

A COMPARISON OF THE ORAL SYNTAX OF
CANADIAN KINDERGARTEN CHILDREN WITH THE WRITTEN SYNTAX
IN THE BEGINNING BASAL READERS

by

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A B S T R A C T

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The purpose of this study was to compare the oral syntax of selected Canadian kindergarten children with the written syntax in the two beginning reading series prescribed for use in the schools in British Columbia.

The oral language data was obtained by taping twenty-four kindergarten children from three selected schools in Richmond, B.C.. The children were taped in three different sessions within their classroom - a free-play session, a story-telling session and an interview session. The written language data was obtained by analysing the first two books from the Grade one level for the Reading 720 and Language Patterns (Revised) basal reading series.

Based on the syntactic measures used, for the most part the children's oral syntax was found to be significantly more complex than the syntax in the Reading 720 series. ($p < .05$). Except for the use of dependent clauses, and the length of adverb phrases and clauses, the Language Patterns series was found to be closely matched to the syntax of the children.

The results of this study warrant careful consideration by those involved in the creation and implementation of beginning reading materials.

To my father and mother whose
inspiration, dedication, and
love helped this thesis become
a reality.

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CHAPTER IGENERAL NATURE OF THE PROBLEM

When children come to school, they are quite fluent in spoken English and yet oftentimes the very nature of many basal reading series tends to ignore rather than capitalize on this tacit knowledge of language. Thus, in examining children's linguistic competencies, there appears to be a lack of congruency between informal education, that is, the education children receive prior to entering the first grade, and formal education, the education children receive upon entering the first grade. In his essay "Properly Literate", O'Neil (1977) summarizes this standpoint on schooling and captures the nature of the problem which this study addresses:

"Before they go off to school, children have engaged in five years of bringing coherent (unspoken) explanations to the world of experiences, linguistic, social, etc. that they face. They're doing pretty well at it, too...(But) Reading is taught as if it were another language, another world, not as if it were a highly abstract representation of the language that the child already has tacit knowledge of. Intuitive connections are erased. And so is knowledge."

(pg. 75)

It is proposed that the children's oral linguistic competencies have not always been given adequate consideration in the linguistic content of some of the beginning reading texts.

Thus, the aim of this research is to compare the oral syntax of Canadian kindergarten children with the written syntax in the two initial basal reading series recently prescribed for use in the schools of British Columbia (Victoria, 1978).

This information could be helpful in providing some guidelines for the linguistic content of beginning reading texts. Such findings may be of particular interest to those involved in curriculum development, especially in the creation and implementation of beginning reading materials.

PROBLEMS FOR INVESTIGATION

More specifically, the following questions will be addressed:

What syntax occurs in the Reading 720 beginning readers - "A Pocketful of Sunshine" and "A Duck Is A Duck?"

What syntax occurs in the Language Patterns (Revised) beginning series - "Listening Letters" and "Laughing Letters?"

What is the relationship between the syntax in the Reading 720 readers and the Language Patterns (Revised) readers?

What syntax is evident in the speech of selected Canadian kindergarten children?

What is the relationship between the oral syntax of the children and written syntax in the Reading 720 readers?

What is the relationship between the oral syntax of the children and the written syntax in the Language Patterns (Revised) readers?

For the various "relationships" that were studied, refer to Chapter 4, page 42.

PREMISE OF THE STUDY

Literacy, defined as "the ability to read and write for practical purposes of daily life" is one of the paramount goals of our society. (Bullock, 1975; pg. 10). Calfee and Drum (1978) present a historical review of research on reading acquisition and point out that:

"In countries which pride themselves on their democratic ideals, the goals of an informed citizenry leads naturally to the effort for universal literacy."

(pg. 189)

Consequently, an educational system exists which is entirely dependent upon the adequate attainment of a basic reading ability.

The task of teaching our children to become skilled readers is, therefore, a topic of much discussion. Literally millions of dollars and man-hours have been spent in the pursuit of the answer to the question: "What is the best way to reach a young child to read?" In fact, according to Mathews (1966), "propositions about how best to teach reading have been disputed for at least 450 years, probably more." (Calfee & Drum, 1978; pg. 184). And yet it seems that in spite of the extensive research and experimentation, an alarming number of normal children find reading difficult. The Bullock Report (1975), an enquiry into the reading problem in Great Britain, reveals that:

"From the evidence collated it seems that approximately 20 per cent of 7-year olds are virtually non-readers, while 4 per cent of 15-year olds can only read as well as a 7-9-year old, and over 10 per cent read less well than the average 11-year old."

(pg. 106)

And according to estimations from the U.S.A., Australia and Britain, "The overall picture seems fairly constant across English-speaking cultures." (Hart, 1977, pg. 13).

Recent research in psycholinguistics has made significant contributions to the field of reading. The integral relationship between oral language competency and reading has been emphasized. The psycholinguistic view of reading, as defined by Smith and Goodman, is founded on the notion that "literacy is built on the base of the child's existing language." (Goodman, 1969, pg.27).

The active role of the individual in language processing has also been emphasized throughout psycholinguistic literature. Vital contributions are made by the reader's experiences, expectations and linguistic knowledge. According to Smith (1971) and Goodman (1968), the process of reading is a meaningful interaction between the reader's language and the writer's language. The reader is actively engaged in extracting meaning from an array of graphic symbols arranged in a spatial dimension.

Another important notion can be traced throughout the psycholinguistic literature on reading. Studies reveal that many reading series fail to recognize the level of linguistic sophistication which children bring to their initial reading experience. As Smith, Goodman and Meredith (1974) point out, the problem with many presently-used reading texts:

"is not that they are silly, but that they are not language. Any system for simplifying reading material must stop short of creating language that is like none the child has ever heard. The child must be able to use his language knowledge right from the beginning."

(Smith, Meredith, Goodman
1974; pg. 272)

If the reading process outlined by Smith, Goodman, & Meredith is actually what happens in the reader's brain, reading materials which reflect children's oral speech patterns should facilitate this reading process. Recently there have been a few studies conducted in the United States, Japan, Eastern Canada, Australia, and Brazil which have analyzed the linguistic content of children's speech and their reading texts. (Arthur, 1979; Handscombe, 1972; Hart, Walker, Gray, 1977; Inacio, 1977). Such an investigation is needed in Western Canada.

Therefore, the author believes that there is a need to compare the oral language of Canadian children with the written language in the two prescribed reading texts used in British Columbia, Canada--i.e., Reading 720 published by Ginn and Language Patterns (Revised) published by Holt, Rhinehart & Winston.

LIMITATIONS OF THE STUDY

1. This study is limited to the oral production of a selected group of kindergarten children from Richmond, British Columbia. Only insofar as the sample population reflects the larger population can the results be generalized to other groups.
2. The study is limited to the description of the language in the two reading series prescribed for use in the beginning reading programmes in British Columbia. Thus, the findings can only be generalized to these particular texts.

Definition of Terms

In this study, the following terms will be used according to the accompanying definitions:

ANALYTICAL METHOD: reading method which initially presents the whole word, followed by a breakdown into smaller parts; this analysis of the words provides correct pronunciation.

BASAL READER: graded series of textbooks moving from single to complex skills, which provide the learning and practice to become an independent reader; usually provided for the teacher's use are guides for instruction, workbooks for development of student's skills, and other supplemental aids.

BASAL SERIES: graded set of reading texts

BASAL TEXT: one of a series of basal reader texts

CLAUSE: a group of words containing a subject and a predicate and forming part of a compound or complex sentence.

COMMUNICATION UNIT (C-UNIT): an independent clause with its modifiers (Loban).

DECODING: process of identifying the sound value (phonemes) of the printed symbol (grapheme); looking at the printed symbol CART and pronouncing the word CART.

DEPENDENT OR SUBORDINATE CLAUSE: a clause that cannot stand alone because it is dependent on the rest of the sentence for its meaning. It does not express a complete thought. It must always be attached to the main clause as a part of a sentence. There are three types - noun, adjective and adverb.

ENCODING: analysis and conversion of oral language into representative written symbols.

ENGLISH PRIMARY LANGUAGE USERS (OPL): people who only speak English, both at home and at school.

ENGLISH SECOND LANGUAGE USERS (ESL): people whose dominant language at home is not English.

LANGUAGE EXPERIENCE METHOD: method of teaching reading which includes both the receptive and expressive aspects of language, using story content dictated or developed from the children's personal experience or ideas; instructional stages: oral discussion, story dictation, story reading, word recognition and/or word attack activities, development of word banks and recreational reading.

LINGUISTIC ABILITY: the inherent or developed capacity with language.

LINGUISTIC COMPETENCIES: skills, concepts, attitudes which are related directly to language.

LITERACY: the ability to read and write for practical purposes of daily life.

MAZE UNIT (M-UNIT): a series of words for initial parts of words), or unattached fragments which do not constitute a communication unit and are not necessary to the communication unit.

PHONOLOGICAL UNIT: practically, this unit is a sentence. In transcribing speech, the unit is determined by inflection, stress, intonation, and pause of the speaker.

(Strickland, Loban)

PHRASE: a group of related words not expressing a complete thought and not including a subject and a predicate. There are three types: adjective, adverb and noun.

PSYCHOLINGUISTICS: field of study which encompasses psychology and linguistics, the resultant blend allows the examination of language as a total process.

SENTENCE: herein defined as any language pattern beginning with a capital letter and ending with a period.

SYNTHETIC METHOD: reading instructional method in which the learner starts with short and simple units as letters of the alphabet, syllables, etc., and progresses to polysyllabic words, phrases, and sentences; part-to-whole.

T-UNIT: a minimal terminable unit which contains some independent clause and any dependent clauses syntactically related to it.

(Hunt, 1965)

The definitions for the terms pertaining to reading have been taken from "Dictionary of Reading and Learning Disability Terms" by Clifford L. Bush & Robert C. Andrews, Educational & Psychological Associates Press: New Jersey, 1973.

The definitions pertaining to grammar have been taken from "An Instant Resource: Hands-On Grammar," by Stan Laird, Fearon-Pitman Publishers, Inc., Belmont, California. 1977

CHAPTER II

BACKGROUND LITERATURE

Literature relevant to this investigation is presented under the following headings:

Children's Linguistic Abilities and Development

The Language-Reading Relationship

(a) Language Ability and Reading Achievement

(b) Oral Language and the Reading Process

The Linguistic Content of Reading Materials

Reading Performance and Language-Based Materials

Children's Linguistic Abilities

Among the earliest and the most valuable acquisitions of children is their treasury of words and grammar. Chuvosky (1963), a long-time observer of children's language found that at about one year old, children know about ten words, at two years of age 250-300 words, and by the end of the third year, their vocabulary has grown into the thousands. (pg. 11). The development of syntactic abilities during the pre-school years is also regarded as an incredible process. Chuvosky commented on this feat:

"The same is true of the grammatical forms that the child learns in the same period. I once tried to make a list of these forms (declensions, conjugations, the use of prefixes and suffixes). I noted down not less than seventy. Most of these "generalizations" that are formed in the child's brain forever, for his entire life, are established between the ages of three

and four, when the linguistic giftedness seems to be particularly strong."

(Chuvosky, pg. 11)

Indeed, many marvel at the systematic, expediant manner by which language learning occurs. It fascinated Chuvosky to such an extent that he called the child "a linguistic genius." (pg. 7).

Children starting school do possess an amazing amount of linguistic knowledge. Educators need to recognize and capitalize on the linguistic competency which children bring to the reading task.

Children's Linguistic Development

Although linguists are impressed by the linguistic knowledge of children, the research has revealed that linguistic development is not complete by the age of four or five.

(Anisfield & Tucker, 1973; Chomsky, 1969; Hatch, 1971; Hunt, 1965; Menyuk, 1969). After testing forty children in the Boston area, Carol Chomsky (1969) found that:

- (1) active syntactic acquisition was not complete by the age of 5 or 6, but it was taking place up to the age of 9 and perhaps beyond. (pg. 121)
- (2) there was an order and rate in the acquisition of structures.

These linguistic developmental stages have been the topic of several other extensive studies.

Templin (1957), one of the pioneers in language development studies, measured the utterances of children from three to eight years. As the students' age increased, he found a clear increase in the use of complex elements, especially the adjunctive clause.

Loban (1963) conducted a longitudinal study of kindergarten to Grade six-aged children residing in Oakland, California. He devised a "communication unit" - an analytic unit which measured the syntactic complexity of the student's reading, writing and speaking samples. From the sample of 338 students, a group of thirty students were selected to form a "high" group and twenty-four students to form a "low" group. The production of the two groups was compared and some of the conclusions of this study were:

1. The fluency and the amount of students' language increased over the years.
2. Flexibility within a syntactic pattern, rather than the pattern itself, was a more effective measure of developmental language control.
3. As the students got older, the number of mazes and average number of words per maze

unit decreased; however, when the low group was analyzed separately, the average number of words per maze unit increased.

4. The "high" group showed greater ability with regard to noun clauses, infinitives, verbals, participle, prepositional and gerund phrases, appositives, nominative absolutes and clusters of words in cumulative sentences. (1970; pg. 625)
5. The "low" group..."says less, has more difficulty in saying it and has less vocabulary with which to express what it says." (pg. 43)

O'Donnell, Griffin and Norris (1963) analyzed the oral syntax patterns of elementary school children and found that there was a developmental sequence of syntactic acquisition. They noticed that relative clauses ("The boy who lives in Canada") were used more frequently in kindergarten than in the older grades, while other items, like nouns modified by participles ("The boy living in Canada"), were used more frequently in the later grades. As the children's age increased, they reported a decrease in the length of meaningless speech fragments (mazes). O'Donnell et al also observed that the first year in school was one of rapid and extensive development of oral and written language structures which slowed down until the end of the fifth year, when it increased considerably.

Hunt's (1965) analysis of grammatical structures contained in the written materials of fourth, eighth and twelfth grade students also revealed a sequential development in the acquisition of syntactic structures. Longer responses, less redundancy and more clauses, especially adjective clauses, steadily increased according to grade level.

Menyuk's studies (1969), which are based on children's use of base structure rules and transformational rules in their oral speech patterns, supported the notion of a sequential development of language acquisition. Similar to the other studies cited, Menyuk's research revealed evidence that specific aspects of linguistic development are still being completed beyond six years of age.

The Language-Reading Relationship

(a) Language Ability and Reading Achievement

A number of studies have indicated that ability in language tends to influence reading achievement.

Loban's longitudinal study (1963) evaluated the linguistic patterns of students from kindergarten to Grade six. He reported that:

"those subjects who read well by the end of grade three are the subjects who ranked high in oral language for the kindergarten and first three years of the study...not a single one of the twenty best readers in Grade three is below the mean on oral language."

(pg. 69)

The overall results indicated that a positive correlation existed between language ability and reading achievement at the Grade three to Grade six level.

A series of studies have been conducted using the Illinois Test of Psycholinguistic Abilities as a means of determining which factors are important in the reading process. The research has suggested that reading achievement is dependent on the ability to use language at an automatic-sequential integrative level. (Bateman & Weatherall, 1965; Foster, 1963; Hart, 1970; McLeod, 1967).

