tried to determine

which English syntactic forms present problems to ESL learners; in

the second study, she tried to determine if syntactic analysis

ability aids the ESL learners overcome such problems. Four

hundred and twenty-six Thai graduate students, who learned English

as a foreign language, participated in the first study.

Structural awareness scores were obtained from an administration

of the Structural Comprehension Subtest of the English Screening

Test (EST). This subtest consisted of twenty-five sentences with

various types of syntactic structures. Reading comprehension
scores were obtained from an administration of the Reading
Comprehension Subtest (of the EST). This subtest consisted of
four passages and thirty multiple choice questions. Pearson
product-moment analysis of the two sets of scores produced a
correlation of .56. Subsequently, item analysis revealed that
passage readability was inhibited by negation, passive voice,
embedding, deletion, and nominalization. Modifier load, pronoun
substitution, and modals also inhibited understanding. Although
Nilagupta identified these factors as major structural barriers to
understanding, one cannot conclude that they necessarily represent
sources of English reading comprehension errors for Thai students.
That is, Nilagupta did not determine the frequency with which
these structures are likely to occur in written English.

In Nilagupta's second study, five hundred and thirty-five ·
Thai undergraduate students were asked to take the Writing and
Reading Subtests of the English Placement Test. The former
subtest, which was used to assess subjects' ability to complete
partial sentences, contained thirty multiple choice questions. In
each question, subjects had to select one answer (from among four
alternatives) to complete a sentence. The Writing and Reading
Subtest scores were correlated, yielding a coefficient of .64.
The high correlations for the two sets of scores in Nilagupta's
studies suggest that the more proficient readers are at
identifying sentence structures, the greater will be their

comprehension of a given text.

In an attempt to illuminate further the relationship between reading comprehension and syntactic awareness, Gass (1983) compared eight advanced and thirteen intermediate ESL university students by measures of their respective abilities to detect and correct grammatical errors. The subjects, who came from different language backgrounds, were asked to write a story. Once the stories were written, each subject was asked to detect and correct his/her own grammatical errors and those of a fellow student. Writing samples assessed by each student consisted of four ungrammatical sentences from his/her own composition, four grammatical sentences from his/her own composition, two ungrammatical sentences from a fellow student's composition, and two grammatical sentences from the same fellow student's composition. The results reported by Gass were as follows:

1. Advanced learners judged fewer of their own sentences grammatical than did the intermediate learners.

2. From the point of view of English, the intermediate group was better able to accurately recognize their own grammatical sentences than their ungrammatical sentences. The ability of the advanced group was about equal in this area.

3. When considering only the group of sentences

judged ungrammatical (L) (L = judgement of the ESL

learners) and the changes made to those sentences, we

found that those sentences which, from an English

standard, were grammatical remained grammatical after

the change while those sentences which, from an English

standard, were ungrammatical remained ungrammatical

after the change (p. 232).

Gass further indicated that advanced learners were more able

to correct grammatical errors. This was evidenced by the fact

that advanced readers were less inclined to alter grammatical

sentences and more inclined to alter ungrammatical sentences than

were intermediate readers. With reference to Bialystok's (1978)

theory of implicit and explicit knowledge, Gass conjectured that

the advanced learners were more able to correct errors in written

sentences than were the intermediate learners because the former's

explicit knowledge was more developed than the latter's. The use

of explicit knowledge provides a reader with the ability to access

"analyzed dimensions" of language. In addition, that the advanced

learners judged fewer of their own sentences grammatical than did

the intermediate learners suggests that the former may possess

relatively superior metacognitive strategies.

According to Brown (1980), Babbs and Moe (1983), and Straw

and Bewell (1981), the use of metacognitive strategies relates

directly to reading competence. For example, Brown believes that

knowing what and when one knows or needs to know is the basic
component of metacomprehension.   That is,

> Mature problem solvers not only have a reasonable
>
> estimate of accessibility of their known facts, they are
>
> also cognizant of which facts cannot be known and which
>
> can be deduced on the basis of what they already know.
>
> (P.440)

Thus, Gass's findings might have been due to the fact that
advanced readers are more equipped to deal with syntactic problems
systematically and strategically than are intermediate readers.
If such is the case, advanced L2 readers should outperform
intermediate L2 learners in a test requiring subjects to identify
syntactic relationships.

Although the number of L2 subjects in Gass's study was small,
Bialystok (1982) carried out a similiar experiment with larger
groups of learners and obtained similar results.   In Bialystok's
study, forty-six intermediate and forty-two advanced adult ESL
learners were asked to complete a solid discrete point test, an
integrative test, and tests containing mixtures of discrete and
integrative tests.' The results revealed that the
performance of advanced subjects was significantly better than
that of the intermediate subjects on both types of tests.

Some of the earliest studies of L2 learners' explicit
awareness of grammatical forms were carried out by the Russian

theorists, Belyayev (1963) and Vygotsky (1962). These two researchers claim that explicit forms of language learning are fundamental for foreign language learners. According to Vygotsky, this deliberate process develops relatively early in the L2 child's learning. Thus,

> With a foreign language, the higher forms (deliberate scientific concepts) develop before spontaneous, fluent speech.... The child's strong points in a foreign language are his weak points in his native language and vice versa. In his own language, the child conjugates and declines correctly, but without realizing it. He cannot tell the gender, the case, or the tense of the word he is using. In a foreign language, he distinguishes between masculine and feminine gender and is conscious of grammatical forms from the beginning.
> (P. 109)

Belyayev believes adult L2 learners evidence a very similar pattern:

> Thus, it is best to consider the end of the period of learning a language to be the moment when a person begins to think in the language. This is preceded on the evidence of many informants, by the ability to dispense with translating when listening to, reading and speaking the foreign language. This ability is in its turn preceded by the ability to understand a foreign language by means of lexical and grammatical analysis,

and to construct one's own speech by this same
consciously discursive means. (P.23)

The following empirical findings revealed that L2 adult
learners are more skillful than L1 native speakers in explicit
syntactic analysis. Schmidt and McCeary (1977) investigated the
use of standard English syntactic forms (e.g. "there is" and
"there are") by adult native and non-native English speakers. The
former group consisted of twenty college freshman who were native
English speakers and twenty-four graduate students in ESL; the
latter group consisted of twenty Egyptian high school teachers of
EFL (English as a Foreign Language). All subjects took a test
divided into three sections. In the first section, subjects were
required to use clue words to construct sentences which were
similar in meaning to stimulus sentences. For example, given the
clue phrase, "about five minutes", subjects were asked to
construct a sentence which conveyed approximately the same meaning
as the sentence, "There's enough time left" (P.416). Thus,
subjects were obliged to write either, "There's about five minutes
left.", or, "There are about five minutes left." In the second
section, subjects were required to select, from among all the
sentences generated in section one, sentences they would be most
likely to use in conversation. Section three required subjects to
identify the correct syntactic variants (e.g. "there is" or "there
are") for the sentences generated in section one according to
English grammatical rules -- regardless of whether they would use

the forms themselves.

Results revealed that non-native subjects performed as well
or better than native subjects. These findings are consistent
with those of Bialystok (1981, 1982). However, this difference
may have been due to a kind of native inclination to using the
syntactic structures of informal speech. For example, rather than
using "Anybody ought to be able to solve his problems.",
native English-speaking subjects were inclined to use "Anybody
ought to be able to solve their problems." Although the
latter construction is unacceptable in formal speech, it is quite
common and quite acceptable in informal speech. Two other
factors, however, may account for the fact that L2 learners
performed as well or better than L1 learners in the syntactic
tasks. First, as suggested by Vygotsky (1963) and Belyayev
(1962), the conscious awareness of L2 linguistic forms appears td
be a fundamental form of L2 learning. That is, L2 learners use
conscious learning to acquire L2 competence and proficiency.
Second, formal instruction in L2 encourages learners to be
consciously aware of L2 grammatical systems. According to
Vygotsky, interaction between the language teacher and language
learners will accelerate the learners' capacity to learn and use
the language analytically.

