THE IMPACT OF A WHOLE LANGUAGE PROGRAM ON THE READING AND WRITING DEVELOPMENT OF GRADE TWO CHILDREN

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by

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ABSTRACT

This study was designed to investigate the impact of a whole language program on the reading and writing development of grade two students. A whole language and a basal skills approach to literacy acquisition were compared. One hundred and four grade two students were equally divided into two groups. The subjects in the experimental group were exposed to whole language in grade one and grade two and the subjects in the control group were taught using a skills approach in grade one and a whole language approach in grade two. The subjects were tested at the beginning and towards the end of grade two on their achievement levels on standardized tests of reading comprehension, meaning vocabulary and sight vocabulary. An evaluation of writing ability was also carried out according to selected criteria.

The results showed that the subjects in the experimental whole language group scored significantly higher on tests of writing ability after one year of exposure to whole language than did the control group. After two years, the experimental group scored significantly higher on reading comprehension and writing ability than did the control group. There were no significant differences between the two groups in meaning vocabulary and sight vocabulary, however, the relationship was in the expected direction. In sum, it was concluded that whole language intervention at the grade one level not only significantly improved writing ability in grade one but also significantly improved reading comprehension and writing ability in grade two.

ACKNOWLEDGEMENTS

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CHAPTER I

INTRODUCTION TO THE STUDY

Statement of the Problem

Basal reading programs have been an integral part of reading instruction in most schools in North America for many years. Educators often view these programs as a comprehensive reading curriculum consisting of graded readers, teacher manuals, scope and sequence charts, workbooks and/or skillbooks, tests and numerous other optional materials. Basal readers are frequently used as the major instructional tool in teaching reading and, as such, they are often considered to be an entire reading curriculum.

Traditionally, basals have contained a skills orientation to reading instruction and reflect the belief that reading acquisition is based on the mastery of a sequence of discrete skills.

> The premise underlying the basal reading method is that reading is a developmental task involving acquisition of major skills and that each of these major skills is comprised of many subskills. These subskills vary in difficulty and complexity and therefore need to be introduced to the reader in a logical prescribed order. Not only do the subskills in each major skill area need to be ordered, but plans need to be made for integrating them into an instructional program so that the reader can begin to interrelate them. (Flood & Lapp, 1983, p.294)

Viewed in this way, reading is believed to occur by progressing through the acquisition of a series of skills beginning with the identification of the letters, their corresponding sounds, words, sentences and finally onto the larger units of the language. This is often referred to as the bottom-up model of reading (Otto, 1982) where decoding the print is perceived to be one of the most important aspects of reading and, consequently, a heavy emphasis is placed on word recognition and phonics. Comprehension is seen as the outgrowth of reader's automatic skill in decoding the print (Chall, 1983; Otto, 1982;

Smith, 1982; Liberman & Shankweiler, 1979). Within this framework, reading and writing are judged to be distinct complex skills to be learned separately and to be taught sequentially, mainly through teacher directed activities. Writing is taught in the same skill directed manner as reading. Until recently, it was thought that children could not write until they had the ability to spell commonly used words, usually at some point in grade two (Beebe, 1988). Emphasis was placed on correct spelling, handwriting, punctuation and capitalization with much less attention being given to message quality.

During the past twenty-five years, there has been a rapid increase in what is known about language learning, beginning literacy acquisition, and the relationship between the two. Studies have shown that children come to school already equipped with considerable knowledge about the language they use while learning to read and write (Goodman, 1983; Clay, 1975). Once researchers started examining the natural behaviours of young children (birth to six years of age) in literate home environments, they began to see the natural emergence of reading and writing which they subsequently labelled emerging or emergent literacy (Teale & Sulzby, 1989).

Information from this type of research has given educators new insights into how children acquire all language abilities. It is now known that reading and writing begin much earlier than educators once believed. For example, by the time children reach age two or three, they can identify some of the print in their environment such as signs, labels and logos (Goodman, 1983; Hiebert, 1981). Research has shown that young children also experiment with writing and that early scribbles are the origin of all drawing and writing. An important investigation by Marie Clay (1975) indicated that sometime between the ages of three and five most children become aware that marks on

paper and signs in the environment have a purpose and convey a message.

Teachers and educators have become disenchanted with traditional skill programs and have begun questioning their own beliefs and understandings about how children learn to read and write. These educators found that students were spending far more time on questionable activities such as workbook pages, skillsheets, and tests than on actual reading and writing activities. Anderson, Hiebert, Scott, and Wilkinson (1985) discovered that "silent reading time in the typical primary school class is seven or eight minutes per day, or less than 10 percent of the total time devoted to reading" (p.74). Coinciding with this is the fact that 70 percent of reading instructional time is devoted to independent workbook activities and skillsheets.