In 1967, Fry surveyed several studies which investigated the relationship between reading achievement and language development. (Shire, 1945; Evertts, 1962; Barnes, 1962; Cordes, 1965; and Schutte, 1967). Generally, the results showed that reading achievement was related to the number of different words used and, or to the total linguistic output of the subjects. The results of Fry's comparison of the language patterns of below-average and above-average readers revealed that: "the above-average group used more conversation in their stories, used a greater number of transformations and more T-units per communication unit." (1969, pg. 70).

Springer (1975) explored the relationship between standard English auditory discrimination and first-grade reading achievement and found significant correlations between scores on auditory discrimination tests and scores on composite reading

particularly in the area of vocabulary and comprehension.

Moe and Rush (1977) conducted a comparison between the oral language fluency of children entering Grade one and their success in learning to read as measured at the end of the school year. They reported a positive relationship between language ability and reading achievement but emphasized the need to develop more effective measures for identifying and evaluating the specific linguistic factors involved in the reading process.

According to the research cited, there seems to be an agreement that language ability effects reading performance.

(b) Oral Language and the Reading Process

While listening, speaking, reading and writing have distinctive qualities, they are nevertheless interrelated facets of the communication process. As discussed in the previous section, young children come to school as very effective oral language users--a knowledge gained through listening and speaking. This mastery of the spoken language is accomplished with no systematic instruction or programmed materials. And yet, as Goodman (1972) pointed out, "children are far more uniformly successful in learning to talk and listen than they are in learning to read and write." (pg. 505)

Much of the literature on the psycholinguistic approach to reading has claimed that one of the major reasons for this

limited success in reading instruction is that reading has not been regarded as one dimension of the same language process as listening and speaking. (Goodman, 1968; Smith, 1971; Ryan and Semmel, 1969). In the article "Reading--The Key is in Children's Language," Goodman (1972) outlined some of the teaching practices which have been responsible for this:

- We have been teaching reading as a set of skills to be learned, rather than as a language process to be mastered. - We have been teaching children who are competent users of oral language as if they were beginners in language learning.
- We have ignored the language structure and in the name of teaching, fed children strings of letters or strings of words.
- We have taught children to match letters to sounds without giving them a basic knowledge of complex relationships between oral and written English.

Thus, according to the psycholinguistic view of reading, as defined by Smith (1971) and Goodman (1968), reading is not a matter of sequentially pairing visual forms with auditory forms which are then interpreted like speech. (Ryan & Semmel, 1969; pg. 59). Rather, reading is a constructive, active process in which the reader uses his cognitive and linguistic knowledge to determine, from a careful sampling of cues, the author's message. In processing oral language, children tend to group sequences of sounds into meaningful units. (Werner & Kaplan, 1950; Hutton-locher, 1964). In the reading process the reader must also group sequences of letters and words into meaningful units. According to Smith (1971), reading involves: "identifying through distinctive features graphic units which are meaningful

because they represent semantic "chunks" of the reader's organized interpretation of his or her world." (Hart, 1978; pg. 15).

The reader approaches written language with the expectation of using his knowledge of language to perceive a message from the text and thus becomes an expert at what Goodman (1970) has called "the psycholinguistic guessing game". He becomes an expert not by "precise perception" and identification of all elements, but from skill in selecting the finest, most productive cues necessary to produce guesses which are right the first time. (pg. 260).

The use of Miscue Analysis as developed by K. Goodman, (1965) and Y. Goodman & Burke (1972) revealed that oral reading miscues (errors students make as read aloud) "are seldom random but reflect the reader's effort to render a meaningful rendition of the text. (Calfee & Drum, 1978; pg. 193).

Therefore, a common view voiced throughout the psycholinguistic research is that reading is a language-based process and consequently readers expect reading materials to conform to the structures of oral language they have already acquired. The Mount Gravatt Language research team summarized this viewpoint:

"Literacy is an extension of oracy--the ability to communicate effectively in oral language must precede and is inextricably interwoven with the development of ability to create and interpret language in its written form."

(Hart, Walker & Gray, 1978;
pg. 1)

The Linguistic Content of Reading Materials

Since oral language competency is an important factor operating in the reading process, researchers have emphasized the need for beginning reading materials which correspond to the oral language patterns already acquired by the child. Otherwise, as the Bullock Report warned, reading materials might hinder the process of interpreting written language from oral linguistic knowledge:

"A printed text is easier to read the more closely its structures are related to those used by the reader in normal speech... Reading material which presents children with...unreal language therefore lacks predictability and prevents them from making use of the sequential probability in linguistic structure."

(Bullock Report, pg. 92)

Critics of current reading materials are concerned with the "unnatural" language in children's reading texts (Stevens, 1965; Amsden, 1964). Both Strickland (1962) and Loban (1963) criticized the language used in readers as "infantile and monotonous" compared to the richness and variety of the spoken language of the students using these materials. (Goodman, 1968; pg. 298). In the teacher's manual of "Breakthrough to Literacy" (1973), a language-based initial reading programme, the authors pointed out that the language in most primers is artificial:

"Forms such as "Dan has a can" or "See the dog. Look, look, look" are rarely encountered

outside the pages of a primer. Books composed entirely from "high frequency" words are seldom gripping in content, and primers seldom match the language of children in their wide interest."

(pg. 145)

Since beginning reading materials have been the subject of much criticism, it seems necessary to view some of the results of studies which have systematically analysed the relationship between children's oral language and the language in the reading texts. Strickland's (1962) research is a major study found in the literature on children's language development. The purpose of her study was:

"...to discover, isolate, and describe the patterns of syntax found in the oral language of elementary school children and to ascertain whether they appeared in certain representative reading textbooks designed for these grade levels."

(pg. 5)

An informal speech sample was gathered by stimulating one hundred children from grades one to six to talk about themselves, their families, pets or whatever was of interest at the moment. (pg. 16). Then samples from four widely-used textbooks were analysed to determine if they contained the oral language patterns most frequently used by children. Strickland's results indicated that the only linguistic pattern which appeared in both samples at all levels was the basic Subject Verb Object utterance. There was no systematic introduction of the elements of subordination, an element found to be an indicator of linguistic

maturity in the oral language analysis. Furthermore, in the texts there appeared to be no scheme for syntax control to compare with the widely-practiced vocabulary control.

Patterned on Strickland's study, Riling (1965) compared the oral and written language patterns of students in Grades four and six with the language in six basal reading programmes. The results revealed that the language of the children in this study was slightly inferior structurally to the language in most of their textbooks. Furthermore, similar to Strickland's findings, Riling found that children's textbooks did not follow a consistent sequential development of sentence structure.

In 1970, Handscombe concluded a three-year study which investigated the oral language patterns of a sample of students in Toronto, Canada. The findings indicated that children's oral speech was more complex than the written language in the reading programmes provided by the school system.

In 1974, Lutz undertook a systematic investigation of the language of twenty-five basal reading texts intended for use in kindergarten through grade three. He discovered that:

"the overwhelming majority of sentences (over 10,000 of 12,000) were simple active declarative sentences. ...this syntactic monotony; coupled with the fact that the sentences are rarely longer than ten words (presumably to accommodate a short attention span and memory), makes for sterile syntax indeed."

(pg. 37)

"The Language of Children - A Key to Literacy" (1977) outlined the results of a fifteen-year study conducted at Mount Gravatt College, Queensland, Australia. Quite an extensive sample of children's natural speech patterns was collected and compared with the written language found in four introductory reading series used in England and Australia. Similar to the other studies cited, the results indicated that children's language was different than textbook language:

"Sufficient information is available from a count of word sequences to indicate that the sequences most frequently used in reading books are not the ones most frequently used in children's language. It follows that the language in most readers is not child language in the sense of being readily understood by children."

(Hart, Walker, Gray, 1977, pg. 20)

Following the schema of the Mount Gravatt project, the researcher (1978) conducted a small-scale comparison of children's language and textbook language. The twenty most frequent one and two-word sequences found in children's language by the Mount Gravatt Research Project were compared to the twenty most frequently used words in two beginning reading series used in British Columbia - Reading 720 and Language Patterns (Revised). Although quite limited in size and scope, this single language analysis revealed that the words and word sequences most frequently used in these reading programmes were not always the ones most frequently used in children's oral speech.

In 1977, Bohn conducted an extensive language comparison. He examined the productive linguistic capacities of a selected sample of Brazilian children and the language found in the materials used to teach beginning reading. He hypothesized that children's language would display a broader range of structures than the primers. Although this notion was not supported, the results revealed a very low number of sentence types and an obvious absence of complex sentences, particularly in the initial portions of the primers. Bohn emphasized the serious implications of reading materials which do not match children's oral language patterns:

"...Most teachers will rely entirely on the primer in their teaching, and the child thus will have a very limited reading experiences in the first year of his schooling...They certainly cannot be taught a language by means that are inappropriate to their developmental level, and thus rich exposure to natural language is crucial."

He did not recommend lifting control from beginning reading materials but warned that:

"the child should be exposed to more than a mere 345 sentences found in the primers analysed, and which total an average of under three sentences per day in a school year."

(pg. 200-1)

In 1979, Arthur conducted a cross-linguistic investigation of the oral language of third grade children in the U.S.A. and

Japan and the language in their basal readers. According to the measures of syntactic complexity employed, the oral language patterns of American children and Japanese were essentially the same but varied greatly from the language in the basals. Similar to Strickland's (1962) and Riling's (1965) results, no systematic control over the development of sentence structure in the textbooks was found. Contrary to Strickland's (1962) finding that "the oral language children use is far more advanced than the language of the books in which they are taught to read" (pg. 106), Arthur found that the language of children in both countries was significantly less complex than the language of the basals.

The research presented has explored the relationship between oral language and written language. A discrepancy between the oral language of children and the written language in the reading textbooks has been reported. Studies evaluating the benefits of using language-based reading materials will be presented in the next section.

Reading Performance & Language-Based Materials

In 1962, Strickland suggested that "evidence is needed as to whether children would be aided or hindered by the use of sentences in their books more like the sentences they use in their speech". (pg. 106). To evaluate the effect of language-based materials on reading performance, a number of studies have been conducted.

Amsden (1964) conducted a study which found that the more the reading textbooks approximated the student's oral speech patterns, the greater the reading comprehension.

Ruddell (1965) undertook a major investigation to determine whether or not materials based on language patterns used by children have an effect on reading performance. From Strickland's (1962) list of high frequency and low frequency language patterns for Grade four students, he wrote two types of passages. The reading comprehension of 131 Indiana students was evaluated on both types of materials by means of a cloze test. Ruddell concluded that:

- Reading comprehension is a function of the similarity between the patterns of language structure found in the reading material and the patterns of language structure found in children's speech.
- Reading comprehension scores on materials that utilize the high frequency patterns of oral language structure are significantly greater than reading comprehension scores on materials that utilize low frequency patterns of oral language structure.

Williams (1968) compared the comprehension of good and poor readers on science text material which was rewritten to match their language patterns. He found that there was a greater increase in comprehension for the poor readers. This increase was not merely a result of a simplification of syntax, but rather, was due to the precise matching of the syntax of the poor reader with the syntax of the text.

Based on Ruddell's study, Tatham (1968) designed a study to further investigate children's reading comprehension of language-based materials. A comparison of students at two grade levels - Grade two and four - was "intended to encourage the emergence of any developmental levels with respect to children's ability to comprehend diverse kinds of language patterns. (pg. 5). The pertinent conclusions were:

- 1) A significant number of second and fourth graders comprehended material written with frequent oral language patterns better than material written with infrequent oral language patterns.
- 2) Fourth graders comprehended material written with frequent and infrequent oral language patterns significantly better than the second graders.

According to Tatham, if maximum comprehension is the goal, reading materials should be based on the linguistic patterns that children find easier to comprehend--which are their own oral language patterns.

Fagan (1971) found that reading comprehension seemed to be related to the type of syntactic structure in the text. The investigation revealed that patterns normally found in direct speech contributed the least to sentence and passage difficulty.

McCabe (1977) identified structures which appeared to inhibit or facilitate comprehension for elementary and junior high school subjects. Similar to Williams' results (1968), a significant effect upon comprehension of mathematical material rewritten on the basis of students' oral language patterns was found. McCabe concluded with a message for curriculum development:

"...become sensitive to those structures used by students in their natural discourse...try to include..., in oral and written exposition, as many of those linguistic structures employed by students as possible. As an corollary, the use of linguistic structures which students do not use should be minimized."

(pg. 16)

Based on Strickland's (1962) frequency list of oral language patterns and Tatham's (1969) comprehension tasks, Gardner (1979) investigated the effects of similar oral and

written language patterns on children's reading comprehension at the beginning reading level. Beginning readers comprehended materials based on frequently-used oral language patterns better than they comprehended materials based on infrequently-used language patterns.

In response to Strickland's suggestion that educators need to ascertain whether or not materials based on children's language patterns have an effect on reading performance, the research cited above has suggested that there is a positive relationship between reading performance and language-based reading materials.

These findings warrant careful consideration by those involved in producing and implementing the reading curriculum. As Tatham (1968) pointed out, "it seems logical and in keeping with linguistic knowledge to use children's patterns of language structure in written material to facilitate learning the concept that spoken and written language are related." (pg. 149-150). Hopefully these results will become guidelines for the development of effective beginning reading materials.

CHAPTER III

METHODS OF COLLECTING AND TREATING DATA

Introduction

The researcher realized that this study involves an analysis of children's language which would require designing a situation in which observable and measurable records could be obtained. Furthermore, to attain a sample of "natural" language, the setting and technique of investigation should simulate, as much as possible, the "natural" environment. These factors were important considerations in the design of this study.

DATA COLLECTION - ORAL LANGUAGE SAMPLE

Methodology

In order to obtain a realistic measure of the children's linguistic abilities, the researcher collected the language sample within their classroom setting.¹ To assess the depth and breadth of their linguistic competencies, different formal and informal modes for eliciting language were used on a selected sample of twenty-four children.² To collect the language sample, three FM microphones and three portable FM receiver-audio taperecorder units were used. The microphones were tunable to separate frequencies so that the three pairs of units (one unit = a microphone and a receiver-taperecorder) operated on three separate channels. Thus, the sounds picked

up by each microphone were recorded separately on each tape. Each microphone was worn by one of the subjects. The speech of each subject was recorded separately on a tape. In this way it was possible to collect the data of the individual's discourse. Because background sounds were slightly audible, if necessary, it would be possible to correlate one subject's utterances with the other members of the group. This language retrieval technique permitted the normal mobility and interaction of kindergarten children and at the same time allowed ease in transcription of individual speech patterns.

The data came from three modes of children's linguistic interaction:

- (1) a free-play session
- (2) a story-telling session
- (3) a interview session

In the first mode, spontaneous speech was recorded for fifteen minutes as three children played freely, without any adult intervention, in the "Dress-Up Center". The same group were then involved in a story-telling session - the researcher was present to introduce the task and to ask questions. The subjects were asked to tell a five-minute story to the group - they could invent a story, tell a well-known story such as Cinderella, or tell a story with the aid of a picture book. Most of the children did use a book to help sequence their ideas.