Krashen (1978A, 1978B, 1982), however, argues against the
proponents of conscious learning. He believes that learners

subconsciously internalize syntactic rules in informal language environments and consciously "learn" them in formal language environments. Only the former approach, Krashen claims, will help adult L2 learners attain L2 competence and proficiency. Explicit syntactic analysis, which, according to Krashen is a part of the latter approach, is used to a limited degree in reading and speaking. Krashen believes that conscious learning is only used with "easy rules" that are "acquired late" in the L2 process.

Krashen's claims, however, are open to debate. His perception of what constitutes conscious learning is rather narrow. For him, conscious learning is that which learners can retain from what is actually taught and said in the classroom. In other words, Krashen believes that conscious rules are the same as pedagogical rules, and pedagogical rules represent formal and informal statements forming parts of classroom explanations. One might suggest, however, that this argument is not necessarily true. In fact, many studies have shown that learners do not directly apply conscious pedagogical rules to analyze syntactic structures, but, instead, use internalized rules.

For example, Selinger (1978) attempted to determine whether learners who were successful in performing syntactic tasks could verbalize standard pedagogical rules. The experiment included the following three groups of subjects: twenty-nine (English) monolingual children between the ages of three and ten years;

eleven (English and other languages) bilingual children between
the ages of four and ten years; and fifteen adult ESL learners
from an English university. The adult subjects had different
degrees of L2 proficiency and exposure. Each subject was asked to
use indefinite articles plus nouns to name objects in several sets
of pictures.

Subjects who differentiated between "a" and "an" in
pre-nominal positions were asked to explain the distinction in
usage. Results showed that all subjects employed both standard
pedagogical rules and personal anomolous rules to express their
understanding of item usage. However, four out of six subjects
who verbalized the correct pedagogical rules did not perform the
task successfully. Conversely, all three subjects who verbalized
anomolous rules did perform the task successfully. These results
imply that the use of rules in grammatical analysis is not
directed by what individuals memorize but, rather, by what
individuals codify.

The L1 and L2 research studies outlined above suggest that
both groups of learners approach syntactic analysis in much the
same way. That is, rather than relying solely on memorized formal
rules, learners tend to rely, to a great extent, on implicit
knowledge -- personally determined and defined rule systems -- in
the explicit analysis of sentence structures. According to
Selinger (1979),

It should not surprise us that learners cannot really be
using the pedagogical rules they claim to use even if
they can repeat back a memorized form of that rule....
Claiming that learners store and use pedagogical rules
in a holistic and unchanged way is reminiscent of empty
organism psychology which saw learners as having little
or no effect on the material presented to them. Those
who present views of language learning do not see the
acquisition process as the passive receptive of
conscious rules but an active process of reconstructing
an internal model and the entire literature on error
analysis supports these views. Some of the new
information which is represented by the pedagogical
rules is recoded and assimilated into the learners'
already existing cognitive systems in accordance with
how that rule is perceived by them but, some of this
information is quickly forgotten because the learners'
systems are not yet ready to absorb it (P.366).

Like Selinger, Belyayev (1963) believes that, rather than
involving a simple process of "mechanical assimilation," practical
conscious learning must incorporate a "feeling for the language."
That is, learners must be able to use implicit knowledge as a
basis of explicit syntactic analysis.

Footnotes

'   Solid discrete point tests require readers to make explicit syntactic analysis; integrative tests emphasize communicative competence. When performing the latter type of test, L2 learners do not rely on explicit syntactic analysis to the same extent as they do when performing the former type of test.

Sample question of a discrete point test: the test-taker is asked to select the words in sentence 2 that "does the same thing" as the word "very" in sentence 1.

1.   He spoke VERY well of them.

2.   Suddenly the music became quite loud. (Krashen, 1978, p8)

Sample question of an integrative test: The test-taker is asked to discuss an issue appeared in a newspaper without focusing on linguistic forms (Bialystok, 1982, p. 187).

CHAPTER 3

METHODOLOGY

The present study evaluated the relationship between
syntactic awareness and reading comprehension. As used in the
present study, syntactic awareness refers to knowledge of
syntactic relationships irrespective of formal rule knowledge.

Subjects

One hundred and twenty-seven non-native English speakers
(64F, 63M) from Vancouver Community College (V.C.C.), Vancouver,
B.C., volunteered to participate in the study. All volunteers
came from V.C.C.'s English Language Training Program, admission to
which requires a minimum Gates-MacGinities grade eqivalence (g.e.)
of 4.0 in reading. Graduation from the program's reading
component requires a grade equivalent of 8.0. Thus, the
non-native subjects in this study had a reading ability equivalent
to that of grade four to grade eight native English speakers as
measured by the Gates MacGinitie Reading Test. The mean age of
the subjects was 29.3 years (age range: 19.5 to 60 years). All
subjects were landed immigrants who had resided in Canada an
average of three years. Most subjects had some formal training in
English in their native countries (mean English training time in
native countries = 278.5 hours : range = 26.0 to 15600.0). During

their residence in Canada, subjects had acquired an average of 643.8 hours of formal ESL instruction. Because the majority of them spoke Chinese as their mother tongue, subjects were divided into Chinese and non-Chinese groups. The purpose of this division was to be able to examine certain trends that may have resulted from L1 interference. The Chinese groups consisted of 36 males and 37 females; the non-Chinese groups consisted of 27 males and 27 females. Table 2 presents the language backgrounds of the non-Chinese group by sex of the participants

TABLE 2

LANGUAGE BACKGROUND OF NON-CHINESE

GROUPS RELATIVE TO SEX OF SUBJECTS

M (N = 27)	F (N = 27)
Italian (1)	Burmese (1)
Polish (5)	Hindi (1)
Punjabi (1)	Japanese (2)
Persian (2)	Polish (9)
Romanian (1)	Punjabi (3)
Tagalog (1)	Spanish (1)
Tigrigne (1)	Tagalog (1)
Turkish (1)	Vietnamese (9)
Vietnamese (14)	

V.C.C.'s advanced class was comprised of people from three different learning levels. The first group (N = 57), which consisted of people from the previous semester's upper intermediate class, were admitted in the basis of their reading ability scores as measured by the Gates-MacGinities Reading Test, level D (g.e. score = 4.0 or better.). The second group (N = 37) consisted of people from the previous semester's advanced class who had failed to achieve the g.e. score 8.0 (on level E form 2) neccessary for graduation from the advanced reading program. The third group consisted of the following two subgroups: people who had enrolled in V.C.C.'s advanced program and "dropped out"; and people who had qualified for the program by taking the English Placement Test and entered at the advanced level. At the end of their advanced ESL training in December, 1983, all subjects wrote the Gates MacGinitie Reading Test (level E, form 2).

In addition to the ESL subjects, eleven native English speakers (8 F, 3 M) enrolled in the Professional Development Program (PDP), Simon Fraser University, Burnaby, B.C., participated in the study (fall semester, 1983). There were three reasons for including this group of subjects. First, data obtained from this group were used to evaluate the present researcher's testing instrument. Second, the data provided seldom-documented information on native English speakers' syntactic awareness of their language. Third, the native English data provided normative information against which the non-native

English data could be compared.