Many teachers have discarded these practices in search of better approaches for language acquisition. Teacher disenchantment with traditional programs, coupled with current research into natural language learning, has resulted in a major paradigm shift in the theory underlying literacy acquisition. Consequently, there has been a trend away from a skills approach to a more natural, holistic, or whole language approach to language learning in its written form.

From this child-centred perspective, children learn to read and write in the same natural manner that they learned to listen and speak.

> The key theoretical premise for whole language is that, the world over, babies acquire a language through actually using it, not through practicing its separate parts until some later date when the parts are assembled and the totality is finally used. The major assumption is that the model of acquisition through real use (not through practice exercises) is the best model for thinking about and helping with the learning of reading and writing and learning in general. (Altwerger, Edelsky & Flores, 1987, p. 145)

The whole language approach grew out of psycholinguistic theory. Psycholinguis-

tics is considered to be the marriage of two sciences: cognitive psychology, which explores the workings of the human mind; and linguistics, which explores the nature of human language (Cooper & Petrosky, 1976). From this perspective, commonly referred to as the top-down model (Otto, 1982), reading is viewed as a psycholinguistic guessing game (Goodman, 1976) in which readers use their background knowledge of the world and the language in order to make hypotheses or predictions regarding the print. Comprehension is seen as the most important goal of any reading encounter. Decoding is viewed as an outcome of making connections between print and the meaning. Readers can discover these connections themselves if they are surrounded by an environment filled with print and given meaningful literary experiences (Goodman, 1986; Bissex, 1981; Holdaway, 1979; Smith, 1982; Otto, 1982).

More recent research refers to reading as a socio-psycholinguistic process (Anderson, 1984; Weaver, 1988; Strickland & Morrow, 1988) which perceives reading to be a process of constructing meaning through interaction between the reader, the reader's knowledge, the print and, of equal importance, the context of the reading situation.

> A socio-psycholinguistic view of language learning considers the learner
> within a culture learning and using language to represent thinking in social
> situational contexts in home, community and school settings. (Anderson,
> 1984, p.7)

In the traditional school setting, language is often broken down into fragmented skills which are neither meaningful nor purposeful. Researchers now question the emphasis on skill activities related to reading and the emphasis on mechanics in the improvement of written expression (Calkins, 1985; Slaughter, 1988). Furthermore, the traditional approach of separating writing from reading is under critical observation (Varble, 1990). In contrast, a whole language classroom promotes learning to read and write in a setting

which encourages: a) meaningful natural language patterns; b) whole language rather than fragmented elements of language; c) language which is functional or purposeful; and, d) language which is learned in a meaningful context (Anderson, 1984).

In keeping with this philosophy, the Department of Education for the province of Newfoundland and Labrador recently adopted a language arts program entitled Nelson Networks (McInnes, 1987) which is based on the whole language beliefs. This instructional program represents one of three components or modules which comprise the primary language arts curriculum for the province. The three modules are presented in the curriculum guide book entitled Experiencing Language, (1988). First, a Language Experience Module is outlined which utilizes the natural language and experiences of the child in order to teach children to read and write. The importance of relating the children's oral language to written language and relating reading to writing is emphasized. Second, an Instructional Module is included which is the selected instructional program (Nelson Networks). This module assists children in learning how to listen, speak, read and write. Third, a Literature Module is presented which provides exposure to a variety of children's literature for the purpose of facilitating the reading and writing development of children in the primary grades.

In September 1988, the Department of Education implemented the new primary language arts program for use in grade one classrooms throughout the province. The Roman Catholic School Board for St. John's did not begin using this program at that time because it was believed that it was necessary to conduct a pilot program and to provide inservice for teachers. Six grade one classrooms were chosen to pilot the program in September 1988 and, subsequently, it was decided that the program would

mented in all grade one and two classrooms in September, 1989. This meant that most of the children who entered grade two during the fall of 1989 in the Roman Catholic school board did not have exposure during their grade one year to the new language arts program.

The question arises as to whether the implementation of the new program will produce better readers and writers at the primary level. It is assumed that this is a preferable program to the previous basal series but little empirical evidence is available as to the effectiveness of whole language teaching (Stahl & Miller, 1989; Reutzel & Cooter, 1990; McKenna, Robinson, & Miller, 1990). One might legitimately ask whether changing to a whole language approach will prove to be a more effective way to assist children in literacy development than continuing with the traditional approach. Specifically, two important questions arise from the situation in the Roman Catholic School Board.

1. Will the children who have been exposed to the whole language program during grade one attain higher achievement levels than those grade one children who were in the traditional basal program?

2. Will students who have been exposed to the whole language program for grades one and two attain higher achievement levels than those who have been exposed to the skills approach in grade one and whole language in grade two?