In contrast to the first two sessions, the third session

was quite structured. The researcher interviewed the group for fifteen minutes. In order to get a sample of the breadth and depth of their linguistic capabilities, divergent questioning techniques were used. (See Appendix B). Interviews were conducted according to some of the "General Guidelines for Interviews" summarized by Witz and Goodwin (1970). (Appendix C). This meant that it was necessary to "encourage verbal output" by asking for explanations by avoiding asking questions that permitted yes-no answers, and by provoking "the child's own summaries and general statements" (pg. 2). In conjunction with the verbal stimuli, both visual stimuli in the form of picture cards and tactile stimuli in the form of live animals were employed. (See Appendix A).

PILOT STUDIES

To determine how appropriate the procedures were for probing the research problem, a pilot investigation was conducted. Six children were randomly chosen from the kindergarten class at Rideau Park School, Richmond. Prior to collecting data, the investigator spent time getting acquainted with the student, and familiarizing the students with the taping equipment. The oral language sample was collected within the classroom setting. The audio-tapes were transcribed and analysed. The three modes for collecting data were evaluated. Adjustments were made in order to establish the final form of procedures and materials for the major investigation.

SELECTION OF SCHOOLS

Stratified sampling was used to obtain twenty-four students from kindergarten classes of three elementary schools in Richmond. Errington Elementary, Garden City Elementary, and Kingswood Elementary were selected because of the convenient location of the schools and the positive attitude of the principals and teachers towards the project. Also, the student population contained some of the varied linguistic backgrounds characteristic of the Greater Vancouver area.

SELECTION OF SUBJECTS

After obtaining the permission of the Richmond School Board, the interviewer contacted the three principals and kindergarten teachers of the schools involved and arranged to select a stratified random sample. A table of random numbers was used to select from each school eight subjects divided evenly on the basis of sex and language. This provided a final sample of twenty-four subjects; six male and six female subjects with English as a Primary Language, and six male and six female subjects with English as a Second Language.³

To ensure selection of a sample without any particular systematic bias, rigorous sampling procedures were employed. The final group of participants was chosen from both morning and afternoon classes. These boys and girls ranged from 5 years and 5 months to 6 years and 5 months of age. The teachers whose

students were involved varied in age, teaching experience and educational philosophy.⁴

SCHEDULE FOR DATA COLLECTION

Research was conducted at the three respective schools within the kindergarten classroom with the regular teacher present. Audio-taping was done as unobtrusively as possible by a technician in the same room as the researcher and the subjects.

Each subject was recorded in three different sessions. In setting up a schedule for data collection, there were two groups of three subjects in each class which took turns participating in the taping sessions. This was to minimize the tiring of the subjects. (Appendix D).

WRITTEN LANGUAGE SAMPLE

The data for the written language sample was obtained from the two basal reading series - Reading 720 by Ginn & Company and Language Patterns (Revised), by Holt, Rhinehart & Winston, recently prescribed texts for the elementary grades in the province of British Columbia. The first two books at the Grade one level were analysed.

READING 720

The Reading 720 is a linguistically-based developmental reading series. The stated philosophy is that reading is:

- a process of decoding
- comprehending the author's message
- critically evaluating the author's message, and
- incorporating the author's ideas into one's own thinking as a result of reading. (Ginn, 1978; pg. T.8)

For each dimension, the emphasis is on processing from the known to the unknown. Decoding skills, of an analytical nature, are taught so the reader can unlock unknown words within a meaningful context. Even at the initial learning stages, "reading for meaning" is stressed. The units within each reader are organized into developing specific themes with varied story types. The titles of readers examined are: "A Pocketful of Sunshine," and "A Duck Is A Duck".

LANGUAGE PATTERNS (REVISED)

Language Patterns indicates that it is a multi-sensory developmental reading programme. The stated aim of the series is to achieve literacy which is defined as confidence and adeptness in the Language Arts of reading, writing, speaking and listening. (Holt, 1976; pg. x-xi). A careful introduction of sounds with a one-to-one audio-visual correspondence characterizes the initial reading materials. Decoding is

heavily emphasized. In contrast to Reading 720, a synthetic rather than an analytic approach is used. As stated in the philosophy of the programme, "there is naturally more emphasis on the phonics component at the early stages to help the child develop the skills that lead to independent reading power." (Holt, pg. ix). The titles of the readers examined are: "Listening Letters" and "Laughing Letters".

ORAL LANGUAGE ANALYSIS

In the last forty years, children's language and language acquisition has been the topic of much attention. Consequently, several standardized measures have been developed for comparison of the linguistic patterns of different groups of children. Tests for determining the mean length of utterances and the frequency with which certain types of words are used by children have been created. Certain grammatical abilities have been identified and evaluated as indicators of syntactic maturity. (Anisfield & Tucker, 1973; Chomsky, 1969; Fagan, 1970; Hatch, 1971; Menyuk, 1969). Other measures included an assessment of syntactic and structural features of language for remediation (Chyratal et al, 1976) and an analysis of vocabulary (Chotlos 1944 & Johnson, 1944; O'Rourke, 1974; Thorndike & Lorge, 1944).

In 1953, Loban began a longitudinal study which traced the oral and written linguistic growth of over 300 students in Oakland, California from kindergarten through Grade twelve.

This study was also concerned with developing appropriate methods of semantic and structural analysis. (Loban, 1967). For classroom and research evaluation, an objective method for segmenting the flow of oral language was devised and the following counts were determined:

- (1) length of communication unit (average number of words per communication unit)
- (2) length of maze unit (average number of words per maze unit)

With some adaptations, Loban's method of analysis has formed the broad framework for the evaluation of syntactical patterns in this investigation.

SEGMENTATION OF ORAL LANGUAGE

The data collected was transcribed and analyzed according to the methodology outlined by Loban (1976). The two basic units of segmentation, the communication unit (referred to as the C-unit) and the maze unit (referred to as the M-unit) have been used in this research. (See Appendix H for a sample transcript).

THE COMMUNICATION UNIT

Calculating the average number of words per communication unit is an effective means of quantifying oral language. Watts (1948)

described it as "the natural linguistic unit...a group of words which cannot be further divided without the loss of their essential meaning". Because of the subjective nature of "essential meaning," this definition proved difficult to apply. Thus, Loban adopted Hunt's (1965) structural definition which referred to a segment as "each independent clause with its modifiers."⁵

The children's transcripts were segmented into C-units. As outlined by Loban, there were three cases in which a C-unit could occur:

1. Each independent grammatical predication
2. Each answer to a question, provided that
the answer lacks only the repetition
of the question elements to satisfy the
criterion of independent predication
3. Each word such as 'Yes' or 'No' when given
in answer to a question such as "Have you
ever been sick?" (pg. 9)

THE MAZE UNIT

Oftentimes oral speech patterns contain hesitations, false starts, and meaningless repetitions. Loban referred to these as "mazes" and identified a maze unit as "a series of words (or initial parts of words), or unattached fragments which

do not constitute a communication unit and are not necessary to the communication unit." (pg. 106).

In this study, the children's transcripts were segmented into maze units and communication units and coded accordingly. Each unit was identified by a six-number coding group which indicated the number and type of words each unit contained. This was easily interpreted by the computer programmes which calculated the number of C-units and M-units per subject and the mean number of words per unit. These measures were used to evaluate levels of syntactical fluency. (Appendix E & F).

PHRASES AND DEPENDENT CLAUSES

Researchers have pointed out that the clause is an important measure of language and thought (Jespersen, 1922; Piaget, 1925). Loban (1963) claimed that "phrases and dependent clauses are verbal means of showing relationships. Through them, speakers communicate more complex propositions than are possible with single independent clauses." (pg. 17-18). Typically, subordination has been considered a more mature and difficult form of syntactical structure than simple statements. (Frognier, 1933; Heider & Heider, 1940; Granowsky, 1972; LaBrant, 1933; Templin, 1957; Loban, 1963). Thus, in this study, the C-units and M-units were further segmented and coded to indicate the length and type of phrase or dependent clause. Following the method of analysis used by Arthur (1979), the

amount of phrasing and subordination was reported in terms of percentages of C-units housing these units. Also, the percentage of C-units not containing any phrases or dependent clauses was calculated. These measures were used to evaluate levels of syntactical complexity.

VOCABULARY

After segmentation, the transcripts were analyzed in order to prepare a cumulative vocabulary list for the sample population. The words listed were grouped into nouns, verbs, adjectives, adverbs, prepositions, pronouns, interjections, contractions and conjunctions according to their use in dialogue. Once these words were classified, each vocabulary item was numerically coded according to the type of word and its place on the alphabetized cumulative vocabulary list. (Appendix F & G).

WRITTEN LANGUAGE ANALYSIS

The written language sample was treated in exactly the same manner as the oral language sample. The same syntactical measures were used. However, as Loban (1963) pointed out, "mazes" are tangles in communication unique to speech:

"in the written transcripts, only the communication units will occur... Occasionally in writing there will be some language that is garbled, but such garbles do not arise from the same cause as mazes. They should be noted and removed from the written communication unit."

(pg. 107)

Thus, for the written analysis, only the communication unit was scored.

TABLE 1

FLOW CHART OF PROCEDURES FOR ANALYSIS OF DATATranscripts of Tapes

Segmentation of Transcripts

Syntax

Coding of C-Units & M-Units

Coding Word Count for
C-Units & M-Units

Coding type and word count of:

phrases

noun
adjective
adverb

dependent clauses

noun
adjective
adverbVocabularyMaking an alphabetized
cumulative vocabulary listClassifying and listing words
according to type: nouns,
verbs, pronouns, adverbs,
pronouns, connectives, articles,
prepositions, interjections,
and contractionsWithin each phrase/dependent clause/C-Unit/M-Unit coding words
according to type per vocabulary list

Keypunching

Analysis

(using specialized programmes written
for these data, plus SPSS Crosstabs
(Stat. Pack. for Social Sciences))

Interpretation

NOTES FROM CHAPTER THREE

1. The research was conducted during the last few weeks of June with kindergarten-aged children. This testing time and age group were chosen in an attempt to obtain a measure of the linguistic abilities of Grade one students just prior to beginning a formalized reading programme.
2. To allow for inaudible and unacceptable data, over-sampling was performed.
3. Although subjects were stratified on the basis of English Primary Language Users (EPL) and English Second Language Users (ESL), this information will not be used for analysis at this time.

(EPL - children who spoke English only at home and at school

ESL - children whose dominant language at home was not English)

4. After the language sample had been collected, the teacher provided some background information on each subject. This data on academic achievement, socio-economic status and linguistic background could prove to be vital to subsequent research in this area.
5. The reader is encouraged to refer to Appendix B, pp. 100-107 of Loban's book, Language Development, for a complete description of the uses of C-Units and M-Units in language analysis.

CHAPTER IVPRESENTATION & ANALYSIS OF DATA

In order to obtain information on the specific research questions stated in Chapter I, it was necessary to conduct the following measures on the written language of the two basal reading series and the oral language of the children:

- mean length of communication units (C-units)¹
- mean length of maze units (M-units)²
- proportion of C-units and M-units in total communication
- sequence of mean C-unit length³
- frequency of use of different types of phrases and dependent clauses
- mean length of phrases and dependent clauses used per C-unit
- proportion of C-units containing phrases and dependent clauses
- proportion of C-units not containing phrases and dependent clauses

The results of these measures are summarized in the text and tables that follow.

PART I AN ANALYSIS AND COMPARISON OF THE BASAL READERS

(1) A Measure of Fluency - The Communication Unit

Fluency, the ability to find words to express oneself readily and smoothly, is considered a mark of successful

communication. (Loban, 1963). In this study, the average number of words per communication unit is used as a basic measure of fluency.

Table 2 shows the measures of central tendency and variability for words per C-unit for the two basal reading series. The figures are based on the total number of C-units for each basal reader. The mean C-unit length of the Language Patterns series is greater than the mean C-unit length of the Reading 720 series by .59 words. The longest C-unit found, which was 14 words, appeared in the Language Patterns series. The shortest C-units, one word commands, were found in both series. An analysis of variance was run to test for significance among the mean C-unit lengths of the basals. It was found that a significant difference existed ($F=33.42$, $df=1,1330$, $p < .001$); A Student's t-test was computed on mean C-unit lengths and a significant difference was found ($p < .05$).⁴ Table 2 shows a comparison of the mean C-unit lengths between the two reading series.

To determine if the basals were arranged sequentially on the basis of C-unit length, the total number of C-units for each series was divided into 12 samples. For each sample the last 50% of the C-units were analyzed. Hence, the last 59 C-units of each of the 12 samples for the Reading 720 series was compared to the last 51 units of each sample for the Language Patterns series (Table 3). If the language in each of

TABLE 2

Mean Length, Standard Deviation and Range of
C-Units Found in Basal Readers

	$\bar{X}$	<u>s.d.</u>	<u>range</u>
Reading 720	4.24	1.64	2.69
Language Patterns	4.83	2.07	4.32
Difference in $\bar{X}$	.59		

* $p < .05$

the reading series is arranged sequentially from "easy" to "difficult", the researcher expects that this progression could be reflected in an increase in mean C-unit length from the beginning to the end. Thus, the shortest mean C-unit length should be found in the first sample, and the longest mean C-unit length in the twelfth sample. For example, in the Reading 720 series, the mean C-unit length for sample six - which was 2.73, would have been more appropriate as the mean length for sample one. In the Language Patterns series, the mean C-unit length for sample five - which was 5.06, would have been more appropriate as the mean C-unit length for sample nine.

From reading Table 3, it appears that these two initial reading series are not clearly arranged in terms of the complexity of mean C-unit length. When a Spearman Rho Rank Correlation Coefficient was calculated between the sampling order and the order of the mean C-unit lengths, no significant correlation was found for either basal series.

MEASURES OF SYNTACTIC COMPLEXITY

Phrasing and subordination, along with fluency, are important factors in effective communication. In this study, the use of phrases and dependent clauses are considered as indicators of syntactic complexity. To compute these measures, most of the procedures outlined by Arthur (1979) were followed.

(a) Phrases

For each series, the number of different phrases and the

TABLE 3Mean C-unit Length for Samples 1-12 of Basal Readers

<u>Sample</u>	<u>Reading 720</u>	<u>Rank</u>	<u>Language Patterns</u>	<u>Rank</u>
1	4.05	6	3.18	1
2	4.61	7	3.78	2
3	4.83	10	4.75	5
4	4.81	9	4.53	3
5	3.46	4	5.06	9
6	2.73	1	4.76	6
7	3.40	3	4.69	4
8	3.36	2	5.31	10
9	3.78	5	5.55	11
10	4.61	8	4.84	7
11	6.19	12	5.00	8
12	4.93	11	6.29	12

average number of phrases per C-unit was computed and reported in Table 4. It was found that the Language Patterns series has significantly more phrases per C-unit than the Reading 720 series. ($p < .05$). Also, it revealed that the Reading 720 series has only one type of phrase - the adverb phrase. Although the Language Patterns series has mostly adverb phrases, there are examples of both noun and adjective phrases.

The number of C-units containing and not containing phrases was determined and summarized in Table 5. A chi-square test revealed that the distribution of phrases in the basals was significantly different. ($\chi^2 = 34.35$, d.f. = 1, $p < .001$). It showed that the Language Patterns series has significantly more C-units containing phrases than the Reading 720 series.

The mean length of phrases found in the readers was calculated and reported in Table 6. The adverb phrases in the Language Patterns series were significantly longer than those in the Reading 720 series ($p < .05$). Since there were no instances of adjective or noun phrases in the Reading 720 series, a comparison of these phrases could not be conducted.