Testing Instrument

The Sentence Elements Test (see Appendix A), designed by the
present researcher (following O'Donnell' s Structural Test, 1961),
employed English words because it was assumed that structures
employing nonsense words would prove too difficult for non-native
speakers. This concern finds support in O'Donnell's statistical
analysis which revealed that the majority of test-items in the
Structural Test had a high level of difficulty (the majority of
subjects answered the majority of the test-items incorrectly).
This finding suggests that O'Donnell's subjects may have erred as
a factor of the "nonsense" words rather than as a factor of weak
structural awareness.[2]

Two criteria were used in the selection of lexical items
for the Sentence Elements Test. First, items had to be
semantically simple to ensure that meaning did not interfere with
syntactic processing. Second, items had to be words which were
not cognates in other languages, to avoid biasing the test result
in favor of a particular linguistic group. Third, selected words
had to be high coverage words as opposed to words that had more
specific referents (see p. 41). Word frequency counts based on
written text compiled by Carroll and Davis (1971) provided a list
of potential lexical items for the Sentence Elements Test, final

selection being based mainly on the intuitive judgement of the present researcher, a non-native English speaker.

In addition to the changes described above, certain modifications to O'Donnell Structural Test were made to the "Direction/Examples" section in an attempt to clarify the test procedures. Whereas O'Donnell provided only two examples in his test, the present researcher provided three examples.

Similar to the Structural Test, the Sentence Elements Test analyzed students' knowledge of the syntactic relationships between individual words, phrases, and clauses. Besides using English words instead of nonsense words, the present researcher also attempted to simplify the language used by O'Donnell in the patterned sentences, as can be seen in the following examples.

(Item no. 9) Structural Test: Professor Walton received an unabridged dictionary from a former student.

Sentence Elements Test: Mr. Jones received a nice present from a former student.

(Item no. 26) Structural Test: South Carolina vigorously opposed the payment of duties in the tariff of 1832.

Sentence Elements Test: The store absolutely refused to accept the return of a bad product.

The types of syntactic relationships tested in the Sentence Elements Test were identical to those used in O'Donnell's Structural Test. As mentioned in Chapter 2, O'Donnell tested the five most frequently occurring syntactic relationships in written English, specifically: relationships between subject and predicate (6 items); relationships between verb and complement (10 items); relationships between coordinate elements (4 items); relationships between various types of modifiers and elements modified (24 items); and relationships between elements involved in cross-reference (6 items).

Although tense was not of major concern in the Sentence Elements Test, the test design included the following six basic tenses of written English: simple past and present; present and past continuous; and present and past perfect. Because simple past is the most common tense in written English, it appeared most frequently in the test items (114 times).

Evaluation of the test

Validity The validity of the Structural Test designed by O'Donnell (1961) was evaluated by several language specialists. The specialists agreed that the test appeared to be a valid means of measuring English native-speakers' recognition of structural relationships in English. As O'Donnell (1963) said,

It was not feasible to establish validity of the test by an objective criterion, but every effort was made to construct the test so that correct responses would depend on ability to recognize the relationships involved. (p.314)

According to Dr. J. Kendall (reading specialist) and Dr. G. Sampson (ESL specialist) of the Faculty of Education, S.F.U., the validity of O'Donnell's test should verify, by extension, the Sentence Elements Test, a modification of the former. Dr. Sampson confirmed that the latter appeared to be an appropriate instrument for effectively measuring non-native English speakers' ability to recognize structural relationships of sentence elements.

The test was pilot tested on three foreign students from Thailand. Each was tested individually. Prior to writing the test, each subject was asked to do his/her best to complete the test, irrespective of the time involved. Thus, the pilot study provided an appropriate measure of test completion time, a prerequisite for testing permission from V.C.C.. This pilot study also served as a means of detecting any immediate design problems.

After writing the test, each individual was asked to offer his/her opinion as to the difficulty of the test language, the difficulty of the test, and the kinds of problems s/he encountered. Feedback was positive. Each subject reported that

the language was clear and that there was a balance between easy
and difficult items. All three subjects expressed surpise that
their test results were lower than they had anticipated. Table 3
presents results from the pilot study.

TABLE 3

RESULT OF THE SECOND PILOT STUDY

Subject	Sex	Age	Institution attended	Length of time living in Canada (in years)	Testing time (in minutes)*
No. 1	F	24	SFU	5	45
No. 2	M	21	Columbia College	1/2	50
No. 3	F	18	St. Thomas High School	2	50

* including time spent reading test directions

Reliability: The reliability of the Sentence Elements
Test was assessed in a second pilot study conducted at V.C.C..
Eight males and ten females participated in this study. Table 4
provides an overview of the subjects (range of age was 19 to 62)
by sex and first language.

TABLE 4

DEMOGRAPHIC INFORMATION OF THE SUBJECTS

IN THIRD PILOT STUDY

M (N = 8)	F (N = 10)
Chinese (5)	Chinese (7)
Japanese (1)	Persian (1)
Laotian (1)	French (1)
Spanish (1)	Hindi (1)

Spearman-Brown computations produced a reliability coefficient of
.81, a level generally considered satisfactory for testing
instruments. Further, as a result of correlated item-total
correlation and item analysis, those items showing either no
correlation or negative correlation with the total score were
modified. Because the syntactic structures were already
determined, changes were made mainly at the lexical level. For
example, the demonstrative "that", in the distractor, "The person
who had it was that fat old man.", was changed to the
indefinite article "a" so as to be more consistent with the
patterned sentence in O'Donnell's test, "It was a nice
day when we came into town last time" (item no. 2). Lexical
items in pattern sentences were also altered to facilitate
comprehension. For example, the prepositional phrase "in

California" in the patterned sentence, "Duncan's place in

California has burned down." (item no. 33), was rewritten as,

"Duncan's place on the island has burned down.", so as to

correspond more closely to the prepositional phrases in the

alternative sentences. Unnecessary phrases were also deleted to

make sentences more concise. For example, "After Alfred helped

her" was deleted from the sentence, "After Alfred helped her, she

became a famous singer.", in the final SET (item no.

36). Further, distractors were improved by changing the order of

some words without altering the syntactic structure. For example,

in option 33, the distractor, "She went with her sister

to buy fish.", was rewritten as, "She went to

buy fish with her sister." This change makes the surface form

of the distractor more consistent with the patterned sentence.

Gates-MacGinitie Reading Test

Results from the V.C.C. administered GM Reading Test

(Canadian Edition, 1980) provided reading scores for subjects in

the present study. The GM Reading Test is a commercially prepared

standardized test that is widely used in measuring the reading

ability of native English speakers. Over the years, it has been

used at V.C.C. to test reading proficiency of ESL students.

According to Sinclair (1982), it provides an accurate assessment

of the reading ability of ESL students as well as native speakers.

The Canadian Edition of the test was derived from earlier US editions after extensive research in Canada. The test includes the following levels: grade 1.0 - 1.9 (Basic R); grade 1.5 - 1.9 (level A); grade 2 (level B); grade 3 (level C); grade 4 - 6 (level D); grade 7 - 9 (level E); and grade 10 - 12 (level F). Two test forms are available for each level. As mentioned previously, Levels D and E were administered to subjects in the present study. As with other levels of the test, Level D and E provide scores for vocabuary and reading comprehension, in addition to a total score. Both levels are comprised of 45 multiple choice vocabuary items and 43 multiple choice comprehension items (based on 16 paragraphs in Level D and 14 paragraphs in Level E).

In the vocabuary section, each target word is accompanied by five alternatives. The test-taker must select the alternative which most closely approximates the target word in meaning. According to MacGinitie (1980), the vocabuary time limit of twenty minutes is sufficient for most students.

In the reading comprehension section, passages ranging in length from 30 - 140 words (level D) and 50 - 200 words (level E) are followed by content questions. Several major subjects are covered: narrative-descriptive, social sciences, natural sciences, and the arts. Level D differs from level E in that the former has more narrative-descriptive content and noticeably less arts

content than does the latter. According to the test manual

(MacGinitie, 1980), the questions in both levels are divided into

literal (55 % of total) and inferential (45 % of total) types.