Purpose of the Study

Over the past decade, there has been considerable controversy and discussion in the literature between adherents of the skills approach to literacy acquisition, with its emphasis on decoding, and advocates of the whole language approach, with its emphasis on meaning. Whole language instruction is becoming increasingly popular nationwide without quantitative evidence that this approach will lead to comparable reading

achievement (Reutzel & Cooter, 1990) and improved writing ability (Varble, 1990) when contrasted with traditional basal reader instruction. According to Searfoss and Readence (1989), no single issue is receiving more attention than whether or not schools should adopt a skills/subskills approach or a holistic/whole language approach when teaching reading and writing.

The purpose of this study was to investigate the impact of the implementation of the new whole language program in terms of the reading and writing achievement levels of grade two students. Writing ability is closely related to children's reading ability (Teale & Sulzby, 1989) and reading ability depends very much on comprehension and vocabulary development. A receptive or meaning vocabulary is considered a strong factor in reading comprehension (Chall & Stahl, 1985) and a sight vocabulary is considered essential to successful reading (Durkin, 1978). This study, therefore, examined the achievement levels of grade two students in four areas; reading comprehension, meaning vocabulary, sight vocabulary and writing ability.

The first concern of the study was whether students who were introduced to literacy using the whole language approach would attain higher achievement levels than those who were introduced through a skills approach. This part of the study was designed to provide answers to four questions.

1. Will students who have been exposed to a whole language approach for one year attain a higher level of reading comprehension ability than those taught using a skills approach for one year?

2. Will students who have been exposed to a whole language approach for one year attain a higher level of meaning vocabulary than those taught using a skills approach for one year?

3. Will students who have been exposed to a whole language approach for one year attain a higher level of sight vocabulary than those taught using a skills approach for one

year?

4. Will students who have been exposed to a whole language approach for one year attain a higher level of writing ability than those taught using a skills approach for one year?

The second concern of the study was whether two years of exposure to the whole language approach would result in higher achievement levels than only one year of exposure to the same program and one year of exposure to a skills approach. This part of the study was designed to answer four questions which parallel those in the preceding set.

1. Will students who have been exposed to a whole language approach for two years attain a higher level of reading comprehension ability than those who had been exposed to the skills approach in the first year and the whole language approach for the second year?

2. Will students who have been exposed to a whole language approach for two years attain a higher level of meaning vocabulary than those who had been exposed to the skills approach in the first year and the whole language approach for the second year?

3. Will students who have been exposed to a whole language approach for two years attain a higher level of sight vocabulary than those who had been exposed to the skills approach in the first year and the whole language approach for the second year?

4. Will students who have been exposed to a whole language approach for two years attain a higher level of writing ability than those who had been exposed to the skills approach in the first year and the whole language approach for the second year?

Significance of the Study

Administrators, teachers, parents and students need to know whether the whole language approach is a better alternative than the traditional skills approach for literacy acquisition. To date, from the limited research that has been done, this does not necessarily seem to be the case for reading. Stahl and Miller (1989) conducted a quantitative research synthesis of whole language and language experience approaches for beginning reading. They found that, overall, whole language/language experience

approaches were approximately equal to basal reading approaches in their achievement effects. They believe that:

> First, whole language/language experience approaches may be more effective in kindergarten than in first grade. Second, they may produce stronger effects on measures of word recognition than on measures of reading comprehension. Third, more recent studies show a trend toward stronger effects for basal reading programs relative to whole language/language experience methods. (p.87)

It is believed that if teachers replaced their traditional approach to teaching writing with the whole language approach, the quality of student's writing would improve (Gunderson & Shapiro, 1986; Reutzel & Hollingsworth, 1988). A recent study conducted in the province of Newfoundland and Labrador (Payne, 1989) investigated the relationship between teacher experience with whole language instruction and student achievement of grade one children in reading comprehension, vocabulary and writing ability. Results indicated that there were no significant differences between student achievement levels in reading comprehension and vocabulary development. However, writing ability showed greater improvement as a result of whole language instruction by a more experienced whole language teacher.

Advocates of whole language who believe that children learn to read and write in the same natural way they learned to speak (Edelsky, 1990; Teale & Sulzby, 1989; Goodman, 1986; Holdaway, 1979; Watson, 1983; Newman, 1985; Anderson, 1984; Weaver, 1988) draw their support mostly from qualitative research in the form of ethnographic or descriptive investigations. There are very few studies of a quantitative nature to support the claims for whole language teaching. This study, then, may have both theoretical and practical significance for offering a whole language approach to language acquisition.

Limitations of the study

There are three main limitations to this study which can be classified as (a) conceptual, (b) data-gathering, and (c) measurement. The first limitation has two aspects, one regarding teacher attitude and the other regarding the subjects.