(b) Dependent Clauses

A summary of the findings regarding the number of different dependent clauses and the average number of clauses per C-unit is given in Table 7. No significant differences between the basals were found.

TABLE 4Average Number of Phrases per C-Unit for the Basal Readers

		<u>Number of Cases Over Total C-Units</u>	<u>Average number of phrases per C-Unit *</u>
Noun Phrases	Reading 720	-	-
	Language Patterns	1/618	.0618
Adverb Phrases	Reading 720	129/714	.1807
	Language Patterns	200/618	.3236
Adjective Phrases	Reading 720	-	-
	Language Patterns	9/618	.0146
Total Phrases	Reading 720	129/714	.1807 **
	Language Patterns	210/618	.3398 **

** $p < .05$

* Calculated by dividing total number of cases over total number of C-units

TABLE 5

Chi-Square Values of C-Units Containing and
Not Containing Phrases for the Basals

	<u>Containing</u>	<u>Not Containing</u>
Reading 720	17.8	82.2
Language Patterns	32.2	67.8

Chi square = 34.35, d.f = 1, $p < .001$

TABLE 6Mean Length of Phrases Found in the Basal Readers

	<u>Reading 720</u>	<u>Language Patterns</u>
Noun Phrases	-	2
Adverb Phrases	2.69 *	3.01 *
Adjective Phrases	-	2.67

$p < .05$

TABLE 7Average Number of Dependent Clauses per C-Unit for the Basals

<u>Data Set</u>	<u>Number of Cases Over Total C-Units</u>	<u>Average Number of Clauses per C-Unit</u>	*
Noun Clauses			
Reading 720	3/714	.0042	
Language Patterns	4/618	.0065	
Adverb Clauses			
Reading 720	-	-	
Language Patterns	5/618	.0081	
Adjective Clauses			
Reading 720	-	-	
Language Patterns	-	-	
Total Clauses			
Reading 720	3/714	.0042	(n.s.)
Language Patterns	9/618	.0146	(n.s.)

* Calculated by dividing total number of cases over
total number of C-units

There were so few instances of dependent clauses that a chi-square test on the distribution of clauses was not conducted. The mean length of dependent clauses found in the readers was calculated and reported in Table 8. However, no significant differences were found.

PART II AN ANALYSIS AND COMPARISON OF THE LANGUAGE OF THE CHILDREN AND THE BASAL READERS

A Measure of Fluency - The Communication Unit

Using the C-unit as a gross measure of syntactic fluency, the language of the children and each of the readers was compared. Table 9 shows the measures of central tendency and variability for words per C-unit for each data set. The figures are based on the total number of C-units for each basal reader and for the oral language sample. The mean C-unit length of the Reading 720 series was less than the mean length of children's oral language by .50 words; the Language Patterns series was greater than the children's oral mean length in the children's language by .09 words. The shortest C-units were one-word commands which were found in all three data sets. The longest C-unit which was 30 words appeared in the children's speech - this had 16 more words than the longest C-unit in the Language Patterns readers and 19 more than the longest C-unit in the Reading 720 series.

TABLE 8Mean Length of Dependent Clauses Found in Basal Readers

	Reading 720	Language Patterns	Difference in
	$\bar{X}$	$\bar{X}$	$\bar{X}$
Noun Clauses	3.67	4.5	.83 (n.s.)
Adverb Clauses	-	6.4	
Adjective Clauses	-	-	

TABLE 9

Mean Length, Standard Deviations, and Range of C-Units Found in
Readers and Children's Speech

	$\bar{X}$	s.d.	Range
Reading 720	4.24	1.64	2.69
Language Patterns	4.83	2.07	4.32
Children	4.74	2.81	7.90

An analysis of variance was run to test for significance. It was found that a significant difference existed ($F=12.950$, $d.f = 2$, $p < .001$). Comparing each of the series to the oral language, the mean C-unit length in the Reading 720 series was found to be significantly shorter than the C-unit length in the children's speech ($p < .05$). No significant differences between the Language Patterns series and the children's speech was found. (Table 10).

Measures of Syntactic Complexity

(a) Phrases

A summary of findings on the use of phrases in the basals and in the children's speech is given in Table 11. An analysis of variance was run and it revealed that a significant difference existed in terms of the average number of phrases per C-unit ($F=33.198$, $d.f = 2$, $p < .0001$). The Language Patterns series and children's speech were significantly more complex than the Reading 720 series ($p < .05$). No significant differences existed between the Language Patterns series and the children's speech. Also, the results revealed that while the Reading 720 series had instances of only one type of phrase (the adverb phrase), both the language of the children and the Language Patterns series had instances of all three types.

A chi-square test showed that the distribution of phrases in the children's speech and one of the basals was significantly

TABLE 10

Difference in Mean Length of C-Units
Found Between Readers and Children

	<u>Language Patterns</u>	<u>Children</u>
	*	*
Reading 720	.59	.50
Children	.09	

* $p < .05$

TABLE 11

Average Number of Phrases per C-Unit
for Basal Readers & Children

	<u>Data Set</u>	<u>Number of Cases</u> <u>Over Total C-Units</u>	<u>Average Number of</u> <u>Phrases per C-Unit</u>
Noun Phrases	Reading 720	-	-
	Language Patterns	1/618	.0618
	Children	1/1634	.0006
Adverb Phrases	Reading 720	129/714	.1807
	Language Patterns	200/618	.3236
	Children	574/1634	.3513
Adjective Phrases	Reading 720	-	-
	Language Patterns	9/618	.0146
	Children	47/1634	.0288
Total Phrases	Reading 720	129/714	.1807 *
	Language Patterns	210/618	.3398 *
	Children	622/1634	.3807 *

*

p < .05

TABLE 12

Chi-Square Values of C-Units Containing and Not Containing
Phrases for the Basals and the Children

	<u>Containing</u>	<u>Not Containing</u>
Reading 720	17.8	82.8
Language Patterns	32.2	67.8
Children	35.1	64.9

Chi square = 71.56198, d.f = 2, $p < .0001$

different ($\chi^2 = 71.56198$, d.f. = 2, $p < .0001$). The Language Patterns series and the children's speech contained significantly more phrases than the Reading 720. Table 12 gives the chi-square values comparing the number of C-units containing and not containing phrases in both of the readers and the children's speech.

The mean length of phrases found in the three data sets was calculated and reported in Table 13. The adverb phrases in the Language Patterns series were significantly longer than the ones found in the children's speech and the Reading 720 series ($p < .001$) (Table 14). There were too few cases of noun and adjective phrases to conduct a comparison.

(b) Dependent Clauses

Throughout the written and oral language data, there were very few cases of dependent clauses. However, a summary of the findings regarding the number of different clauses and the average number of clauses per C-unit is given in Table 15. There were significantly more clauses in the children's speech than in either of the basal series ($p < .0001$). The mean length of clauses found in the readers and children's speech was determined and presented in Table 16. The adverb clauses in the Language Patterns series were significantly longer than the ones found in the children's speech ($p < .001$). The Reading 720 series had no instances of adverb clauses. There were too

TABLE 13Mean Length of Phrases Found in Basal Readers & Children's Speech

	<u>Reading 720</u>	<u>Language Patterns</u>	<u>Children</u>
	$\bar{x}$	$\bar{x}$	$\bar{x}$
Noun phrases	-	2	3
Adverb phrases	2.69	3.01	2.59
Adjective phrases		2.67	2.70

TABLE 14

Differences in Mean Length of Adverb Phrases Found in Basal
Readers and Children's Speech

	<u>Language Patterns</u>	<u>Children</u>
	*	
Reading 720	.32	.07
	*	
Children	.25	-

* $p < .001$

TABLE 15

Average Number of Dependent Clauses per C-Unit
for Basal Readers and Children's Speech

	<u>Data Set</u>	<u>Number of Cases</u> <u>Over Total C-Units</u>	<u>Average Number of</u> <u>Clauses per C-Unit</u>
Noun Clauses	Reading 720	3/714	.0042
	Language Patterns	4/618	.0065
	Children	20/1634	.0122
Adverb Clauses	Reading 720	-	-
	Language Patterns	5/618	.0081
	Children	31/1634	.0190
Adjective Clauses	Reading 720	-	-
	Language Patterns	-	-
	Children	5/1634	.0031
Total Clauses	Reading 720	3/714	.0042 *
	Language Patterns	9/618	.0146
	Children	56/1634	.0343 *

* $p < .0001$

TABLE 16

Mean Length of Dependent Clauses Found in Basal Readers
and Children's Speech

	<u>Reading 720</u>	<u>Language Patterns</u>	<u>Children</u>	Difference in $\bar{X}$
Noun Clauses	3.67	4.5	4.2	
Adverb Clauses	-	6.4 *	4.3 *	2.27 *
Adjective Clauses	-	-	3.2	

*
p < .001

few instances of adjective or noun clauses to conduct a comparison of mean lengths, or to complete a chi-test on distribution of dependent clauses.

THE MAZE UNITS AND COMMUNICATION UNITS IN THE CHILDREN'S SPEECH

In this study, Loban's (1963) method of segmenting the flow of language into two basic units, the communication unit and the maze unit and examining their relationship, has been conducted on the children's speech.

Due to the fact that "mazes" are only characteristic of the syntactic idiosyncrasies of oral language (Loban, pg. 107), a comparison of the maze-communication unit relationship in the readers is impossible. Therefore, the following results are only presented to provide information on the oral proficiency of the children.

Table 17 shows the measure of central tendency and variability for words per C-unit and per Maze unit for the total sample of 24 subjects. (See Appendix I for individual subjects). It is interesting to note that the mean C-unit length of 4.74 and the mean M-unit length of 2.40 found in this study are quite close to those reported by Loban (1963) in his investigation of the language of kindergarten children. (C-Unit - 4.81; M-Unit - 2.58) (pg. 28).

An analysis of variance found that a significant difference existed between the mean length of C-units and M-units ($F=1779$, $d.f = 1$, $p < .0001$) (Table 17). The proportion of maze units and communication units for the total communication of each subject can be found in Appendix J. It is interesting to note the variance between subjects - for example, for subject 1 the C-units are 65% of the total utterances whereas for subject 23, the C-units are 97.7% of the total. A comparison of the C-unit/M-unit relationship for individuals within the population should reveal some interesting results. However, this is beyond the scope of this study.

TABLE 17

Mean Length, Standard Deviation and Variance
of C-Units and M-Units Found in Children's Speech

	<u>No. of Cases</u>	<u>Mean</u>	<u>Standard Deviation</u>	<u>Variance</u>
Maze	670	2.40	2.02	4.08
Communication	7752	4.74	2.81	7.90
Difference in $\bar{X}$		2.34 *		

*

p $\leq$.0001

NOTES ON CHAPTER IV

1. "Mean length" was determined by calculating the average number of words per utterance.
2. No analysis of maze units was conducted on either of the basals - see Chapter III, page 38 for an explanation.
3. An analysis of the sequence of mean length was an appropriate measure for the basal reading series only.
4. Throughout this study, unless otherwise stated, the test for significance used was a Student's t-test.

CHAPTER V

RESULTS, IMPLICATIONS AND RECOMMENDATIONS

The purpose of this study was to compare the oral syntax of selected Canadian kindergarten children with the written syntax in the two beginning reading series prescribed for use in the schools in British Columbia. Significant differences were found both in the comparison of the basal readers and in the comparison of the language of the children and the basal readers.

Results

The investigation consisted of two parts: Part I compared the syntax of the two basal reading series - Part II compared the children's syntax to the syntax in each of the basals and presented some results on the linguistic fluency of the children. Both the written and oral data were analyzed on the basis of lengths, frequencies and distributions of communication units, phrases and dependent clauses.

The findings of Part I were that:

1. In terms of communication units, the Language Patterns series was significantly more complex than the Reading 720 series. ($p < .05$).
2. In terms of complexity of mean C-Unit length, no clear progression emerged for the Language Patterns or the Reading 720 series.

3. In terms of phrasing, the Language Patterns series was significantly more complex than the Reading 720 series. ($p < .05$).
4. In terms of dependent clauses, no significant differences between the basals were found.

Thus, in answer to the research question posed in Chapter I regarding the relationship between the syntax in the two basal reading series, Language Patterns was found to be more complex than Reading 720 series on the syntactic features examined.

The findings of Part II were that:

1. In terms of communication units, the speech of the children was significantly more complex than the language in the Reading 720 series. ($p < .05$). No significant differences between the Language Patterns series and the children's speech were found.
2. In terms of phrasing, with the exception of the length of adverb phrases, the children's speech and the Language Patterns series were significantly more complex than the Reading 720 series ($p < .05$). The length of adverb phrases in the Language Patterns series was significantly greater than those in the children's speech and the Reading 720 series ($p < .001$).

3. In terms of dependent clauses, with the exception of the length of adverb clauses, the children's speech was significantly more complex than either of the basals ($p < .0001$). The length of adverb clauses in the Language Patterns series was significantly greater than those in the children's speech and the Reading 720 series ($p < .001$).
4. In terms of length and proportion of communication and maze units in the children's speech, there is a significant variance between the subjects ($p < .0001$).

Thus, this investigation of the relationship between the syntax in the children's speech and the syntax in each of the basals has revealed some interesting results. Based on the syntactic measures used, for the most part the children's oral syntax was found to be significantly more complex than the syntax in the Reading 720 series. Except for the use of dependent clauses and the length of adverb phrases and clauses, the Language Patterns series was found to be closely matched to the syntax of the children.

Implications and Recommendations

The results of this study warrant careful consideration by those involved in the creation and implementation of beginning reading basal series. However, the researcher cautions the reader against making any definitive conclusions

regarding the relationship between children's oral syntax and the written syntax in either of the two series examined until a complete syntactic analysis is conducted. As Loban (1970) suggested, it is the flexibility within a language pattern, not only the word count, which is an indicator of linguistic maturity. (pg. 625).

Nevertheless, the findings of this study indicate that the following points are worthy of consideration:

1. This study found that the syntax in the Reading 720 series was for the most part, different from the children's oral syntax. The Reading 720 series states that attention is given to a "total view" of language development:

...Instruction on ways in which language is used is designed to support the child's overall language and reading growth. (Ginn, 1978; T14) ...There are many opportunities for language-based activities throughout the total programme; the continuous intention is to reinforce children's understanding that what we think we can say, what we speak can be written, what is written can be read, and what is read can be incorporated into our thought process. (Ginn, 1979; pg. 1).

Therefore, a critical evaluation of materials that claim to give adequate consideration to children's natural language is necessary.

2. In the basal readers examined, there was a lack of progression in terms of complexity of syntax.

Curriculum developers might want to consider syntactic control as a factor in the creation of beginning reading materials.

3. Subordination, a more sophisticated form of syntactic structure, was more prevalent in the children's speech than in the basals. Producers of curriculum materials might want to consider including more instances of different types of dependent clauses in beginning reading materials.
4. A tremendous variance in linguistic proficiency between subjects was revealed. Educators need to be aware of the linguistic abilities of students and the linguistic content of basal reading series. It is quite possible that certain basals would be more appropriate for certain students.
5. Anyone using these reading series should be aware of the differences that were found in the syntactic complexity between the two basals and between the basals and the children's speech. These beginning reading series may need to be supplemented with materials that reflect the linguistic sophistication of the children.
6. Teachers should be aware of the syntax that appears in the basal series. It may be necessary to orally

pre-teach some of the syntactic patterns to enable children who are experiencing difficulty to make the connection between their linguistic knowledge and the language in the texts.