This subtest requires student to use "the semantic implication of

syntax" and "the logical relationship of ideas" (p. vi). Students

are allowed thirty-five minutes to read the passages and answer

the questions. Again, this time limit is sufficient for most

students.

The reliability coefficients of the GM Reading Test were

computed using Kuder-Richardson Formula 20. The K-R coefficients

ranged from 0.85 to 0.90 for Vocabuary and from 0.86 to 0.89 for

reading comprehension (MacGinitie, 1978, p.54). Thus, the Gates

MacGinitie Reading Test appears to be a valid and reliable

instrument to assess learners' reading ability.

Procedure

During the first week of October, 1983, consent forms (see

Appendix B) were handed out to 140 non-native speakers in V.C.C..

Of the 140 handed out, 127 were returned, for an overall return

rate of 90.7 %.

Testing took place during the second week of October, 1983,

under the supervision of the researcher. Prior to testing, each

subject completed a demographic questionnaire (see Appendix C).

All non-native English speakers completed the questionnair and the test within one hour. Native English speakers, who wrote the slightly different first draft Sentence Elements Test, completed the test within forty minutes. In scoring the SET, the researcher awarded one point for each correct answer.

As mentioned previously, reading comprehension scores were obtained from V.C.C. (GM Reading Test results) for each subject. Correlations between reading comprehension, syntactic awareness, and demographic data were computed using the Pearson product-moment formula.

Syntactic analysis ability of native and non-native speakers of English

The syntactic analysis ability of the native and non-native speakers of English were compared. This comparison assumes an equality of cognitive ability between the two groups of learners, and, consequently, that any differences between the two groups as measured by the SET will be due to syntactic awareness rather than cognitive ability. A comparison between the two groups' mean scores had to be statistically tested because the number of subjects in each group was different.

Twelve SET items were deleted from the comparison because the native and non-native subjects wrote slightly different forms of

the test.   The twelve deleted items included items number 2, 5,

7, 8, 10, 13, 16, 18, 33, 34, 36, and 39 (see Appendix A).

Deletion decisions were based mainly on the extent of semantic

differences between the preliminary SET form written by native

speakers and the final SET form written by non-native speakers in

the experimental group.

For example, in question two option three, the lexical items

on the final SET form differed considerably from the lexical

items on the preliminary SET form.   The researcher changed, "The

T.V. station that reported it was C.B.C. in

Vancouver.", in the initial form, to, "the place that sold

it was a small store on Robson Street.", in the final

form.   For similar reasons, item 5 was deleted because the

sentence ,"An elephant has big eyes but small eyes.",

was changed to, "He had a big house and a car."   The   •

researcher also deleted test items containing different numbers of

lexical items regardless of similarity in meaning.   For example,

in item 36, "After Alfred helped her, she became a famous

singer.", contained more elements than, "She became a

famous singer."   Changes in the position of words was also

taken into consideration.   For example, "went" and "to find" were

separated in, "She went with her daughter to find the

monkey.", whereas "went" and "to buy" in the final form were

connected in the sentence, "She went to buy fish with

her sister." (item 33).   However, the differences between,

"When he came in, everybody was watching T.V.", and,

"*Everybody was watching T.V. when he came in." (an

asterisk in front of the sentence indicated the switching of

phrases' position, item no. 17), was not considered crucial. All

lexical items were identical and an asterisk indicated the same

word order.

Footnote

As a minor test of the hypothesis, the author

asked three non-native English speakers enrolled in undergraduate

courses at SFU to take the Structural Test. Each of these

subjects complained that the test was confusing and frustrating.

Thus, it would appear that structures using nonsense words as a

means of evaluating syntactic knowledge may prove overly difficult

for native as well as non-native speakers.

CHAPTER 4

RESULTS

The Sentence Elements Test (SET) scores of syntactic analysis were correlated with the Gates-MacGinitie (GM) Reading Test scores by means of the Pearson product-moment formula. The latter test included comprehension, vocabuary, and total test scores. According to Borg and Gall (1979), the product-moment correlation is the "most stable technique" for analysing two sets of continuous scores because it is "subject to the smallest standard error" (488-493).

As stated previously, GM Test scores obtained from V.C.C. represented scores from different levels and forms which were administered at different times of the year (see Table 5).

TABLE 5

CATEGORIES OF ESL SUBJECTS AS DEFINED
BY GM TEST FORM TAKEN AND DATE TAKEN

Subjects	N	GM test level and form	Date Taken
Subgroup 1 (SG1)	59	D-2	June, 1983
Subgroup 2 (SG2)	37	E-1 (1)	June, 1983
Subgroup 3 (SG3)	31	not tested	—
Total Group (TG)	127	E-2 (2)	Dec., 198

The mean GM and SET scores for each category of subjects appear in Table 6.

TABLE 6

MEANS AND STANDARD DEVIATIONS OF GM AND SET

SCORES FOR SUBJECTS IN EACH CATEGORY

Subjects		GM Vocab. (Max=42)	GM Comp. (Max=43)	GM Total (Max=85)	SET (Max=50)
SG1	X	20.39	25.17	45.57	36.49
N=59	s.d.	5.44	5.39	8.50	5.15
	Range	10-36	5-35	17-65	20-45
SG2	X	14.84	21.70	36.54	34.39
N=37	s.d.	3.30	4.16	5.49	6.54
	Range	9-22	15-30	27-47	17-50
SG3	X	-	-	-	35.52
N=31	s.d.	-	-	-	7.34
	Range	-	-	-	21-48
TG	X	18.10	25.36	43.46	35.64
N=127	s.d.	6.02	5.69	10.07	6.31
	Range	6-32	14-38	23-67	17-50

Table 7 presents correlation coefficients between SET and GM scores. Correlations were quite low; only those between SET and

TABLE 7

CORRELATION COEFFICIENTS FOR SET AND GM SCORES

		GM Vocabulary	GM Comprehension	GM Total
SG1	SET	.12	.10	.14
SG2	SET	-.16	.11	-.02
TG	SET	.05	.29*	.19*

* p < .05

GM Comprehension and SET and Total GM for the total Group's December scores proved significant. Thus, hypothesis one is not supported; success in syntactic analysis does not appear to be related to reading comprehension for ESL learners.

SET Scores and Demographic Variables

As previously mentioned , the researcher collected

demographic information for each subject. The demographic
variables are defined in the following manner:

Lang: subjects' native language ,Chinese = 1,
non-Chinese = 2.

T Hour: hours of English language instruction in native
country.

Canada: length of residence in Canada.

T Hour C: hours of English language instruction in
Canada.

Correlation coefficients between SET scores and the
demographic variables revealed moderate and, in most instances,
non-significant relationships (Table 8).

TABLE 8

CORRELATION COEFFICIENTS FOR SET SCORES AND DEMOGRAPHIC VARIABLES

FOR NON-NATIVE SUBJECTS

		Age	Sex	Lang	T Hour	Canada	T Hour C
SG1							
	SET	.29	-.16	.03	-.04	-.26*	-.19
SG2							
	SET	.06	-.07	-.04	.22	-.37*	-.23
SG3							
	SET	.21	-.09	.11	-.17	-.22	.10
TG							
	SET	.20*	-.10	.06	.01	-.27*	-.15*

* p < .05

The majority of the relationships between the SET scores and demographic variables were not significant. Only the relationship between length of residence in Canada (Canada) and SET scores was significant for two of the three subgroups and the Total Group.

This finding suggests that the longer the subject resided in Canada, the less proficient s/he becomes in syntactic analysis. Because of the large number of nonsignificant relationship between the SET and demographic variables, hypothesis two was not supported.