For many teachers, legislated change to whole language instruction causes fear and hesitation which often leads to resistance. While it was recognized that teacher attitude is an essential component in the success of any program, the scope of the research did not include this element. Similarly, variables which affect students' literacy acquisition such as background experience, motivation and parental involvement were not measured.

The data gathering was limited because the sample was not randomly selected. Therefore, generalizations cannot be made beyond the schools in which the study was conducted. The experimental group had to be selected from the classes who had been part of the pilot project with the Roman Catholic School Board and the control group was selected on the basis of a close socio-economic match to the experimental group. The catchment areas were the same for both schools, therefore, it is most likely that the classes were very similar.

The measurement limitation concerns the fact that there were no scores available for the subjects at the entrance to grade one. Ideally, the children would have been measured before they began the pilot. Since this was not possible, the assumption was made that the academic levels of the children in the control and experimental groups were very similar because both groups had been heterogeneously assigned to grade one classes and were from the same kind of residential areas.

CHAPTER II

RELATED LITERATURE

Historical Perspective of the Basal Reader

The earliest form of what might be called basal readers appeared in America in 1790 under the authorship of Noah Webster (Spache & Spache, 1986). Webster's "Blue-Backed Spellers" attempted to teach reading by introducing and teaching the names of alphabet letters and their corresponding sounds. Proper pronunciation and fluency in oral reading was the primary focus of reading instruction. It was believed that understanding would come later as the children became practiced in oral reading.

It was not until 1836 that the first graded reading series, called the McGuffey Readers, were developed by William Holmes McGuffey (McGuffey, 1962). A Presbyterian minister, McGuffey believed it was important that texts be used to instill christian piety and character as well as to teach reading and writing (Steuer & Steddom, 1979). As a result, the content of these readers was flavoured with religious and moral overtones. The McGuffey readers accompanied the establishment of the graded school system and were widely used for approximately forty years. During this period, the focus of reading instruction began to involve the introduction of a progression of increasingly complex skills which had to be mastered at each grade level prior to promotion to the next grade.

By 1890, changes in the content of the basal readers appeared which reflected a new emphasis in education. The patriotic and moral stories of the basal gradually disappeared and were replaced by selections which tried to capture a child's interest and stressed the importance of the acquisition of knowledge.

Once reading instruction was released from its theological moorings, a rapid progression began in instructional technology. Gaining meaning from print is clearly discernible in the intentions of late eighteenth-century authors, as revealed by changes in primer content. The shift from preaching adult concepts to promoting interest through child's concerns is one of the great revolutions in the history of the basal reader (Venezky, 1987, p. 262).

In the early 1900's, a scientific movement in education began and instructional practices changed from an emphasis on rote memorization and oral reading toward a greater emphasis on silent reading. Psychological studies clearly indicated that reading was a complex thought-getting activity that depended on underlying skills and abilities. At this time, comprehension and speed were found to be largely responsible for reading ability (Beebe, 1990).

As early as 1940 Gray, who was one of the first to view reading as a hierarchial set of skills, identified the apprehension of meaning into literal, inferential, and critical levels of understanding. The research of Davis (1942, 1944) into the delineation of the skills involved in comprehension had a profound effect on reading instruction. It appeared that research had finally begun to identify the basic psychological processes involved in reading. Authors and publishers of basal readers could not ignore these new discoveries and began to incorporate the teaching of basic sequential skills in their programs. As a result, the teacher's manuals or guide books to accompany the graded readers were increased in content to include instruction for skill development. The topics covered were broadened to provide a more balanced program which included word recognition, comprehension, evaluation, and enrichment activities. Perhaps the most important inclusion was the skills chart which gave a listing of skills associated with specific pages in the basal readers and the instructions for teaching them.

During the 1950's and 1960's the skills approach became firmly entrenched in the school system and this trend is still evident in many schools today. Some basals have incorporated several instructional techniques, however, it is the traditional skills approach which is reflected in most of the published instructional material.

> A skills orientation to reading is probably familiar to all reading teachers since most published materials reflect this orientation. In one set of materials (Random House Criterion Reading) reading is subdivided into over 450 skills. These skills are ordered hierarchically and each is tested and taught in turn. Knowledge of these skills is generally considered to be both necessary and sufficient for learning to read. (Malicky, 1980, unpaged).

Historically, the skills approach viewed reading comprehension as being primarily concerned with remembering or reproducing the text as it appeared on the printed page (Pearson & Johnson, 1978). From this orientation, phonics and decoding skills were considered prerequisites for reading comprehension. Most basal reading series reflected this view and emphasized skill development. Guidebooks and manuals provided teachers with lists of skills which were broken down into a sequence of sub-skills, along with well developed lesson plans to teach each skill. Although some of these were considered comprehension skills, most of the attention was given to word identification skills.