Recommendations for Further Research

For further research, the following recommendations are made:

1. To provide a more comprehensive evaluation of syntax, a content analysis of the syntactic patterns in these three data sets should be conducted.
2. To provide a broader linguistic comparison, an analysis of the vocabulary in the samples of written and oral language used in this study should be undertaken.
3. To evaluate the linguistic competencies of the children, a comparison of each individual in the three taping situations is recommended. The sex, language and academic achievement of each subject should be taken into account.
4. To determine whether or not certain reading materials are more appropriate for certain students, the

selected basals should be tried out on
linguistically different children.

APPENDICES

APPENDIX A
LIST OF MATERIALS NEEDED

Taping Equipment

3 FM microphones

3 portable FM receiver-audio taperecorder units

Storytelling Session

Picture books (Ladybird Talk About books are very suitable.
For example: Talk About THE BEACH,
CLOTHES, BEDTIME)

Interview Session

Large pictures of animals which contain a lot of activity.

Live animal(s) - preferably a pet they haven't been exposed
to before. e.g. 3 newts were used

APPENDIX B

SAMPLE INTERVIEW QUESTIONS

I. Discussion - Verbal Stimuli

- Have you ever been to the Richmond Nature Park, or to the zoo?
- What did you see there?
- Tell us about _____
- How did the _____ eat?
- What did you eat for breakfast this morning?
- What do you think the _____ eats for breakfast?
- Do you have a pet?
- Tell me about your pet.
- If you could have any pet, what would you choose - Why?

II. Discussion - Visual Stimuli

Children were shown chart-size action-packed pictures of animals and asked a number of open-ended questions -

"What do you see happening in this picture?

Can you describe what _____ is doing?

Tell us about the shape/colour...of this animal.

What do you think it eats?

What do you think happened just before this picture was taken?

What do you think is going to happen next?"

III. Discussion - Visual & Tactile Stimuli

Three newts in a tank were presented to the children. They were not familiar with this creature but were very eager to ask questions, and to watch and to handle the newts. A number of questions were asked to stimulate conversation -

What do you think these animals are?

What animal do they remind you of?

Can you tell us what you see that newt is doing right now?

Feel the newt. How does it feel?

Tell us what they look like (.../eat/shape/colour)

What do you think the newt will do next?

Why have the newts got both a wet spot (pool) and a dry spot (rocks) in their home?

Which spot do they seem to like better? How do you know?

APPENDIX C

GENERAL GUIDELINES FOR INTERVIEWS

II General remarks on how to interact with the child

1. Maximize the number of usable expressive acts.
 - a) Encourage verbal output
 - (i) Ask explanations
 - (ii) Avoid questions that permit yes or no answers
4. Be especially sensitive to levels of generality and presuppositions you might have in forming your questions and what might be implied by them.
 - a) Use the most general phrases with the fewest suppositions. Only if the child has trouble connecting, become more specific. For example:

What will happen? vs. How will it go?
vs. Which way will it go?
 - b) Pay special attention to what implications your questions might have in light of your presuppositions.

III Miscellaneous

1. Focus your attention on the child at all times. Avoid getting too involved in the child's reactions to your question; i.e., maintain a little bit of reserve. Also avoid situations that would focus the child's attention on you, thereby disturbing the task context.
2. Be sure questions are absolutely clear. Clear up any unclear statements of the child. If necessary, ask him to repeat himself again.

Adapted from:

Klaus G. Witz and David R. Goodwin
July 20, 1970

APPENDIX DSCHEDULE FOR DATA COLLECTION

<u>School</u>	<u>Class</u>	<u>Group</u>	<u>Subjects</u>	<u>Mode</u>
A	A.M.	1	1,2,3	A
		2	4,5,6	A
		1	1,2,3	B
		2	4,5,6	B
		1	1,2,3	C
		2	4,5,6	C
	P.M.	3	7,8,9	A
		4	10,11,12	A
		3	7,8,9	B
		4	10,11,12	B
		3	7,8,9	C
		4	10,11,12	C
B	A.M.	1	1,2,3	A
		2	4,5,6	A
		1	1,2,3	B
		2	4,5,6	B
		1	1,2,3	C
		2	4,5,6	C
	P.M.	3	7,8,9	A
		4	10,11,12	A
		3	7,8,9	B
		4	10,11,12	B
		3	7,8,9	C
		4	10,11,12	C
C	A.M.	1	1,2,3	A
		2	4,5,6	A
		1	1,2,3	B
		2	4,5,6	B
		1	1,2,3	C
		2	4,5,6	C
		3	7,8,9	A
		4	10,11,12	A
		3	7,8,9	B
		4	10,11,12	B
		3	7,8,9	C
		4	10,11,12	C

*

N = 36

LEGEND

School A - Kingswood
 B - Errington
 C - Garden City

Mode A - Free Play Session
 B - Storytelling Session
 C - Interview Session

* NOTE: Oversampling was conducted. Only tapes from eight subjects in each school were used for the analysis.

I. DIRECTIONS FOR CODING TRANSCRIPTS

The transcripts were coded so the computer could produce the necessary summary statistics on the amount, and frequency of different types of utterances. To facilitate this analysis, specialized programmes were written for the data before the SPSS Crosstabs programme could be used. (See Appendix H for a sample transcript).

Using coding groups of 6 digits - the following levels of analysis are to be conducted:

Level I - Write coding group in blue pen above the first word at the beginning of each utterance.

1. Code all utterances as either:

Maze Unit (M-Unit) - "01" (indicated by red brackets)

Communication Unit (C-Unit) - "02" (indicated by pencil slashes)

2. Code the number of words in each of these units (4 digits)

e.g. - A M-Unit with 20 words would be coded as "010020"

A C-Unit with 11 words would be coded as "020011"

*

Level II - 1. Underneath Level I, code in pencil the type of phrase (indicated by two blue lines underneath phrase) / dependent clause (indicated by blue parenthesis) according to the following list:

- 13 - noun phrase
- 14 - adverb phrase
- 15 - adjective phrase
- 16 - noun clause
- 17 - adverb clause
- 18 - adjective clause

* Level II analysis will not be conducted on every communication unit. For example, in the case of a simple sentence with no phrases or clauses, only Level I and Level III analysis will be computed.

2. Code the number of words in each phrase/clause

e.g. - A noun clause with 4 words would be coded as "160004"

Level III - Under Level I & II, code in red pen each words in the utterance according to type and number per vocabulary list. (Be sure and code the word as it is used in the sentence - for example, "no" is not only an adjective but an adverb and a noun).

Use the following list for the type of word and refer to the vocabulary list (Appendix G) for the words listing:

03 - noun	08 - connective
04 - verb	09 - article
05 - adjective	10 - preposition
06 - adverb	11 - interjection
07 - pronoun	12 - contraction

e.g. The adverb " right " would be coded as

⁰⁶
 ✓
 adv.

⁰⁰⁹⁸⁻
 ✓
 listed as " 98 " on the adverb list

II. Directions for Preparing Data for Key punching

Enter the numbers onto the Fortran coding sheets following the order of the words on the transcripts. Level I is recording first then all of its parts - Level II phrases and clauses (if applicable) and Level II - each word in the utterance.

For example the following language sample from subject 13 would be coded on the sheet in the following manner:

020006 140003 020005
 090003 030251 040424 100019 090003 030659 040001 070013
 The driver sits on the right/ Am I

140003 020005
 100019 090003 030448 070013 040001 090003 030251
on the left/ I am the driver/

020003 010003
 070028 060045 040519 (070028 060045 040519
 We just turned/ (we just turned))

020006 090003 030251 040424 140003 100019 090003 030659 020005
 040001 0700013 140003 100019 090003 030448 020004 070013
 040001 090003 030251 020003 070028 060045 040519 010003 070028
 060045 040519

APPENDIX G

CUMULATIVE VOCABULARY LIST

<u>NOUNS</u>	(A)		(B)
Aaron	030001	baboon	030024
Acorns	030002	Babs	030025
adventure	030003	babies	030026
Africa	030004	baby	030027
airport	030005	back	030028
Alan	030006	backs	030903
Allouetta	030007	bag	030029
Amanda	030008	bags	030030
America	030009	ball	030031
Andy	030010	balloon	030032
Anthony	030011	balloons	030033
animal	030012	balls	030034
animals	030013	banana	030035
Ann	030014	band	030036
Anna	030015	bandstand	030037
answer	030016	bang	030038
ant	030017	bank	030039
ants	030018	banks	030040
apple	030019	bark	030041
arm	030020	barn	030042
arms	030021	basement	030043
aquarium	030022	basket	030044
attic	030023	bass	030045
apples	030897	bat	030046

Nouns Cont'd (B)

bath	030047	bits	030072
batteries	030048	blackbird	030073
beach	030049	Black hen	030074
beak	030050	blanket	030075
beanbag	030051	blankets	030076
beard	030052	block	030077
bears	030053	blood	030078
beaver	030054	board	030079
beavers	030946	boat	030945
bed	030055	Bob	030080
bee	030056	Bobbie	030081
beer	030057	body	030082
belt	030058	bolts	030083
bell	030876	bone	030905
Ben	030059	bones	030084
Benny	030060	bonnet	030085
Beth	030061	book	030086
Bett	030062	books	030087
Bill	030063	boots	030088
Billy	030064	bottle	030089
bike	030065	bottles	030090
birch	030066	bottom	030091
bird	030067	bow	030092
birds	030068	bows	030093
birthday	030069	bow-wow	030094
birthdays	030070	box	030095
bit	030071	boxes	030096

Nouns Cont'd (B)

boy	030097	bump	030122
boys	030098	bumps	030890
Bozo	030099	bundle	030123
brain	030100	bunny	030124
brains	030101	buns	030125
branches	030102	bus	030126
brass	030103	busstop	030127
bread	030104	busticket	030128
breakfast	030105	butterfly	030129
Brenda	030106	button	030130
Brent	030107	buttons	030131
bricks	030108		
bridge	030109		
brother	030950	(C)	
brush	030110	cabin	030132
bubble	030111	cactus plant	030133
bubblebath	030112	cage	030134
bubblegum	030113	cake	030135
bubbles	030114	calf	030136
bucked	030115	Cam	030137
bud	030116	Camel	030138
buds	030934	camp	030139
bug	030117	candy	030140
bugs	030118	can	030141
Bugsy Paper	030119	cans	030142
building	030120	cap	030143
buildings	030121	car	030144

Nouns Cont'd (C)

card	030145	chin	030171
care	030920	Chuck	030370
Carl0	030146	chuckle	030922
Carrots	030147	chuckwagon	030172
carrot:	030148	circle	030173
cars	030150	city	030174
case	030151	clap	030893
cat	030152	cleaners	030175
caterpillar	030153	clerk	030176
Cathy Cliff	030154	click	030177
cave	030155	clinic	030178
cavities	030156	clock	030179
C.B.	030157	clocks	030180
celery	030158	closet	030181
centre	030159	cloth	030182
cereal	030160	clothes	030213
chair	030161	clothing	030183
Champ	030162	clown	030184
chaps	030163	clowns	030185
cheek	030164	coat	030186
cheers	030165	cobwebs	030188
chicken	030166	coffee	030189
chicks	030167	coffeecake	030190
children	030168	cold	030214
child	030169	colour	030191
chill	030170	comics	030192

Nouns (Cont'd) (C)

cones	030193	Daffy Duckling	030216
contest	030194	dam	030258
cops	030212	Dan	030217
corner	030195	dandy	030218
cot	030196	danger	030219
country	030197	Danny	030220
cow	030198	darling	030221
cows	030199	David	030222
crabs	030200	day	030223
cracker	030201	days	030933
crackers	030202	deer	030255
Craig	030203	deers	030259
crash	030204	delivery	030224
crayons	030207	den	030225
cricket	030205	dentist	030226
crocodile	030206	desk	030227
crown	030208	Desmond Dragon	030228
crowd	030877	diapers	030229
crunch	030928	diet	030253
cup	030209	Dimity	030230
cupcake	030210	ding-dong	030231
curly	030923	dish	030232
cushion	030211	dishes	030233
		ditches	030257
(D)			
dad	030215	dock	030234
daddy	030260	doctor	030235

Nouns Cont'd (D)

dog	030236	eggs	030264
doggie	030237	elephant	030265
doggies	030261	elephants	030275
dogs	030238	elf	030266
doll	030239	elves	030267
Don	030240	Emily	030268
door	030241	end	030269
dozen	030254	engine	030271
dragon	030242	Eric	030270
dreams	030252	everybody	030948
dress	030243	everything	030274
drug store	030244	eyes	030271
drink	030908		
drinks	030930	(F)	
driver	030251	face	030276
drum	030245	fairy	030277
drumstick	030902	family	030278
duck	030246	farm	030300
duckling	030247	farmyard	030926
ducks	030248	farmer	030279
dump truck	030249	father	030304
dust	030250	feet	030280
(E)		field	030281
earnings	030272	fighter	030282
ears	030262	fins	030283
edge	030954	fire	030284
egg	030263	firefighting	030285

Nouns Cont'd (F)

fireman	030307	(G)	
fish	030286	Gail	030313
fisherman	030306	gallon	030342
flag	030287	game	030314
flap	030882	gang	030315
flapjacks	030288	gas	030316
flashlight	030289	gear	030340
Florence	030301	geese	030352
fly	030881	Georgie	030317
foil	030310	German Shepard	030345
foot	030900	germs	030350
food	030290	gift	030318
forest	030291	gills	030346
fox	030293	ginderbread	030319
foxes	030311	giraffe	030349
Freckles	030293	girl	030320
Fred Frog	030294	girls	030321
Fridays	030308	glass	030321
friend	030903	glasses	030322
frills	030295	goat	030323
frog	030296	goats	030324
froggy	030309	goldfish	030325
frogs	030312	going	030901
front	030297	gongs	030326
frost	030298	good-bye	030327
frown	030299	gown	030328

Nouns Cont'd (G)

Grade One	030341	hanky	030359
Granddad	030343	hat	030360
Grandma	030329	head	030378
Grandpa	030330	heart	030379
glass	030331	helicopter	030361
gravel	030332	help	030935
Green Team	030333	hen	030362
grin	030898	Henry	030363
groups	030351	hens	030364
Griff	030334	hero	030377
gun	030338	hill	030365
guppies	030334	hills	030889
Gurjert	030348	hillside	030938
Gus	030336	hippopotamus	030380
gusts	030337	hockey	030366
guy	030344	hog	030367
guys	030339	hole	030368
		home	030369
(H)		homes	030370
habit	030353	hotdogs	030371
hair	030375	house	030372
ham	030354	humps	030373
hamburgers	030355	hut	030374
hand	030356		
handle	030357	(I)	
hands	030358	icecream	030381

Nouns Cont'd (I)

idea	030385	jobs	030404
inch	030382	joke	030405
India	030386	juice	030407
inside	030383	jump	030915
Isabel	030384	junk	030406