GM Scores and Demographic Variables

As can be seen in Table 9, correlations between GM scores and demographic variables were moderate, and, again, the majority were not sigificant.

TABLE 9

CORRELATION COEFFICIENTS FOR GM SCORES AND DEMOGRAPHIC VARIABLES

	Age	Sex	Lang	T Hour	Canada	T Hour C
SG1						
Vocabulary	.21	-.02	.24*	.29*	-.16	-.21
Comprehension	.15	-.02	.07	-.05	-.07	-.15
Total	.24*	.03*	.20	.15	-.15	-.23*
SG2						
Vocabulary	.35*	-.26	.09	-.18	.11	-.06
Comprehension	.03	.07	.19	.36*	.07	-.11
Total	.23	-.10	.20	.16	.12	-.11
TG						
Vocabulary	.11	.05	.40*	-.12	-.15	-.42*
Comprehension	-.13	-.00	.40*	.12	-.16*	-.34*
Total	.01	-.03	.43*	.13	.18*	-.45*

* p < .05

The positive correlations between GM scores and first

language (Lang) suggest that non-Chinese were the more proficient

readers. Conversely, the negative relationship between GM scores and formal instruction time in Canada (T Hour C) suggests that the longer subjects received formal training in Canada, the lower they scored in the reading comprehension test. Overall, results were not sufficiently strong to support the third hypothesis.

Syntactic Analysis Ability: Native and Non-Native Speakers Compared

The comparison of native to non-native English speakers, relative to syntactic analysis ability, assumes an equality of cognitive ability between the two groups. Thus, any differences between the two groups on SET scores will be attributed to syntactic awareness differences. Thirty-eight SET items were used in the comparison, twelve items having been deleted because of certain semantic differences between the preliminary SET form used in testing the native speakers and the final SET form used in testing the non-native speakers. Table 10 presents mean SET scores for native and non-native subjects.

TABLE 10

MEAN SET SCORES AND STANDARD DEVIATIONS FOR NATIVE AND NON-NATIVE

ENGLISH-SPEAKERS

Subjects	N	X	s.d.	SE
Non-native English speakers	145	26.73	5.32	0.44
English native speakers	11	28.18	2.86	0.86

A comparison of the mean scores revealed that the difference in SET scores was not significant, $t(16) = -1.50$, $p > .05$. (This t-test is based on a separate variance analysis from SPSS-X (1983)).

In order to determine if one group of subjects (native or non-native) performed better on any aspect of the SET, the researcher compared native and non-native scores in each of the five syntactic categories (as described in Chapter 2, p. 14) by percentage of correct answers. Neither group, however, evidenced syntactic superiority in any of the categories, as can be seen in Table 11.

TABLE 11

PERCENTAGE OF CORRECT ANSWERS OF

THE FIVE SYNTACTIC CATEGORIES

BY NATIVE AND NON-NATIVE ENGLISH-SPEAKERS

1. The relationship between subjects and predicate

Item no.	Native speakers (N=11)	Non-native speakers (n=127)
1	100	96.1
3	90.9	78.7
4	90.9	91.3
11	63.6	61.6
12	72.7	83.3
46	70.0	83.3

2. The relationship between verb and complement

9	63.6	83.5
14	90.9	91.3
26	90.9	72.2
28	85.0	85.0
38	90.9	85.7
45	81.8	59.7
49	54.5	43.4

3. The relation between coordinate element

Item no.	Native speakers	Non-native speakers
17	63.6	89.0
22	72.7	52.0
42	63.6	69.4
47	18.2	35.5

4. The relationship between various types of modifiers and elements modified

6	100	91.3
15	100	91.3
19	81.8	84.9
20	100	33.1
21	45.5	44.1
23	81.1	82.7
24	100	93.7
25	90.9	41.3
30	63.6	52.8
31	9.1	43.7
32	81.8	77.0
35	100	88.1
41	54.5	81.1

4. The relationship between various types of modifiers and
elements modified (continued)

Item no.	Native speakers	Non-native speakers
43	45.5	65.6
44	90.9	71.8
48	100	97.6
50	81.8	74.6

5. The relationship between elements involved in cross-reference

27	72.7	64.6
29	72.7	53.5
37	81.8	49.6
40	100	92.8

CHAPTER 5

DISCUSSION

In this chapter, each of the four hypotheses will be discused. Limitations of the study, implications for further research and for education will then be described.

In their text on research methodology, Borg and Gall (1978) make the following statement:

Correlations ranging from .20 to .35 show a very slight relationship between the variables, although this relationship may be statistically significant. A correlation of .20 indicates that only 4 percent of the variance in the two measures that have been correlated is common in both....correlations at this level, however, are of no value in prediction. (p. 513)

Their caution should be kept in mind throughout this chapter.

SET - GM scores

Only two significant correlations between SET and GM scores were found (SET - GM Comprehesion subtest, .29; SET - GM Total, .19). However, each of these is quite low. In general, results

of this study suggest that syntactic awareness may not be importantly implicated in reading comprehension ability. Two possible explanations for this finding are discussed below.

First, the role of syntactic analysis in reading comprehension may not be a major one. As Goodman (1981) and Royer and Cunningham (1978) point out, reading involves an interaction between "the reader's world knowledge and incoming linguistic messages (Royer and Cunningham , p. 1). Insofar as linguistic messages are composed of semantic, syntactic, morphological, and phonological cues, the degree to which syntactic awareness contributes to reading comprehension may be relatively insignificant when compared to the contributions of these other cues.

Second, ESL learners in the present study may not have relied on syntactic analysis ability while completing the SET. The justification for this relates to the fact that the SET, particularly in term of vocabulary, was very easy as evidenced by the following:

1. There was no significant difference in SET scores between native and non-native speakers, $t(16) = -1.50$, $p > .05$.

2. There was no difference in the time required by native and non-native speakers to complete the test.

3. The correlation between SET scores and GM vocabulary

scores was not significant (see Table 7).

4.   When designing the test, the researcher attempted to select common words as lexical items.

Yorio (1971) reported that ESL learners believed vocabulary posed the most difficult problem and syntax posed the least difficult problem in their own reading. Thus, in most cases, ESL learners may focus on vocabulary to facilitate reading comprehension. But when a passage is composed of difficult vocabulary, ESL learners may shift their focus to syntactic analysis as a mean of resolving their reading difficulties. Because SET vocabulary was relatively easy, ESL subjects may not have used explicit syntactic analysis to determine the relationship between sentence elements.

Further, the syntactic relationships tested in the SET were those which occur most frequently in written English, and thus ESL learners should have been quite familiar with them. Perhaps ESL learners use explicit syntactic analysis only when the material is very difficult for them, or, as Baker and Brown (1980) have argued for native speakers, perhaps ESL learners use explicit syntactic analysis as a metacognitive strategy when they are aware of their comprehension difficulties. This is an interesting topic for future research.

That there was no correlation between SET scores and

vocabulary scores suggests that lexical items for the Sentence Elements Test were well chosen. That is, the inclusion of difficult lexical items in the test would have favoured students with relatively extensive vocabularies and discriminated against students with relatively limited vocabularies, thus yielding a significant correlation between vocabulary and syntactic analysis ability.

Demographic Variables - SET

The majority of the correlations between SET and demographic variables were not significant. While correlations between length of time in Canada (Canada) and SET were statistically significant, the coefficients were quite low.