Each story lesson normally began with the identification of the words that were considered to cause decoding or meaning difficulty. These so called target words were listed in the teacher's manual and were often used to develop meaning vocabulary. Prior to reading a particular basal story, teachers were encouraged to introduce these target words by writing them on the board and using them in sentences constructed to provide enough context to allow the student to infer the meaning of the word. Children were also encouraged to use a glossary to look up the meanings of the target words and put them

into sentences. Since the texts were not specifically written to establish the meanings of target words, it seemed that the extent to which a context was likely to lead a reader to the meaning of a target word depended on chance rather than on design (Beck, 1984). After reading the basal selection, a variety of exercises in the form of independent workbook activities and/or skillsheets were used to reinforce the target words found in the various reading selections. In many of the traditional basal programs, the words targeted for meaning vocabulary development did not appear on a regular basis and little effort was made to provide experience with these words (Beck, 1984).

The traditional basal series approach to developing children's sight vocabulary was through teaching word lists, playing isolated word games, and using worksheets and/or the workbook pages which accompanied the basal reader. All of these activities relied on the drill and practice of new words. The language in the basal reader selections contained simplified and controlled sight vocabulary which introduced new words gradually and used these words over and over on later pages and in subsequent readers. Explicit instruction in sight vocabulary resulted in a number of word lists being developed. Dolch (1960) composed one of the first and most frequently used list of basic sight words. It consisted of 220 words which comprised a sizeable portion of the words that were encountered in the primary basal readers. Often teachers wrote these sight words on cards or placed long lists of words on paper and had the children repeat them over and over until they were memorized. It was assumed that children who knew the words in the Dolch list could read 70 percent of the words in the first grade reader (Robinson & Good, 1987).

The traditional basal series viewed writing as a product that could only be taught

after a student had acquired the basics of reading. The sequence of instruction in writing

is described by Beebe (1988) in the following way.

> Letter formation was taught as the alphabet and the associated sounds
> were introduced in Kindergarten and grade one. Once letters were
> learned, they could be put together to make words and words led to
> writing partial sentences as children answered questions in workbooks or
> on worksheets. Finally, sentences were taught and then stories were at-
> tempted. (p. 18)

In this approach, writing was considered a separate subject and was taught in isolation

from reading. The major emphasis was on skill development, especially skills dealing

with the mechanics of the language such as punctuation, spelling, capitalization and

usage. Proper grammatical form, correct spelling, and neatness in handwriting were

considered much more important than the meaning of the message. Traditionally, the

idea of multiple drafts and revision was rarely considered. In fact, there was a tendency

to consider the first draft as the only one. Writing and spelling were products to be

learned rather than processes to be explored and developed.

Basal reading series are still used to teach children how to read. According to

Artley (cited in Searfoss & Readence, 1989) the basal reader approach is concerned with

all aspects of reading and contains the following three major features: scope, sequence,

and organization. The scope encompasses the range of skills that the fluent reader needs

to acquire and the sequence deals with the order in which the various skills are taught.

The organization refers to the integration of all the elements including individual lessons,

units, and books within a series. In order to accomplish this organization, guidance is

provided by a teacher's manual that directs the teaching of the specified skills.

In addition to the teacher's manual, the typical basal reading series contains four

components. Student readers make up the core of the basal reading program and contain

carefully constructed selections which control the difficulty of the vocabulary. These readers are typically arranged in a sequence of increasing difficulty, beginning with reading readiness and continuing through to the middle grades.

Workbooks, the second component, are skillbooks which accompany the basal series and contain practice exercises which reinforce the various skills presented in the basal readers. They are designed to provide individual, independent practice in skills previously taught as well as enrichment activities related to selections in the readers.

The third component includes supplementary materials in the form of additional reading books, activity sheets, large colorful pictures, and other suggested reading materials to further develop the skills emphasized in the manual. These materials are designed to encourage and motivate children to read independently.

The final component of the basal program contains the assessment procedures. These include the various tests designed to ascertain whether children have mastered the prescribed set of skills contained in the basal readers and outlined in the teacher's manual.

With the extensive help afforded to teachers by basal readers, it is easy to understand why organized programs for teaching reading became popular.

> With the possible exception of Webster's Speller or the New England Primer, no other text book has achieved the universal adoption accorded the current basal reader or reading series. At least 90 percent of the schools in our country (U.S.) now use basal manuals as the foundational material for reading instruction. (Spache, 1963, p.25)

In a more recent survey of 1300 teachers throughout the United States, Spache and Spache (1986) found that 95 to 98 percent of the primary teachers used basal readers almost everyday. Research repeatedly documents the fact that basal reading series are

used as the basis of reading instruction in well over 90 percent of primary and elementary schools (Logan, Logan & Patterson, 1972; Durkin, 1984; Flood & Lapp, 1986; Clary & Smith, 1986).