(J)

jacket	030387
jack-in-the-box	030388
jacks	030389
jam	030390
James	030391
Jan	030392
Jane	030393
Japan	030394
Jarrett	030394
Jason	030408
Jed	030396
Jeff	030397
Jennifer	030398
Jerry	030399
Jet	030400
Jill	030401
Jim	030402
job	030403

(K)

Kate	030409
Kay	030410
Ken	030411
kennels	030412
key	030413
keys	030414
kid	030425
kids	030426
Kim	030415
kindergarten	030424
king	030416
Kip	030417
Kirsten	030418
Kirshy	030419
kit	030420
Kit Cat	030888
kitten	030421
kittens	030422
Kool-Aid	030427

Nouns Cont'd (L)

Lad	030941	log	030443
lady	030450	logs	030444
lake	030449	lollipops	030445
lampshade	030428	look	030453
land	030429	Louise	030454
leaf	030430	lumber	030446
leaves	030451	lunch	030447
left	030448		
leg	030431	(M)	
legs	030432	Ma-a-a	030456
lid	030433	Mac	030457
lids	030434	MacDonald	030866
light	030435	machine	030458
Linda	030436	machines	030459
line	030437	Magda	030460
lion	030438	magic	030461
lips	030439	man	030462
liquid	030905	Mandy	030513
lists	030440	map	030463
Little Town	03092	maple	030464
Little Red Hen	030441	mark	030510
Liz	030442	Mark	030508
lizard	030452	market	030465
lizards	030455	mash	030887

Nouns Cont'd (M)

mast	030466	mitt	030486
mat	030467	mitts	030487
Matt	030468	Molly	030488
Mayor	030469	Mom	030489
meal	030470	Mom Frog	030891
meat	030471	money	030507
men	030472	monkey	030518
meow	030473	monkeys	030521
mess	030474	monster	030490
metal	030475	monsters	030491
mice	030514	month	030492
Mickey	030515	mop	030493
microphone	030511	morning	030494
miles	030509	motel	030412
mike	030477	moth	030495
milk	030476	mother	030496
Milky Way	030478	Mother Duck	030943
mill	030479	Mother Rabbit	030944
minute	030480	motor	030506
minutes	030481	mouse	030497
mirror	030482	mouth	030516
Miss	030483	Mr.	030498
Miss Perez	030942	Mr. Black	030499
Miss Smith	030484	Mr. Frog	030517
Miss Stephen	030485	Mr. McTavish	030910

Mrs. Cliff	030501	'number 4'	030905
Mrs. Grundy	030502	nut	030872
Mrs. McTavish	030503	nuts	030535
Mrs. Shower	030519	nothing	030536
Mrs. Trowers	030520	nobody	030537
mud	030504		
mummy	030505	(O)	
mumps	030873	oak	030538
		obstacles	030546
(N)		octopus	030545
name	030522	Olga	030539
names	030523	one	030544
Nan	030524	ones	030548
nap	030525	Ontario	030542
naps	030526	orange	030540
Nat	030867	other	030547
neck	030527	outside	030541
needle	030528	owl	030543
nest	030874		
nests	030529	(P)	
newspaper	030530	pad	030549
newt	030949	pages	030616
Nick	030531	pal	030550
night	030532	Pam	030551
nighttime	030865	pancakes	030605
Norman	030533	pans	030552
nose	030534	pants	030553

Nouns Cont'd (P)

paper	030615	pictures	030622
park	030554	piece	030601
parrot	030555	pig	030576
parrots	030556	pigeons	030577
part	030557	piggie	030578
parts	030558	piggy bank	030579
party	030559	pigs	030910
pasture	030611	pill	030580
Pat	030560	pin	030581
path	030561	Pine	030581
peanuts	030562	Pine's	030583
pellets	030563	pizza Hut	030584
pen	030564	place	030620
pen	030565	places	030604
pennies	030566	planes	030585
Penny	030567	planet	030586
penguins	030618	plank	030587
people	030568	plant	030588
pepper	030609	plan	030939
Petez	030569	plate	030614
pet	030570	plastic	030619
Pete	030571	plates	030610
Peter	030572	playground	030606
pets	030572	police	030603
picnic	030574	pond	030592
picture	030575	pollywogs	030621

Nouns Cont'd (P)

pool	030617	rain	030630
popcorn	030593	raincoat	030662
popsicles	030594	ranch	030631
porcupine	030612	Randy	030632
porridge	030608	rat	030633
pot	030595	rats	030634
puck	030597	Raymond	030635
pub	030602	Red Hen	030892
pumps	030924	ribbon	030636
puppet	030598	ribbons	030637
puppies	030599	Rick Rat	030638
		ride	030639
(Q)		rides	030944
question	030623	ring	030640
		right	030659
(R)		rink	030641
rabbit	030624	river	030642
rabbits	030625	road	030643
race	030665	Robby Robin	030644
races	030667	robbers	030645
raccoon	030626	robin	030646
raccoons	030627	robot	030661
radio	030664	rock	030649
raft	030628	rocket	030650
rag doll	030629	rockets	030651

Nouns Cont'd (R)

rocks	030652	seals	030683
rod	030653	seat	030684
Ron	030654	secret	030684
Ron's Rabbit	030655	seeds	030686
room	030663	sentence	030687
row	030660	shade	030688
Rudy	030656	sheep	030689
rug	030657	shelf	030690
Rusty Fox	030658	shells	030691
		sherry	030692
(S)		ship	030693
sack	030669	shoes	030694
saddle	030670	shore	030695
sailboats	030671	shoulder	030696
sale	030672	shower	030697
salt	030673	shop	030698
Sam	030674	side	030699
sand	030675	sight	030700
Sandra	030676	sign	030701
sandwich	030677	signs	030702
sandwiches	030678	step	030940
Saturday	030679	songs	030927
scamp	030680	Silky	030919
scarf	030681	sister	030703
scissors	030682	skin	030704

Nouns Cont'd (S)

skunk	030705	stick	030732
sky	030706	sticks	030733
sky	030706	store	030734
sled	030707	stories	030735
sleep	030708	story	030736
slide	030709	stairs	030953
slippers	030710	sounds	030936
snack	030711	suckers	030931
snake	030712	ship	030925
snakes	030713	sea	030981
snow	030714	stove	030737
snowman	030715	Stephen	030738
socks	030716	street	030739
something	030717	streets	030740
son	030718	stuff	030741
song	030719	sucker	030742
sort	030720	summer	030743
sound	030721	supper	030744
space	030722	surprise	030745
spot	030723	surprises	030746
spots	030724	Susan	030747
squirrel	030725	Suzu	030748
squirrels	030726	sweater	030749
stamp	030727	swings	030750
star	030729	Stanley Park	030741
stars	030730	Stanley Beach	030752
steamshovels	030731	string	030752

Nouns Cont'd (S)

spring	030875	telephone	030758
sun	030883	thanks	030759
shell	030886	thing	030760
swim	030893	things	030761
shot	030894	thread	030762
sun-up	030896	throat	030763
steps	030899	thunder	030764
stand	030900	Tim	030765
speck	030903	time	030766
shelves	030906	Tip	030767
smells	030911	tips	030768
springs	030912	today	030769
stripe	030913	toes	030770
strings	030917	Tam	030771
spill	030917	Tomoko	030772
stores	030918	Tom Turkey	030773
stop	030919	Toni	030774
		tonight	030775
(T)		top	030776
tank	030904	town	030777
Tab	030753	toy	030778
tail	030754	track	030779
Tam	030755	train	030780
team	030756	trains	030781
Ted	030757	trap	030782

Nouns Cont'd (T)

tree	030783	towel	030805
trip	030784	two	030806
trips	030785	types	030807
truck	030786	trumpet	030901
trees	030932	Tad	030868
trunk	030889	Thelma	030869
tummy	030885	twin	030878
thicket	030884	twins	030879
trucks	030787		
turnip	030788	(U)	
turtle	030789	umbrella	030808
tire	030790	Uncle Bill	030809
trunk	030781		
ticket	030792	(V)	
times	030793	vacation	030810
tables	030794	van	030811
tub	030795	velvet	030812
tent	030796	Velda	030813
teeth	030797	visit	030814
teeter-totter	030798	vowel	030815
turtles	030799		
turn	030800	(W)	
tunnel	030801	washing	030952
trick	030802	wagon	030816
tadpoles	030803	waiting	030817
tiger	030804	walk	030818
		walking	030819

Nouns Cont'd (W)

wall	030820	whale	030847
wallet	030821	wolf	030848
water	030822	worm	030849
way	030823	whales	030850
weed	030824	wood	030851
weeds	030825	window	030852
week	030826	west	030888
well	030827		
Wendy	030828	(Y)	
wheat	030829	yee	030853
wig	030830	yesterday	030854
Wilfred	030831	yip	030855
Willy	030832		
Wilma	030833	(Z)	
wind	030834	Zak	030856
winds	030835	zebra	030857
wings	030836	Zip	030858
winter	030837	zoo	030859
wish	030838		
woman	030839		
word	030840		
world	030842		
wheel	030843		
witch	030844		
while	030845		
washing	030846		

VERBS

(A)			
am	040001	beware	040021
answer	040002	bit	040022
ate	040003	bite	040023
ask	040004	biting	040024
asked	040005	block	040025
allowed	040006	boasted	040026
act	040007	boasting	040027
asks	040619	bobs	040028
ate	040712	bolts	040029
		bows	040030
(B)		bragged	040031
back	040008	bring	040032
bake	040009	bringing	040033
bang	040010	broke	040034
bark	040011	brush	040035
barked	040012	bump	040036
bat	040013	bumped	040037
be	040014	bumps	040038
became	040015	burn	040039
been	040016	burning	040040
beeped	040017	button	040041
began	040018	buttons	040042
bends	040019	buzzed	040043
bent	040020	buzzing	040044

Verbs Cont'd (B)

busted	040045	cannot	040059
bust	040046	care	040060
buying	040047	cares	040061
brought	040048	carry	040062
bleeding	040050	chase	040063
blows	040050	catch	040696
building	040051	caught	040701
breathe	040052	check	040064
brings	040053	checked	040065
buy	040054	chill	040066
bakes	040596	chose	040067
better	040599	chuck	040068
begin	040651	chuckle	040069
begged	040672	chuckled	040070
become	040685	clap	040071
buzzy	040691	clean-up	040072
breathing	040704	click	040073
bringed	040715	closer	040074
bends	040733	cluck	040075
		clucks	040076
(C)		collect	040077
call	040055	collected	040078
called	040056	collects	040079
came	040057	color	040080
can	040058	come	040081
		coming	040082

Verbs Cont'd (C)

correct	040083	cleaning	040109
could	040084	crawling	040110
cover	040085	croaking	040111
covered	040086	caged	040112
crack	040087	collecting	040113
claps	040612	carrying	040114
cracks	040088	crashed	040115
cracked	040089	driving	040116
crash	040090	cook	040597
crawled	040091	cried	040683
creeping	040092	comes	040636
crept	040093	crawl	040709
cross	040094	chase	040721
crunch	040095	cleaned	040693
cry	040096	(D)	
crying	040097	drag	040614
curly	040098	drips	040611
cut	040099	dry	040700
chasing	040100	drying	040730
change	040101	did	040117
caught	040102	dig	040188
cooking	040103	digging	040119
catching	040104	digs	040120
camping	040105	dim	040121
count	040106	ding	040122
cooked	040107	do	040123
climb	040108	down	040124

Verbs Cont'd (D)

dragged	040125	(E)	
drags	040126	eat	040146
draw	040127	eating	040147
dreaming	040128	eats	040148
dress	040129	end	040149
drifted	040130	ended	040150
drifts	040131	eaten	040151
drills	040132	escape	040152
drink	040133	excuse	040601
drinks	040134		
drip	040135	(F)	
drive	040136	fall	040695
drizzle	040137	falls	040153
dropped	040138	falling	040154
drops	040139	fans	040155
dumped	040140	fed	040156
dumps	040141	feel	040157
drives	040142	fell	040158
drop	040143	felt	040159
dropping	040144	filled	040160
dive	040145	fills	040161
driving	040590	find	040162
doing	040591	finish	040163
does	040598	finished	040164
dressed	040500	fix	040165
dresssing	040674	fixed	040166

Verbs Cont'd (F)

fizzle	040167	giving	040732
flaps	040168	galloping	040189
flapping	040169	gallops	040190
flash	040170	gasps	040191
flops	040171	get	040192
fly	040172	gets	040193
flying	040173	getting	040194
fogs	040174	giggled	040195
follow	040175	give	040196
forget	040176	gliding	040197
forgot	040177	glug	040198
fried	040178	go	040199
frown	040179	gobble	040200
fry	040180	going	040201
fussing	040181	got	040202
fishing	040182	grab	040203
found	040183	grabbed	040204
feels	040184	grabs	040205
feeding	040185	grin	040206
feed	040186	grinned	040207
fail	040187	grips	040208
following	040188	groaned	040209
fire	040593	grumble	040210
fish	040711	grumbled	040211
fighting	040718	guess	040212
(G)		gone	040213
		grabbing	040214

Verbs Cont'd (G)

gives	040215	hides	040234
grins	040605	hit	040235
gusts	040627	hits	040236
gallop	040628	hold	040237
gave	040675	honk	040238
goes	040713	hop	040239
gone	040689	hoped	040240
(H)		hopped	040241
had	040216	hopping	040242
hang	040217	hugs	040244
hangs	040218	hops	040243
happen	040219	hummed	040245
has	040220	hung	040246
happened	040221	hunt	040247
have	040222	hunts	040248
having	040223	hurry	040249
hear	040224	hurts	040250
head	040225	hate	040251
heard	040226	holding	040252
help	040227	held	040666
helping	040228	hurtt	040723
helps	040229	(I)	
helped	040230	imagine	040253
hid	040231	invent	040254
hidden	040232		
hide	040233		

Verbs Cont'd (J)

jumping	040672	leaped	040274
juggled	040255	leaves	040275
juggled	040256	let	040276
jump	040257	letter	040277
jumped	040258	left	040638
jumps	040259	licking	040278
		licks	040279
(K)		left	040280
kept	040260	lifted	040281
kick	040261	like	040282
kicks	040262	liked	040283
know	040263	likes	040284
knew	040731	limps	040285
keep	040264	listening	040286
killed	040265	live	040287
kissing	040266	locked	040288
kicked	040267	look	040289
keeps	040268	looked	040290
		looking	040291
(L)		lost	040292
land	040269	loved	040293
landed	040270	loves	040294
lands	040271	lie	040295
leave	040689	love	040296
laying	040272	laugh	040297
lay	040273	lying	040298

Verbs Cont'd (L)

listen	040299	must	040315
lifts	040620	married	040316
lived	040646	make	040317
lives	040653	means	040318
led	040659	making	040319
looks	040698	moving	040320
listen	040721	marry	040321
letting	040690	miss	040680

(M)

made	040300
mash	040301
may	040302
meet	040303
mended	040305
meow	040305
messy	040306
met	040307
might	040308
mix	040309
mixed	040310
mixing	040311
moaned	040312
mop	040313
munch	040314
must	040315

(N)

name	040322
naps	040323
near	040324
need	040325
needs	040326
nibbles	040327
nipping	040328
nips	040329
nodded	040330