The fact that there is no relationship between the learners' age and syntactic awareness ability may have been due to the fact that only adult subjects participated in the present study. The inclusion of child subjects may have produced different results, insofar as pre-pubescent children, unlike adults, have not reached the formal operational stage of cognitive development. According to Burt, Dulay, and Krashen (1982),

> The ability to think abstractly about language, to conceptualize linguistic generalizations, to mentally manipulate abstract linguistic categories, in short to construct or even understand a theory of a language, a

grammar, may depend on those abilities that develop with

formal operations. (p. 61)

Demographic variables - GM scores

GM scores positively correlated with first language (Lang),
suggesting that non-Chinese were the more proficient readers. The
moderately high correlations in the total group may be attributed
to the fact that 44 of the 54 non-Chinese subjects spoke languages
that use the same alphabetical system as English. According to
Robinett (1980)

One of the most obvious difficulties in using spelling

clues in reading appear when the students native

language is not alphabetically represented (in the

text). (p. 357)

These high correlations may also be due to the fact that
Vancouver, B.C. contains the second largest Chinese-speaking
community in North America. Consequently, there may be less
pressure on Chinese speakers than there is on non-Chinese speakers
to integrate into the English-speaking community.

The inverse relationship between GM scores and the amount of
formal instruction subjects received in Canada (T hour C) suggests
that the type of reading instruction at V.C.C. may not be related
to the type of reading required by the Gates-MacGinitie Reading
Test.

Limitations

Although the present study was designed to examine the relationship between syntactic analysis ability and reading comprehension ability, data are not available to show whether subjects actually consciously applied syntactic analysis while they were reading. However, in this study, the more fluent native-English speakers performed no better than the less fluent ESL subjects on the Sentence Elements Test. Thus, differences in reading ability must be attributed to factors other than syntactic awareness as measured here.

Also, of course, because the present study included subjects from only one educational setting, the results may not be generalizable to ESL subjects in different environments. However, subjects in this study do not appear to be an unusual group of ESL learners, and thus educators in other settings may wish to consider the results.

Implication for Further Research

The present study revealed a potentially rewarding area for further research in the reading process as it relates to L2 learners. The fact that Chinese subjects scored lower than non-Chinese subjects on the Gates MacGinitie Reading Test suggests that a comparison based on larger numbers of subjects from these

two groups may reveal areas in which English reading instruction may be improved for ESL students from Chinese backgrounds. Similar studies involving ESL learners whose native languages are based on nonalphabetic (e.g. Chinese) systems may prove fruitful.

Another area that may prove fruitful for future research is the relation between the conscious application of syntactic analysis in reading and ESL learners' cognitive styles. Cawley, Miller, and Miligan (1976) have studied learners with "polar analytic", "polar rationale," and "mixed" cognitive styles. According to these researcheres,

> The analytic learner is field-independent. Field-independence is the ability to select relevant stimuli that are embedded in a larger context and to resist the interfering effects of context and to resist the interfering effects of contextual stimuli. This style is associated with a longer attention span, greater reflectivity and deeper concentration. The analytic learner tends to be more sedentary, prefers formal learning situations....the (polar) rational learner has been found to be more hyperkinetic, to prefer informal learning situations,...,to be less oriented to achievement and competition, to prefer simplicity and social integration. (pp. 103-104)

It appears possible that polar analytic ESL learners may tend

to rely more on explicit analysis (e.g. syntactic analysis) to resolve problems in reading comprehension whereas polar rational ESL learners may rely less on metacognitive strategies.

Implication for Education

Teachers and curriculum planners in ESL have suggested that ESL learners may increase their reading efficiency through the improvement of their reading speed, vocabulary, or ability to analyze sentence and paragraph structure. Much has been written offering practical suggestions as to how such improvements might be accomplished.

A focus on syntactic structures of written text is one aspect that has been considered. The present study was carried out to investigate the relationship between the use of explicit syntactic awareness and reading comprehension ability. The low correlation between the Gates MacGinitie Reading Test and the Sentence Elements Test scores suggest that syntactic analysis is not importantly implicated in reading comprehension ability. The similar SET scores obtained by native and non-native English speakers also suggest that reading ability may be attributed to factors other than syntactic analysis. However, there was some indication that ESL learners may not have used explicit syntactic analysis when completing the SET, as previously discussed. Thus, the results were too inconclusive to make recommendations

regarding the teaching of syntactic analysis to ESL learners.

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Appendix A

The Sentence Elements Test

Introduction: This is a test of your ability to recognize
the various ways words in a sentence are related to one another.
In the sentence, "My best friend sent me a letter," best is
related to friend in a special way. Also, sent is
related to me in a special way; it is related to
letter in a different way; and it is related to friend
in still another way.

Directions: In each of the following groups of sentences,
you are to select the alternative (1, or 2, or 3) in which word
a is related to word b most nearly as word a in the
pattern sentence is related to word b in the
pattern sentence

Example:

Ex 1.   (Pattern sentence) He fought in the war.

   1.   Three men sat in the same car.

   2.   She is the richest women in town.

   3.   All the students were reading their book.

Alternative (1) should be selected as the correct response because
men is related to sat in sentence (1) in the way that
He is related to fought in the pattern sentence.

in some of the alternatives a group of words is underlined.
In these items you are to select the alternative in which the
group of words is related to the other underlined word
or group of words in the way indicated in the pattern
sentence.

Ex. 2. (Pattern Sentence) My uncle is building a new
house.

   1. His youngest son is a very clever boy.

   2. Bill turned on the radio when we ate dinner.

   3. She is writing a long letter.

Alternative (3) should be selected as the correct response because

is writing is related to a long letter in the same way
that is building is related to new house in the
patern sentence.

Ex. 3. (Pattern Sentence) When he comes, I will do my
homework.

    *1. He went to the supermaket when it rained.

    2. She will go to the movie with her friends.

    3. He can play tennis as well as basketball.

Alternative (1) should be selected as the corrct answer because of
the same reason as in the previous examples. Also, it should be
noted that there is an an asterisk (*) indicates that the
underlined phrases are not in alphabeical order (b, a rather than
a, b). Be sure to be careful when you see this asterisk.

Do not begin until the starting signal is given by the examiner.
Do not mark the test booklet. Indicate all answers on the answer
sheet. If you finish before time is called, wait quietly.

1. The <u>woman</u> whose husband rented our boat <u>had</u> an
    accident.

    1. Everybody was happy after the tiger that killed the
        <u>children had gone</u>.

    2. The <u>teacher</u> who had been traveling around the world
        <u>missed</u> the plane on Wednesday.

    3. The young woman with the old <u>clothes</u>, who <u>is</u>
        <u>picking</u> the flowers, will soon be a doctor.

2. <u>It</u> was <u>a nice day</u> when we came into town last
    time.

    1. When we went there, <u>it</u> was <u>an expensive</u>
        <u>evening</u>.

    2. The person who had <u>it</u> was <u>a fat old man</u>.

    3. The place that sold <u>it</u> was <u>a small store</u> on
        Robon Street.

3. The first public <u>school</u> <u>was built</u> in Thailand
in 1880.

1. The policeman carrying a <u>gun</u> <u>had stopped</u>
the robber.

2. After coming back from cleaning the church, <u>Mary</u>
<u>was called</u> by her friend.

3. A <u>fat</u> <u>man came</u> in while her mother was
cleaning the floor.

4. <u>Paragraphs</u> seldom <u>run</u> to more than two or
three hundred words.

1. Most people <u>parked</u> their <u>cars</u> on this
steet.

2. The <u>waitress</u> at the <u>restaurant</u> was hitting
the manager with a broom.

3. The lazy <u>farmer</u> <u>slept</u> quietly while his
wife worked in the field.

5. Mrs. Wong <u>made</u> the hungry <u>boy</u> a bowl of soup, and then she put him to work.

    1. The girl who <u>sent</u> <u>her father</u> money complained angrily that a mailman had taken it.

    2. The weather <u>being</u> <u>fine</u>, we went out for a walk.

    3. He <u>had</u> <u>a big house</u> and a car.

6. The <u>one who laughs last</u> often laughs best.

    1. The big <u>ship</u> <u>that is coming in slowly</u> carries thousands of people.

    2. The police will soon <u>know</u> <u>who you are</u>.

    3. Those gangsters <u>attack</u> <u>whoever speaks badly of them</u>.

7. In my opinion, he is either extremely <u>stupid</u> or completely <u>mad</u>.

    1. Most of the cars are either <u>red</u>, black, or <u>white</u>.

    2. If I touch <u>her</u> or hold her <u>beautiful</u> hand, her father will be very angry.

    3. The house either <u>stays</u> home or visits her <u>relatives</u>.

8. <u>Flowers</u> <u>bright</u> and colourful were seen growing in the forest.