This high percentage of basal use is also evident in Canadian schools. It is estimated that at least 99 percent of our teachers have used or are using basal materials in prescribed or modified forms and, conversely, 99 percent of students are exposed to these basal materials (Fagan, 1985).

Malicky and Norman (1985) also discuss the extensive use of basal reading series in Canadian classrooms. They write that the usual response to the question of how children are taught to read and write is:

> In this country (Canada) the answer most commonly given is in the form of a packaged basal reading series in which reading skills are taught in a sequential systematic manner. Although each province differs in the specific basals recommended for use in schools, there is a general assumption that formal instruction is necessary at this very crucial stage of literacy development. (p.8)

It is obvious to conclude, then, that most children in Canada and the United States have been or will be exposed to basal reading programs. Even though these programs are used extensively throughout North America, they have been the target of considerable criticism.

Criticisms of the Basal Reading Series

Basal series were based on the assumption that the complex processes involved in reading had to be broken down into smaller skills and, if students were taught these skills, they would become fluent readers (Newman, 1985). Critics such as Goodman (1986), Sampson & Sampson, (1981), Holdaway (1979), Huck (1977), and Newman (1985) do not believe literacy is learned in this way and probably have been the most

vocal in their condemnation of basal programs.

Perhaps the leading criticism is the content of the basal readers. The selections are often contrived stories, with controlled vocabulary, that are written to revolve around a specific phonic relationship or a specific reading level. The strict control of sentence length and the repetition of vocabulary result in artificial, unnatural sentences which do not match the interests and the more complex oral language of the children who read them. The reading material, therefore, is often dull and uninteresting for the reader.

Basal reader authors are also criticized for tampering with children's literature selections. They often simplify the vocabulary or rewrite the stories to accommodate the development of particular skills. As well, editors of the basal readers often include short excerpts from children's literature which usually interfere with the meaning of the original story.

Basal reading instruction is denounced because it is believed that it places undue emphasis on isolated parts of language: letters, letter-sound relationships, words, sentence fragments, or sentences. The result is often a perception of reading as being a precise word identification activity instead of a meaning making one. For example, workbook pages present lists of individual words with the initial vowel or consonant deleted and the child is required to fill in the missing letter. There is little or no opportunity for the children to see these words used in a meaningful context.

Basals are also criticized for failing to address student's lack of prior knowledge. Not only are many stories irrelevant to the background experiences of the children, but teacher's manuals include few strategies for developing background knowledge or for resolving problems of incorrect background knowledge. Both of these factors have been

shown to interfere with comprehension (Lipson, 1984). Lipson argues that reading is a meaning based process in which readers understand the text through interactions between the print and personal experience or background knowledge. Without prior knowledge of the subject of the text, students are disadvantaged because they have no framework to logically organize and integrate the new information from the text.

Criticism is also levelled at the arbitrary sequencing of skills in the basals. Teachers often make false assumptions about basal readers and believe that these skill sequences are scientifically ratified and have to be rigidly followed. This results in the teaching of irrelevant and unnecessary skills which children are expected to master before advancing to the next level.

Another false assumption is that the authors of the basal series are experts and that their judgements are better than those of teachers. These authors, for example, suggest that teachers divide a particular story into two or three parts, which results in the selection being extended over a three day period. Teachers often follow these suggestions precisely. As a result some children, especially the weaker readers, easily forget what happened on the previous day and have difficulty putting the pieces of the story together.

Basals are admonished for minimizing the amount of time spent on reading real stories or content selections by monopolizing the time for skill exercises. The major problem here is the extensive use of the workbook and work sheets which results in less time for independent reading and meaningful activities such as interpreting, predicting, or analyzing a story.

The fact that all students in a particular group receive instruction at the same time

and from the same reading text is often a disadvantage because one series used in a rigid narrow fashion tends to bore children. In the traditional basal class, children are often expected to take turns reading aloud particular sections of a basal selection. This is referred to as round robin reading where each child is expected to follow along at the same pace as the student who is reading aloud. In this type of instructional atmosphere, the strong reader becomes bored and the weak reader becomes frustrated. As a result, children tend to view reading as an unpleasant rather than a pleasurable activity.

The cost of the basal reading series represents a substantial commitment for school boards. Often this leaves few funds for the purchase of library books and other authentic reading material which children need in order to practice the skills they are taught (Beebe, 1990).

Many teachers using the skills approach find that a considerable number of children are not learning to read and write as effectively as they could. It appears that reading is often equated with the ability to say all the words correctly rather than to gain meaning. Consequently, teachers began to look for new ways to help children acquire literacy.