(O)

open	040331
opened	040332
order	040333
opens	040714

Verbs Cont'd (P)

packed	040334	pouted	040360
packing	040-35	puff	040361
pad	040336	puffed	040362
panic	040337	puffs	040363
panics	040338	pumps	040364
panted	040339	push	040365
passed	040340	pushed	040366
past	040341	put	040367
pats	040342	picking	040699
patting	040343	plant	040679
peeked	040344	pinch	040664
pick	040345	putting	040368
picked	040346	pulled	040369
picks	040347	pretend	040370
pile	040348	pulling	040371
plan	040348	paddled	040372
play	040350	painting	040373
played	040351	pop	040645
playing	040352	pinched	040665
please	040353	puts	040705
plods	040354	pull	040717
plop	040355		
polished	040356	(Q)	
popped	040357	quack	040374
pops	040358		
press	040359	(R)	
		ran	040375

Verbs Cont'd (R)

rattle	040376	reading	040598
reached	040377	rings	040609
read	040378	resting	040616
rest	040379	rests	040623
rested	040380	ring	040635
ride	040381	rattled	040645
rides	040382	rid	040680
rip	040383	read	040697
ripped	040384	riding	040728
roared	040385	runned	040734
rocks	040387	rush	040397
rubs	040388	rushed	040398
ruin	040389		
rumble	040390	(S)	
rumbled	040391	said	040399
rumbles	040392	sailed	040400
rumbling	040393	sailing	040401
run	040394	sang	040402
runs	040395	sat	040403
running	040396	saw	040404
rob	040592	says	040405
robbed	040593	screamed	040406
relaxing	040594	see	040408
remember	040595	seek	040409
raining	040596	seemed	040410
rolled	040597	seems	040411

Verbs Cont'd (S)

sell	040412	slide	040668
shiver	040413	slides	040667
shop	040414	set	040662
show	040415	scrubbed	040658
shut	040416	scrub	040657
sighed	040417	sipped	040647
sight	040418	sizzle	040648
sign	040419	sipping	040649
sing	040420	shrink	040650
singing	040421	shrank	040652
sinks	040422	sticking	040694
sit	040423	swimmed	040706
sits	040424	say	040429
skims	040425	sleeped	040713
skip	040426	sees	040729
skipped	040427	snapped	040678
sleep	040654	splashed	040643
slipped	040430	straps	040633
slips	040431	snaps	040433
smiled	040432	snow	040434
sniff	040692	sobs	040435
seem	040690	sorted	040436
storing	040688	sound	040437
smile	040684	sounds	040438
splash	040673	spent	040439
sobbed	040671	spill	040440
smash	040669	spin	040441

Verbs Cont'd (S)

spins	040442	splits	040635
spits	040443	spank	040467
spot	040444	scare	040468
spread	040445	supposed	040469
springs	040445	speaking	040470
stamp	040447	saved	040471
stamps	040448	shook	040472
stand	040449	swimming	040473
stands	040450	slept	040474
start	040451	smelling	040475
stay	040452	squished	040476
stayed	040453	stuck	040477
step	040454	seen	040478
stepped	040455	shopping	040479
steps	040456	showing	040480
stick	040457	sleeps	040481
stopped	040459	sleeping	040482
stop	040458	standing	040483
surprise	040460	stays	040484
swept	040462	staying	040485
swim	040463	swam	040486
shoot	040465	sticking	040487
shot	040466	shooting	040592
shone	040641	sitting	040594
shall	040710	should	040604
sniff	040644	sniffs	040606

Verbs Cont'd (S)

smells	040607	tie	040503
stops	040608	tired	040504
spills	040610	took	040505
spots	040622	tramp	040506
skim	040626	tramped	040507
set	040629	trap	040508
sets	040630	trapped	040509
smell	040631	traps	040510
spotted	040632	travel	040511
sniffed	040642	travelled	040512
(T)		trip	040513
		trips	040514
take	040488	troll	040515
taken	040489	trots	040516
talk	040490	try	040517
tapped	040491	turn	040518
tell	040492	turned	040519
telling	040493	threw	040520
thank	040494	tasting	040521
think	040495	took	040522
thinks	040496	tipped	040523
threw	040497	thought	040524
throbs	040498	touch	040525
throw	040499	taking	040526
throwing	040500	trying	040528
throws	040501	talking	040427
thumps	040502	types	040595

Verbs Cont'd (T)

tips	040602	upset	040533
thanks	040603	upsets	040534
tugging	040613	use	040535
tapping	040617	used	040536
tugs	040618		
trick	040621	(V)	
tip	040624	vanished	040537
throb	040625	visit	040538
tap	040639		
thanked	040640	(W)	
ticked	040661	wait	040539
tickle	040663	waited	040540
tickling	040665	walk	040541
thumped	040670	want	040542
track	040677	wanted	040543
tried	040682	wants	040544
tidy	040687	was	040545
thump	040693	washes	040546
told	040699	waved	040547
tied	040733	wear	040548
		wearing	040549
(U)		went	040550
underline	040529	were	040551
understand	040530	whack	040552
undid	040531	whisks	040553
unhappy	040532	whispered	040554

Verbs Cont'd (W)

wiggle	040555	watching	040582
will	040556	winks	040623
win	040557	welcome	040681
wind	040558	wishing	040634
winds	040559	wins	040637
wish	040560	wiggles	040681
wished	040561	waiting	040686
woke	040562	walking	040707
wore	040563	washed	
work	040564		
worked	040565	(X)	
working	040566		
works	040567	(Y)	
would	040568	yank	040583
write	040569	yapped	040584
wrecking	040570	yaps	040585
wrecked	040572	yelled	040586
wonder	040573	yip	040587
washing	040574	yawned	040588
watch	040575	yells	040615
waking	040576	yanks	040632
won	040577	yap	040645
wiggling	040578		
wrapping	040579		
wiggled	040580		
winning	040581		

ADJECTIVES

(A)

animal	050283	berr	050019
afraid	050001	black	050020
ago	050002	block	050021
alike	050003	blue	050022
all	050004	bottom	050023
alone	050005	bright	050024
any	050006	brown	050026
another	050007	broken	050026
apple	050008	bumpy	050027
asleep	050009	bus	050227
Ann's	050221	brass	050230
Allan's	050244	bubble	050254
Andy's	050247	bubbling	050258
attic	050268	Benny's	050296

birch	050298
bigger	050310

(B)

baby	050010	beaver	050318
back	050011	brain	050321

bad	050012
-----	--------

baggy	050013
-------	--------

behind	050014
--------	--------

best	050015
------	--------

big	050016
-----	--------

biggest	050017
---------	--------

battered	050018
----------	--------

(C)

corner	050291
--------	--------

candy	050294
-------	--------

clown	050275
-------	--------

cactus	050261
--------	--------

chill	050028
-------	--------

cracker	050289
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Adjectives Cont'd (C)

chocolate	050029	dizzy	050048
chubby	050030	down	050049
clever	050031	dry	050050
closed	050032	drying	050051
cold	050033	dumb	050052
cowboy	050034	dusty	050053
clumsy	050035	drunk	050215
crossly	050036	dentist's	050243
cute	050037	Daffy's	050246
camp	050231	Dan's	050277
Champ's	050248	drug	050282
cross	050267	delivery	050304
chicken	050276		
crinkly	050293	(E)	
		each	050054
(D)		extra	050055
dandy	050038	empty	050056
darling	050039	every	050057
dead	050040	easy	050265
delicious	050041		
deep	050042	(F)	
different	050043	fair	050058
dim	050044	fast	050059
dirty	050045	faster	050060
distant	050046	fat	050061
diving	050047	fine	050062
		first	050063

Adjectives Cont'd (F)

five	050064	grey	050089
flat	050065	gooey	050090
four	050066	girl's	050091
frantic	050067	gucky	050209
free	050068	Grandma's	050269
fresh	050069	gas	050285
fried	050070		
frisky	050071	(H)	
frizzy	050072	happy	050092
front	050073	high	050093
fun	050074	hot	050094
funny	050075	hungry	050095
fire	050076	hundred	050096
few	050077	half	050208
favourite	050078	ham	050288
frog's	050079	hat	050295
fish	050080	hockey	050303
farm	050286	hen's	050307
		hard	050311
(G)			
glad	050081	(I)	
glassy	050082	impossible	050097
glum	050083		
gone	050084	(J)	
grand	050086	jolly	050098
green	050087	just	050099
great	050087	Jan's	050220
		jacket	050226

Adjectives Cont'd (J)

jumping	050257	middle	050107
junk	050281	missing	050108
jam	050290	m-m-m	050109
		moo-oo	050110
(K)		more	050111
Kim's	050238	much	050112
		muddy	050113
(L)		mad	050114
lions	050100	million	050115
little	050101	mashed	050116
lizard	050102	Miss Smith's	050218
long	050103	moth	050234
least	050210	Mom's	050241
lost	050228	Mrs. Shelby's	050273
lumpy	050232	messy	050279
lot	050270	meat	050296
lamp	050274	mud	050260
lots	050280	metal	050301
loud	050302		
loose	050313	(N)	
laughing	050315	new	050117
		next	050118
(M)		nice	050119
main	050104	no	050120
many	050105	neat	050121
maple	050106		

Adj. Cont'd (N)

nutty	050317	person's	050139
		piggy	050254
(O)		plant	050271
odd	050122	party	050292
old	050123	pine	050297
one	050124	picnic	050304
only	050125	park	050308
open	050126	paper	050318
own	050127		
orange	050128	(Q)	
okay	050207	quick	050140
other	050211	quiet	050141
oak	050298		
		(R)	
(P)		ready	050142
panic	050129	red	050143
pink	050130	rear	050144
plastic	050131	rough	050145
pretty	050132	rabbit	050237
prickly	050133	Red Hen's	050242
purple	050134	rag	050251
police	050135	Randy's	050255
pen	050136	rat's	050287
polar	050137	Ron's	050309
pet	050138		

Adj. Cont'd

(S)

sunny	050262	sore	050168
silky	050250	sorry	050169
satin	050234	sound	050170
Sam's	050219	spoilt	050171
sad	050146	sport	050172
safe	050147	star	050229
safer	050148	steering	050173
same	050149	still	050174
scrambled	050151	suddenly	050176
shaggy	050152	sure	050177
short	050153	splendid	050299
shopping	050154	smart	050207
sick	050155	Susan's	050278
side	050156	spinning	050253
silly	050157	such	050249
sleeping	050158	stiff	050252
slimy	050160	stuffed	050264
slow	050161	six	050269
small	050162	spring	050272
smaller	050163	summer	050284
smooth	050164	squished	050312
snuggly	050165	small-looking	050314
soft	050166	sort	050319
some	050167		

Adj. Cont'd

(T)

Ted's	050240	tame	050263
throbbing	050223	those	050265
tent	050245	turnip	050305
thick	050222		
Tip's	050217	(U)	
Tim's	050216	ugly	050193
truck	050214	unkind	050194
terrible	050178	upset	050225
that	050179	unhappy	050232
the	050180		
these	050181	(V)	
thin	050182	very	050195
three	050183	velvet	050233
tickly	050184		
tidy	050185	(W)	
tight	050186	well	050236
this	050187	waggy	050196
tiny	050188	washed	050197
tired	050189	welcome	050197
track	050190	wet	050199
two	050191	what	050200
two-wheeled	050192	white	050201
twelve	050208	wrecked	050202
top	050259	wrong	050203
ten	050260	which	050311

Adj. Cont'd (Y)

yellow	050204
yucky	050205
yummy	050206
you	050212

ADVERBS

(A)

as	060107	both	060020
about	060001	but	060021
across	060002	best	060113
after	060003	bit	060125
again	060004		
against	060005	(C)	
alone	060006	crossly	060124
already	060007	certainly	060022
along	060008	crazier	060023
always	060009	closer	060120
apart	060010	crazy	060127
around	060011		
asleep	060012	(D)	
away	060013	darker	060024
awhile	060014	down	060025
all	060093	different	060128
any	060095		
anyway	060134	(E)	

(B)

back	060015	either	060026
backwards	060016	else	060027
behind	060017	enough	060028
beside	060018	everywhere	060029
bigger	060019	even	060101
		(F)	
		faster	060030
		finally	060031

Adverbs cont'd (F)

first	060032	(L)	
forever	060033	late	060123
forwards	060034	last	060107
frantically	060335	later	060046
funny	060036	little	060047
fast	060099		
flat	060104	(M)	
		maybe	060048
(G)		much	060112
good	060037	more	060094
good-bye	060097		
glum	060108	(N)	
		near	060049
(H)		never	060050
happily	060038	no	060051
hardly	060039	not	060052
here	060040	now	060053
how	060041	neither	060054
half	060042	next	060055
hard	060043		
high	060125	(O)	
		odd	060109
(I)		off	060056
instead	060044	once	060057
in	060129	otherwise	060058
		out	060059
(J)		okay	060060
just	060045	only	060061

Adverbs Cont'd (O)

over	060100	sometimes	060071
outside	060102	sure	060072
on	060121	still	060073

(P)

please	060062
probably	060063
past	060103

(T)

then	060076
there	060077
tonight	060078
too	060079
today	060096

(Q)

quietly	060122
quickly	060064

(U)

underneath	060080
up	060081
upside-down	060082
until	060111
upstairs	060131

(R)

real	060065
really	060066
right	060098

(V)

very	060106
------	--------

(S)

sadly	060067
sound	060074
sideways	060075
suddenly	060105
sale	060119
so	060068
softly	060070
some	060070

(W)

well	060083
when	060084
whenever	060085
where	060086
why	060087
without	060088

Adverbs Cont'd

(Y)

yes 060089

yet 060090

yeah 060091

you 060092

yesterday 060125

(Z)

PRONOUNS

(A)

anything 070001

any 070002

anyone 070036

(B)

bath 070003

(E)

each 070004

everyone 070005

everything 070006

(H)

he 070008

her 070009

him 070010

himself 070011

his 070012

(I)

I 070013

it 070014

its 070015

(M)

me 070016

mine 070017

my 070018

myself 070037

(N)

nobody 070019

none 070040

(O)

our 070020

(S)

she 070021

such 070039

someone 070040

(T)

that 070022

these 070023

they 070024

this 070025

those 070026

Pronouns Cont'd

(U)

us	070039
----	--------

(W)

who	070027
-----	--------

we	070028
----	--------

what	070029
------	--------

which	070030
-------	--------

whatever	070034
----------	--------

(Y)

you	070031
-----	--------

your	070032
------	--------

yourself	070033
----------	--------

yours	070034
-------	--------

CONJUNCTIONS

although	080001
and	080002
because	080003
but	080004
if	080005
so	080006
than	080007
when	080008
where	080009
or	080010
except	080011
while	080012
until	080013

ARTICLES

a 090001

an 090002

the 090003

PREPOSITIONS

(A)

along 100001

among 100002

at 100003

about 100034

against 100004

around 100005

along 100006

after 100007

across 100029

(F)

for 100014

from 100015

(I)

in 100016

into 100017

(L)

like 100027

(B)

beside 100008

but 100009

by 100010

between 100011

behind 100031

before 100034

(O)

of 100018

on 100019

onto 100020

over 100021

off 100032

(D)

down 10012

(P)

past 100033

(E)

except 100013

(T)

to 100022

through 100028

Prepositions Cont'd

(U)

under 100023

upon 100024

up 100030

(W)

with 100025

without 100026

CONTRACTIONS

(A)			
aren't	120001	(I)	
		I'd	120012
(C)		I'll	120013
can't	120002	I'm	120014
couldn't	120003	It's	120015
		I've	120016
(D)		it's	120017
didn't	120004	isn't	120021
doesn't	120005		
don't	120006		
		(L)	
(E)		let's	120018
everybody's	120007		
		(M)	
(G)		mine's	120019
girl's	120008		
		(O)	
(H)		one's	120020
he'll	120036		
he's	120009	(S)	
haven't	120010	she's	120021
here's	120011		
hasn't	120033	(T)	
how's	120034	that's	120022
		there's	120023
		they're	120024

Contractions Cont'd

(W)

we'll	120025
what's	120026
where's	120027
won't	120028
wouldn't	120035
wasn't	120036

(Y)

you'll	120029
you're	120030
you've	120031
we're	120032

INTERJECTIONS

(A)		(N)	
aaawr	110001	nightie	110034
all right	110030	night	110035
achoo	110036		
(B)		(O)	
bang	110002	oh	110011
boom	110003	okay	110012
		ocw	110013
		ouch	110014
(D)		(P)	
ding-dong	110028	pow	110024
(G)		(R)	
good-bye	110004	rah-rah	110031
great	110022	rum-tum-tum	110029
(H)		(S)	
ha	110005	screech	110015
hello	110006		
hi	110007		
hm	110008		
(M)		(T)	
huh	110009	tap tap	110033
hey	110010		
(M)		(W)	
		wham	110016
my	110025	whee	110017
		wow	110018

Interjections Cont'd (W)

well	110023
------	--------

wa-wa	110027
-------	--------

(Y)

yea	110019
-----	--------

yeoow	110020
-------	--------

yippy	110021
-------	--------

yum yum	110032
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APPENDIX HSAMPLE OF CHILD'S TRANSCRIPT

Subject 13 (Male EPL, PM Class. Age: 6 years: 2 mos.
Academic: Average)

For brevity on the transcripts, the zeros were omitted from the six digit coding groups;

for example: "030790" would be written
as "3-790".