  *1. Down the <u>street</u> <u>came</u> the taxi driver singing a song.

  *2. The <u>handsome</u> <u>prince</u> made a long speech.

  3. The <u>hunter</u> <u>quickly</u> went to the trap when he heard the noise.

9. Mr. Jones <u>received</u> a nice <u>present</u> from a former student.

   1. Even one of the richest students in this class <u>took</u> the bus to <u>school</u>.

   2. The lady in the white house <u>made</u> the best <u>cake</u>.

   3. His girlfriend <u>was</u> one of the most famous <u>actresses</u> in America.

10. Our boys <u>have had better training</u> than theirs <u>have</u>.

   1. Some of the girls <u>have short hair</u> and some <u>have</u> long hair.

   2. You have <u>been watching T.V.</u> longer than Mary <u>has</u>.

   3. If our friends <u>have brought</u> the soccer ball, we would <u>have</u> to play.

11. <u>That she was even there has not been proved to my</u> <u>satisfaction</u>.

    1. <u>Into the theatre came Bob with popcorn in his</u> <u>hand</u>.

    2. <u>The dog that bit the woman ate all our</u> <u>meat</u>.

    3. <u>Some of you here must have studied Social</u> <u>Studies</u>.

12. In 1861, <u>the King appointed</u> Dr. James governor of Bellingham.

    1. In the <u>store</u> we <u>bought</u> many shirts.

    2. After the <u>factory had been</u> built, the road became busy.

    3. The <u>dog</u> in the cage <u>jumped</u> very high.

13. They are the people I referred to in my class.

    1. It is well known that coffee grows in
       Brazil.

    2. The animal he stole from the zoo was a
       rabbit.

    3. The reporter reported to us what the problem
       was.

14. Loud noises scared them in the middle of the
    night.

    1. The soldires were going to shoot when their
       leader gave the signal.

    2. A rather tall man caught the fish in the
       lake.

    3. The colourful bird in the small shop sang
       beautifully.

15. She called it <u>hot tea</u>, but my cup was very cold.

    1. The <u>man sat</u> under the tree, having gone to the river.

    2. The information posted on the <u>wall</u> was <u>interesting</u>.

    3. A <u>gold watch</u> was the only thing he had.

16. Tom's father is the <u>man who was wrongly arrested</u>.

    1. The <u>lady whose house was robbed</u> was a bakery manager.

    2. The man asked his <u>secretary who he woukd hire to deliver his message</u>.

    3. One of the robbers told his <u>friend who to watch for</u>.

17. <u>Lee went to sleep</u> <u>while her teacher was talking</u>
     <u>about the importance of getting up early</u>.

     1. <u>The clumsy lady searched for her ring</u> <u>but</u>
         <u>could not find it</u>.

     2. <u>Everybody was watching T.V.</u> <u>when he came</u>
         <u>in</u>.

     3. <u>Everybody in the stadiam left</u> <u>after the final</u>
         <u>game</u>.

18. Sometimes, the opinion of the majority <u>is his</u>
     <u>opinion</u>.

     1. The leader of that group <u>became</u> <u>the leader of</u>
         <u>this company</u>.

     2. Usually, the one who <u>is</u> tallest jumps <u>the</u>
         <u>highest</u>.

     3. Some of the children <u>were</u> <u>eating dinner</u>
         and watching T.V..

19. The noises <u>suddenly</u> <u>stopped</u> and there was an
     unusual quietness.

    *1. Mr. Jones drove hes big <u>car</u> <u>proudly</u>.

    *2. As the funny parade passed by, the <u>audience</u>
         laughed <u>loudly</u>.

    *3. Judy <u>cleaned</u> the house <u>well</u>, but her
         mother didn't notice.

20. <u>The water is pure</u> <u>because it comes from a clean</u>
     <u>river</u>.

     1. <u>Mr. Bill explained</u> <u>why the school was not</u>
         <u>open</u>.

     2. <u>My mother was asleep</u> <u>when the train went into</u>
         <u>the tunnel</u>.

     3. This is the truck <u>that took our books away</u>.

21. In the middle of the table sat a wooden bowl which Sam
   had carved with his hands.

   1. Having talked to the Queen of England,
      Jane was very excited.

   2. At the end of the dirty hall lies a dead
      man.

   3. The driver drove slowly to the airport.

22. George saw me, but he pretened not to recognize
   me.

   1. All the flowers but one rose had been
      picked.

   2. Robert has not come, nor has he phoned.

   3. When Mary comes in, a maid will take her coat
      for her.

23. Last summer my father <u>took</u> me on a camping <u>trip</u>.

   1. Her uncle had <u>come</u> to the office <u>early</u> this morning.

   2. Marie will <u>cook</u> dinner after bathing her <u>baby</u>.

   3. When I went to Hawaii, my family <u>saw</u> me off at the <u>airport</u>.

24. The car <u>swerved</u> <u>suddenly</u> and headed toward the tree.

   1. Andrew <u>tried</u> to call very <u>often</u>, but the phone never worked.

   2. The old <u>lady</u> <u>sliced</u> the turkey with a long knife.

   3. Usually the bus arrived to this <u>station</u> <u>earlier</u>.

25. The works of Milton cannot be understood unless the
mind of the reader cooperates with that of the
writer.

1. As a tree gets older, it sometimes becomes
more beautiful.

2. While talking about the accident, The young man
closed his eyes.

3. Susan whispered that the young man was a
doctor.

26. The store absolutely refused to accept the
return of a bad product.

1. As time has gone by, her brother has
become stronger.

2. If Jim is hitting the girl, why isn't she
crying?

3. He usually smokes cigarttes when nobody is
home.

27. My <u>brother</u> <u>John</u> is an English teacher.

   1. His <u>good-looking</u> <u>sister</u> is a dentist.

   2. My <u>mother</u>, <u>a nurse</u>, has been working in
       the hospital.

   3. The <u>man</u> <u>standing</u> in front of the class is
       my husband.

28. That bad old man <u>sent</u> <u>me</u> only five dollars in
     return.

   1. The noisy child <u>broke</u> a <u>piece</u> of dishware.

   2. When he was a teacher, <u>students</u> <u>liked</u> him.

   3. Jojobe is a plant that <u>gives</u> <u>us</u> oil.

29. Debbie plays tennis as well as Dodson does, if not better.

    1. I cooked dinner but did not make enough.

    2. John Cooks better than they do.

    3. Bob says Jessica can sing that song as well as a professional singer does.

30. If you return the money, we will not tell the police.

    1. Mary had promised to cook for her friends, but she was too busy.

    2. Before the waitress starts to serve the food, tables should be nicely arranged.

    3. Jeff told the story well; he used to be a story teller.

31. <u>I find it easy to live without a car</u> <u>because I</u>
     <u>like to walk</u>.

   *1. <u>While be was drinking his beer</u>, <u>he was</u>
        <u>painting</u>.

    2. Why did the doctor give his money <u>to the pretty</u>
        <u>nurse</u>?

    3. <u>Some of these boys are lonely and upset</u>, <u>but</u>
        <u>others are simply foolish</u>.