Natural Language Acquisition

During the 1960's and 1970's, researchers turned their interests from prescribing what skills should be taught to investigating how children learn to read and write. In order to understand this process, they began to study how language is learned and how some preschoolers learned to read on their own. As a result, studies began to examine how children learned spoken language in their own homes and how this learning carried over to early literacy learning (Teale & Sulzby, 1989).

The first studies to investigate pre-schoolers learning to read (Durkin, 1966; Torrey, 1969; Clark, 1976) documented the importance of reading aloud to children from a very early age, of exposing children to a wide variety of books, and of having adult role models to answer any questions about reading. Later research by Glazer (1980), Goodman (1983), and Holdaway (1985) confirmed that early readers learned to read in the same way they learned to speak. Children who learn to read on their own are immersed in an environment filled with interesting books and are exposed to language and print which have meaning in their daily lives. For example, having a child participate in preparing a shopping list of all the items necessary for a particular recipe can be an excellent literacy experience. Helping the child check off each item as it is purchased and used in the recipe makes oral and written language come together in an activity which is meaningful.

Doake (1985) identified four stages of typical language development among preschoolers who acquire early literacy. First, children develop positive attitudes towards books because they are frequently read to and they are exposed to a variety of children's literature in their home environments. Children who are given the opportunity to interact with books by pointing at the pictures, talking about the characters, or simply sharing the story with their parents find reading an enjoyable activity. Second, children gain control over the oral dimensions of written language through frequent rereadings of their favourite stories. As a story is reread, children often begin to join in and read along with the parent. They begin to internalize the syntactic structure of the language and how it works. They come to know that a story has a beginning, a middle, and an end. This enables the children to give renditions of the story in their own words, then later to be

able to reproduce the story with considerable accuracy. Third, children begin to show an increasing awareness of print and begin to match the words they say aloud with words on the printed page. At this stage they are able to track the words on the page with their finger while simultaneously saying them aloud. During the fourth stage, children are able to integrate their perceptions of the words with their knowledge of the story rather than relying on memory. Once the story has been understood and internalized, children can then make the link between the information inside their head with the print in the book. At this time, the reader is not just pretending to read the words but is actually reading the words and using background knowledge to reject or confirm the accuracy of the reading.

Children's early writing development emerges through these same stages, and at about the same time (Dobson, 1988). First, children develop an interest in writing when they are exposed to role models in the home who write. Early writers are given many opportunities for writing activities which interest and excite them. For example children are invited to draw and write about a favorite toy, animal or place they have been. They may call a few lines of scribble a story one moment and call those same scribbles a letter to Grampa the next. Through their scribbling and drawings, the children are encouraged and praised as they attempt to gain control over their writing. During the second stage, they are able to point to the pictures or scribbles and verbalize the meaning. As children continue to develop in writing, the renditions of a story, each time it is repeated, becomes more consistent. The third stage sees the child finger pointing to the part of his writing that tells his story. At this time, letters or letter like symbols begin to emerge in children's writing. They may compose stories or personal messages with letter strings,

drawings, or a combination of both. In the fourth stage, children are able to purposely attempt to translate speech into print. They are now trying to associate the sounds of the language with their printed message. From here, children learn more about the print, letter-sound relationships, the writing and the reading of words as they continue to learn at home or in school.

Reading Comprehension

Theories on reading comprehension are as numerous as the instructional practices used in the teaching of reading. It is beyond the scope of this thesis to deal in detail with all of the traditional theories of reading; rather, the focus will be on the process involved in understanding the print. Three major variables for consideration in any model of the reading process are: 1) the graphic input, or the print; 2) the reader's knowledge, including knowledge of the language and of the world; and, 3) the processes involved in the interaction between the two.

The graphic input includes the printed material itself and involves letters, words, sentences and discourse. Graphics are the focus of theorists (LaBerge & Samuels, 1974; Gough, 1984) who view reading as a bottom-up process. They believe that readers analyze the print and then process information from a series of low level to high level stages. This means that the process of learning to read begins with letter identification and knowledge of letter sound relationships. Strings of letters are then combined into words, then words into sentences, and sentences into paragraphs. Once this is achieved, meaning is believed to become automatic.

The reader's knowledge is emphasized by theorists (Goodman, 1976; Smith 1978) who view reading as top-down processing. From this perspective, reading is seen as a

"psycholinguistic guessing game" where readers strategically use their knowledge of the language and the world to make reasoned guesses about the print. Goodman (1976) believes that readers rely on three sources of information to bring meaning to print. These sources are referred to as cueing systems and consist of: (a) graphophonic information, which is the information from the graphic and phonological systems of the language; (b) syntactic or grammatical information, which is the information implicit in the grammatical structures of the language; and, (c) semantic information, which is information derived from the reader's background knowledge and experiences.

Goodman believes that reading involves thinking and reasoning processes whereby readers use their knowledge of the print, knowledge of the language, and their background knowledge of the world to allow them to make inferences, draw conclusions, evaluate, and check validity. In other words, it is the interaction of the reader's general knowledge and language familiarity with information from the page that enables one to understand.