= phonological unit. See Chapter 1, page
for explanation.

MODE 1 - Freeplay Session

020003

12-13 4-136 3-369 / 020003 3-151 4-589 5-56 020006 4-192 9-1 3-151 6-59 9-3
 I'll drive home# / ... Case is empty# / ... Get a case out the

020003

3-144 3-603 4-003 4-082 020012 6-41 6-27 4-058 7-28 4-182 3-369 8-5
 car# / ... Police are coming# / ... How else can we get home if

7-28 12-2 4-136 9-1 3-144 020001 6-91 020003 12-25 4-192 4-102 020005 7-13 4-479
 we can't drive a car# / ... Yeah# / ... We'll get caught# / ... I threw

9-3 3-414 6-59 020006 7-32 5-055 3-414 4-551 140002 10-19 7-35 020003 12-32 3-369
 the keys out# / ... your extra keys were on them# / ... We're home

6-53 020002 4-192 6-59 020006 6-62 4-192 6-59 140003 10-18 9-3 3-144 020004 12-13 4-276 7-31
 now# / ... Get out# / ... Please get out of the car# / ... I'll let you

4-136 020003 7-31 4-136 6-23 020005 7-13 4-177 7-18 3-360 140002 10-03 3-369
 drive# / ... you drive crazier# / ... I forgot my hat at home# / ...

020006 4-81 10-19 12-13 4-465 9-3 3-212 020008 12-13 4-261 9-3 9-790 140004 10-32 9-3 5-135
 Come on I'll shoot the cops# / ... I'll kick the tire off the police

3-144 020005 7-8 4-220 4-202 5-18 3-790 020003 12-24 4-371 6-100
car# / ... He has got battered tire# / ... They're pulling over# / ...

020018 4-370 7-31 4-202 140003 10-16 7-18 3-786 6-44 10-18 7-32 3-811 8-2 7-31 4-522
 Pretend you got in my truck instead of your van and you took

6-56 8-2 7-31 4-572 7-14 020005 12-30 4-570 7-32 3-786 6-81
 off and you wrecked it# / ... You're wrecking your truck up# / ...

020003 12-11 7-32 3-786 020003 12-17 6-93 5-202 020001 6-91 020006 4-063 9-3
 Here's your truck# / ... it's all wrecked# / ... Yeah# / ... Chuck the

3-406 140003 10-16 9-3 3-642 020004 4-201 140003 10-22 9-3 3-376 020004 140003 4-201 10-22 9-3
 junk in the river# / ... Going to the hospital# / ... Going to the

3-049 020006 6-91 12-18 4-199 140003 10-22 9-3 3-049 020001 6-91 020005 4-192 6-59 140003 10-18
beach# / ... Yeah, let's go to the beach# / ... Yeah# / ... Get out of

7-18 3-786 010001 020005 140002 6-91 4-201 10-22 4-571 7-18 3-786 020004 140002 4-367 7-14 10-16 3-340
my truck# / ... (Yeah,) going to wreck my truck# / ... Put it in gear# / ...

020003 020005 140003 020003 020006
 12-13 4-04 7-14 4-257 6-59 10-18 9-3 3-144 12-11 9-1 3-338 4-451
 I'll bust it# /...Jump out of the car# /...Here's a gun# /...start

140002 020004 020007
 4-592 9-3 3-862 10-19 7-14 050137 4-589 7-32 3-144 7-31 4-222 4-202
 shooting the wheels on it# /...This is your car# /...You have got

020007
 5-066 10-22 5-064 3-150 8-2 7-31 4-003 4-570 4-35 6-93 6-81
 four to five cars# /...and you are wrecking them all up# /...

020006 020006 180002
 8-2 7-13 6-61 4-202 9-1 3-786 8-2 5-124 5-211 3-786 7-22 4-567
 and I only got a truck# /...and one other truck (that) works# /...

020008 020003 020006
 6-91 7-31 4-222 4-202 5-066 10-22 5-064 3-150 6-89 7-31 4-123 12-25
 Yeah, you have got four to five cars# /...Yes you do# /...We'll

140003 020007 140003
 4-593 3-652 10-23 9-3 3-761 4-081 10-19 12-18 4-192 10-16 7-8 3-786
 fire rocks (at) the things# /...Come on let's get (in) my truck# /...

020006 140003 020007 140004
 8-2 12-25 4-394 10-21 9-1 3-144 7-31 4-058 4-423 10-16 9-3 5-011 3-684
 and we'll run over a car# /...You can sit (in) the back seat# /...

020007 140003 020010 140002 150003
 7-31 4-058 4-423 10-16 9-3 3-028 6-77 7-13 4-1 4-201 10-22 4-014 9-3 3-251 10-18
 You can sit (in) the back there# /...I am going (to) be the driver (of)

020006 140003 020005 140003
 7-18 3-786 9-3 3-251 4-424 10-19 9-3 3-659 4-1 7-13 10-19 9-3 3-448
my truck# /...The driver sits (on) the right# /...Am I (on) the left# /...

020004 020003 020006 150003
 7-13 4-1 9-3 3-251 7-28 6-45 4-519 9-3 3-028 10-18 9-3 3-786
 I am the driver# /...We just turned# /...the back (of) the truck

020006 140003 020007
 4-235 12-18 4-192 6-15 10-22 9-3 3-602 6-91 12-18 4-199 4-192 9-3
 hit# /...let's go back (to) the pub# /...Yeah#...let's go get the

020006 020006
 3-029 12-18 4-199 4-192 5-111 3-030 6-78 4-199 10-16 8-2 4-192 5-167
 bag# /...let's go get two bags tonight# /...Go in and get some

020004 020011 140003
 3-507 12-11 5-04 9-3 3-057 12-13 4-367 5-04 9-3 3-057 10-16 9-3
 money# /...Here's all the beer# /...I'll put all the beer (in) the

150003 020004 020006
 3-028 10-18 9-3 3-786 4-081 10-18 12-18 4-199 7-31 4-192 6-59 8-2
back#...(of) the truck# /...Come on let's go# /...You get out and

020005 020006
 4-192 7-14 7-22 4-545 7-17 3-485 5-04 9-3 3-057 4-589
 get it#./...That was mine, Miss Stephens#./...all the beer is

020005 140003 020003
 6-81 6-40 4-192 6-100 10-19 7-32 3-684 3-635 4-424 6-77
 up here#./...Get over on your seat#./...Raymond sits there#./...

020006 020004 020004
 6-51 7-13 4-542 10-22 4-423 6-77 7-13 4 9-3 3-251 11-12 7-31 4-423
 No, I want to sit there#./...I am the driver#./...O.K. you sit

020010 140003 020004
 6-77 6-89 7-28 4-058 7-23 6-45 4-367 7-14 10-16 5-144 3-340 8-2 6-76
 there#./...Yes we can, we just put in in rear gear#./...and then

7-14 4-484
 it stays#./...

Mode 3 - Interview Session

020005 140003 020005
 7-28 4-550 10-11 9-03 3-780 9-03 3-236 4-589 6-93 5-315
 We went on the train#/.The dog is all laughing#/.

020002 020005 020005 170003
 12-17 5-61 12-22 9-03 5-101 3-848 8-2 7-8 4-698 10-22
 It's fat#/.That's the little wolf and#/.He looks (like)

020007 130003 020003
 7-8 4-589 7-8 12-5 4-282 7-16 4-699 7-10 6-81 8-3 12-9
 he is#/.He doesn't like me (picking) him up#/.because he's

020006
 4-578 12-24 6-59 10-27 7-22 4-366 6-59
 wiggling#/.They're out like that#/.pushed out#/.

020005 020002 020005
 4-710 7-13 4-267 7-10 6-15 7-8 4-577 7-8 4-550 9-03 5-203 3-823
 Shall I put him back#/.He won't#/.He went the wrong way#/.

020004 020005 010001
 7-8 4-220 5-163 3-432 7-8 4-105 7-12 3-432 6-128 5-90
 He has smaller legs#/.he puts his legs different#/.(Gooney#).

010003 020005 140003 020007 140003
 7-13 4-282 7-10 12-2 4-199 10-16 9-03 3-822 4-58 7-8 4-287 6-59 10-18
 (I like him#)Can't go (in) the water#/.Can he live out (of)

020005 020006 140002
 9-03 3-822 4-58 7-13 4-264 4-252 7-10 4-528 10-22 4-541 6-13
the water#/.Can I keep holding him#/.Trying (to) walk away

140002 020002 020004 140002 020001
 10-15 7-16 5-187 3-544 4-367 7-10 10-21 6-40 6-91
(from) me#/.this one#/.Put him (over) here#/.Yeah#/.

020005 140002 020002 020002
 4-276 7-10 4-541 10-16 6-77 6-91 6-98 12-9 4-581
 Let him walk (in) there#/.Yeah#/.Right#/.He's winning#/.

020003 140002 020005 140002 020001 020003
 4-289 10-3 7-22 12-14 4-201 10-22 4-555 7-14 4-539 4-192 7-10
 Look (at) that#/.I'm going (to) wiggle it#/.Wait#/.Get him

020004 140002 020004 140002 020004
 3-676 4-367 3-544 10-16 6-40 4-367 7-10 10-16 6-77 4-317 7-10
 Sandra#/.Put one (in) here#/.Put him (in) there#/.Make him

020002 020002 020002
 4-257 6-56 4-257 6-25 4-192 6-25 4-81 6-40
 jump down#/.Jump down#/.Get down#/.Come here#/.

MODE 2 - Storytelling Session

020010

140004

020005

9-01 3-330 4-545 4-493 9-01 3-736 10-22 7-12 5-101 3-320 6-76
 A grandpa was telling a story to his little girl#....Then

020003

020006

9-03 5-101 3-320 4-697 9-03 3-330 4-588 6-76 9-03
 the little girl read#....the grandpa yawned#....then the

020011

5-101 3-425 4-262 5-114 8-2 6-76 9-03 5-101 3-320 4-697 8-2 7-8
 little kid got mad#....and then the little girl read and he

020019

4-545 4-154 6-12 8-2 6-76 9-03 5-101 3-320 4-158 6-12
 was falling asleep#....and then the little girl fell asleep

140003

8-2 4-367 9-03 3-86 10-19 9-03 3-902 8-2 9-03 3-330 4-158 5-9
 and put the book on the bed#....and the grandpa fell asleep#....

APPENDIX I. Average Number of Words Per Communication Unit and per Maze Unit for Children.

	<u>Total # of Words</u>	<u>Total Words in C-Unit</u>	<u>Average # of Words per C-Unit</u>	<u>Total Words in M-Unit</u>	<u>Average # of Words per M-Unit</u>
1	351	291	5.39	60	2.30
2	391	378	5.73	13	1.86
3	364	342	4.62	22	2.20
4	320	291	4.34	29	2.64
5	448	422	4.14	26	1.73
6	333	308	4.74	25	2.78
7	396	377	4.83	19	2.11
8	422	391	4.76	31	2.06
9	303	290	4.53	13	3.25
10	324	279	4.04	45	3.00
11	490	399	4.93	91	3.37
12	331	311	4.78	20	2.22
13	586	559	5.04	27	1.80
14	512	453	4.98	59	2.81
15	492	443	4.61	49	2.33
16	377	344	4.41	33	3.00
17	209	195	4.33	14	2.00
18	273	258	4.87	15	1.67
19	208	180	4.50	28	2.55
20	201	184	6.79	17	2.83
21	310	304	4.83	6	2.00
22	316	291	4.28	25	2.27
23	248	247	5.74	1	1.00
24	<u>237</u>	<u>215</u>	<u>4.67</u>	<u>22</u>	<u>3.67</u>
Total	8422	7752	4.74	670	2.40

APPENDIX J. Proportion of Mazes and Communication Unit in Total Communication for Children

	<u>Total # of Utterances</u>	<u>Number of C-Units</u>	<u>% of Total Utterances</u>	<u>Number of M-Units</u>	<u>% of Total Utterances</u>
1	80	54	67.50	26	32.50
2	73	66	90.41	7	9.59
3	84	74	88.10	10	11.90
4	78	67	85.90	11	14.10
5	117	102	87.18	15	12.82
6	74	65	87.84	9	12.16
7	87	78	89.66	9	10.34
8	97	82	84.54	15	15.46
9	68	64	94.12	4	5.88
10	84	69	82.14	15	17.86
11	108	81	75.00	27	25.00
12	74	65	87.84	9	12.12
13	126	111	88.10	15	11.90
14	112	91	81.25	21	18.75
15	117	96	82.05	21	17.95
16	89	78	87.64	11	12.36
17	52	45	86.54	7	13.46
18	62	53	85.48	9	14.52
19	51	40	78.43	11	21.57
20	39	33	84.62	6	15.38
21	66	63	95.45	3	4.55
22	79	68	86.08	11	13.92
23	44	43	97.73	1	2.27
24	<u>52</u>	<u>46</u>	<u>88.46</u>	<u>6</u>	<u>11.54</u>
Total	1913	1634	85.42	279	14.58

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