32. The brain controls the <u>thinking</u> <u>process</u> called
     cognition.

    1. The <u>people</u> <u>suddenly</u> left that shopping
        center.

    2. The lady from the <u>kitchen</u> <u>brought</u> us
        another drink.

    3. That <u>pretty</u> <u>girl</u> was crying in the
        washroom.

33. Duncan's <u>place</u> <u>on the island</u> has burned down.

    1. He walked <u>quickly</u> <u>down the hall</u>.

    2. All the <u>furniture</u> <u>in the living room</u> was
       bought when her father come to visit.

    3. She <u>went</u> <u>to buy</u> fish with her sister.

34. The town itself <u>is located</u> <u>on the top</u> of a
    very high mountain.

    1. The boy <u>sat</u> so quietly <u>in the room</u> that
       nobody could find him.

    2. Halfway up the mountain Marco stopped, falling
       <u>slowly</u> <u>on his knees</u>.

   *3. Those books <u>in the box</u> <u>were given</u> to us by
       the teachers.

35. The new student is a <u>nice</u> and clever <u>person</u>.

   1. <u>Sooner</u> or later <u>Dick</u> will change his mind.

   2. <u>Seeing</u> her father and her <u>mother</u>, Alice
      ran to the gate.

   3. Into the room came a <u>large</u> <u>women</u>, smiling
      as she came.

36. The head officer <u>called</u> my uncle a <u>hero</u>.

   1. The goverment <u>considered</u> drugs a major
      <u>problem</u>.

   2. Our French teacher <u>made</u> us some French
      <u>bread</u>.

   3. She <u>become</u> a famous <u>singer</u>.

37. <u>There</u> was <u>blood on his shirt</u> after the fight.

   1. The standing <u>there</u> was <u>the one with the</u>

       <u>highest grade</u>.

   2. When he had finished his dinner, <u>there</u> was <u>a</u>

       <u>Chinese sance</u>.

   *1. <u>The man with a knife</u> was <u>there</u> when she

        came in.

38. Her father <u>looked</u> closely to <u>her</u> while she

     told him her opinion.

   *1. Life in Hong kong <u>was</u> difficult.

   2. The man hit his <u>poor</u> dog with a <u>belt</u>

   3. When the captain <u>jumped</u> into the <u>water</u>,

       his enemy shot him.

39. His car is the <u>one</u> <u>that was used for car</u>

<u>racinq</u>.

*1. <u>That the man lost</u> his <u>wallet</u> was

unfortunate.

2. It is not <u>certain</u> <u>that the doctor can help</u>

<u>him</u>.

3. L<u>The</u> same <u>dress</u> <u>that Mary had</u> was sold at

the Mall.

40. If those <u>girl</u> don't start studying, <u>they</u> are

going to fail.

1. <u>Dan and Carol</u> stayed together when <u>they</u>

were in New York.

2. The small boy sitting by the <u>window</u> is the

<u>one</u> that threw the rock.

3. <u>Cats</u> hate dogs and often attack <u>them</u>.

41. The group <u>made</u> John <u>leader</u>, but he refused to serve.

    1. The pilot <u>flying</u> the big plane <u>laughed</u>.

    2. After eating his dinner, he <u>became</u> upset and <u>ill</u>.

    3. The manager of the company <u>sent</u> another company's manager <u>a present</u>.

42. Henry's grandfather started the business with nothing but a <u>shop</u> and some <u>tools</u>.

    1. <u>Joe</u>, Jeff, and <u>James</u> were talking at the dining table.

    2. A stupid fly flew into <u>the fire</u> and <u>died</u>.

    3. That graceful <u>lady</u> and her <u>rich</u> husband spoke German.

43. The <u>rest</u> of the <u>week</u> passed very pleasantly.

   1. Our father went to invite <u>Morris</u> to the <u>party</u>.

   2. Out of the forest there came the <u>hunter</u> with his <u>two dogs</u>.

   3. <u>He</u> lay in the <u>room</u> for two hours and then died.

44. A stranger came to the desk and asked <u>the number of your room</u>.

   1. Tuff slept <u>quietly</u> <u>on the sofa</u>.

   2. The <u>two dollars</u> <u>in his pocket</u> was his only money.

   3. He pointed his <u>gun</u> <u>at her</u> and left.

45. The professor <u>recommended an excellent book in</u>
     <u>teaching English</u>.

     1. The birds <u>flew</u> <u>away to find a new place</u>.

     2. The best student in the art <u>class</u> <u>sent his</u>
         <u>picture to the exhibition</u>.

     3. The teacher came into the class, <u>assigned</u>
         <u>homework</u>, and left.

46. <u>Living there</u> <u>is an experience I will always</u>
     <u>remember</u>.

     1. <u>Turn your car to the right</u>, <u>watching</u>
         <u>carefully as you turn</u>.

     2. <u>After the cat had gone, the man who</u> <u>gave it</u>
         <u>food became lonely</u>.

     3. <u>The man who likes to wear read sweaters</u> <u>comes</u>
         <u>here sometimes</u>.

47. <u>Take time to think about your story,</u> <u>and pay</u>
<u>attention to your writing</u>.

   1. <u>Some people are taught to be clever;</u> <u>some</u>
<u>became clever by themselves</u>.

   2. <u>Your house has no heater</u> <u>and no</u>
<u>fireplace</u>.

   3. <u>He said he would be at the shopping center</u>,
<u>but not in the department store</u>.

48. <u>people</u> in the new <u>office</u> smiled and laughed
cheerfully.

   1. The boy <u>ran</u> to the <u>big</u> store that sold
candies.

   2. We talk <u>loudly</u> in our <u>house</u>.

   3. When he wanted lunch, he walked to the
<u>restaurant</u> in the <u>shopping center</u>.

49. We must educate the young today, for tomorrow they <u>may</u> <u>be</u> <u>our leaders</u>.

    1. A flea marke <u>is</u> <u>a place for buying things at</u> <u>a very low price</u>.

    2. When Mary becomes older, <u>maybe</u> <u>she will learn</u> <u>the truth</u>.

    3. He <u>may be</u> <u>staying</u> home by himself.

50. Mrs. Carson's <u>brother,</u> <u>a doctor,</u> was there when it rained.

    1. <u>Norway,</u> <u>Sweden,</u> and Finland are Scandinavian countries.

    2. <u>The parrot,</u> a <u>colourful,</u> can talk to people.

    3. When a <u>teacher,</u> a young <u>person</u> with no experience, had taught a class, he made many mistakes and failed.

Appendix B

Dear student:

My name is Ratana Hemniti and I am a graduate student from Thailand, studying at S.F.U.. I am doing a master's thesis focusing on the relationship beween the reading comprehension and syntactic awareness of E.S.L. advanced learnes.

In conducting this particular investigation, two types of information are necessary. First, E.S.L. advanced students will be given a test which evaluates their syntactic awareness. The test will take approximately an hour and will be given in your E.L.T. advanced class on   , 1983. Second, Mr. Victor Sinclair will provide me with your score on the Gates-MacGinitie Reading Test, a test you took at V.C.C. in June.

If you are willing to participate in writing the test and will allow me to have your Gates-MacGinitie score, would you please sign your name below. I would like to assure you that the test results will remain anonymous and will not affect your academic record in V.C.C. in any way.

Thank you very much for your help. If you have any questions, please call me at 291-4363 during the day or 298-8149 in the evening.

Appendix C

Demographic Questionnaire

1. Student No.----------.

2. Age:-------years.------monthes.

3. Sex   1.M   2.F   (circle).

4. What country are you from?----------.

5. What language do you speak at home?------------.

6. How long had you studied English in your country before coming to
    Canada?-------years.--------monthes.

7. How long have you been in Canada?---------years.------monthes.

8. How long have you been studying English in
    Canada?-------years.------monthes.