Readers organize their knowledge of the world into conceptualizations or schemata which provide much of the basis for comprehending, learning, and remembering the ideas in stories and text (Anderson, 1985). Schemata are simply conceptualizations of physical events or encounters in the world such as going swimming, shopping, or visiting a friend. These schemata do not remain the same, they expand and grow into generalizations. For example, the concept of family can grow from mother, father, and children to include relatives and communes. Schema change may occur through having actual experiences, vicarious experiences or through the use of language. The schema or schemata that the reader brings to bear on a text depends on age, race, religion, sex,

nationality, and experiences. Readers use their schemata to make predictions based upon past experiences, redundancies in the language, and upon how closely the conceptual ability of the reader matches the concepts presented by the author. Comprehension does not proceed automatically from the visual information in letters to the overall interpretation of the text. One would bring one's prior knowledge to bear so that an interpretation of the print could be made (Anderson, 1985; Mason, 1984). Children who have had considerable exposure to story book language learn to expect certain story elements to occur (Trelease, 1985). For example, children who have been exposed to many fairy tales know the traditional once upon a time beginning and often incorporate this beginning in stories they write themselves. They learn that the main characters often face problems which are eventually solved and these characters live happily ever after. As a result, children develop a sense of story which allows them to make good predictions about what will happen in a particular story. Using their schemata, readers are able to abstract or select information from texts and assimilate this information into their already existing repertoire of knowledge in order to compose their own interpretation of the print (Anderson, 1985).

From the research literature on reading comprehension and studies of natural reading acquisition, it appears that many researchers agree that some kind of background knowledge is necessary for reading comprehension. They argue that reading is a meaning based process in which readers understand text through interactions with the print, their personal background knowledge and experience. Teachers, therefore, must help students develop their general knowledge and understanding along with specific reading strategies.

In the same way that the parent guides the preschooler, the teacher encourages

reading comprehension development through activities which often involve the entire class. In school, shared storybook reading is an easy way to continue or to introduce the comprehension development process that began at home (Teale & Sulzby, 1989). Teachers assist children in drawing upon their schemata before, during, and after the reading aloud of a book. This helps them learn to make predictions and to confirm or reject their predictions as the story is read.

Before reading the storybook, teachers lead discussions by eliciting responses from their students about what they are going to hear. For example, the children may be asked to predict the name of the story by studying the picture on the book cover. This may be followed by a discussion of the author and illustrator. Then, the children are requested to make some predictions about the setting, the characters and what is going to happen. During the reading, teachers monitor and develop children's understanding by asking them questions about the story and the pictures. Whenever it is felt that children need more information, the teacher elaborates on specific elements. Explanations are given and questions are posed in order to help children understand the meanings of unfamiliar words, make predictions about the text, interpret the thoughts and feelings of the characters, and understand potentially difficult concepts. After reading the story, teachers encourage children's comments and continue to ask questions as a way of checking and extending comprehension (Mason, Peterman, & Kerr, 1989). In this way readers can make the link between the topic and their background experiences.

Meaning Vocabulary

Educators and researchers have documented the strong correlational relationship between vocabulary knowledge and reading comprehension ability (Anderson &

Freebody, 1981; Davis, 1944; Thurstone, 1946). The more words students can understand, the better their comprehension ability (Chall & Stahl, 1985; Thorndike, 1973-1974). It seems that:

> since words represent concepts which reflect experience, common sense tells us that the principal contributor to reading comprehension is vocabulary knowledge. . . . the more words a child knows the meaning of and the greater the child's vocabulary flexibility and precision, the greater that child's ability to comprehend what is read. (Pearson & Johnson, 1978, p. 37)

Exactly how vocabulary instruction improves comprehension has not been answered. However, the work of Anderson and Freebody (1981) has contributed significantly to the theoretical base for vocabulary acquisition. They offer three distinct views of vocabulary knowledge and explain why it is such a major factor in reading ability. The first is the instrumentalist view which claims that knowledge of individual word meanings is the primary factor which results in comprehension. In other words, the more word meanings readers know and concatenate, the better they will comprehend the text. This view suggests the importance of direct vocabulary instruction and the rote learning of word meanings to improve reading comprehension. Teaching the dictionary definitions or relationship of a word to other words is the type of instruction used in the instrumentalist's position.

According to the aptitude view, good readers score high on a test of vocabulary because they are intelligent. This view claims that persons with large vocabularies and high reading levels possess superior mental ability. It is this mental ability that enables the person to acquire many word meanings and to understand easily.

The third view is the knowledge hypothesis. Vocabulary acquisition is seen as a direct reflection of exposure to the culture. Vocabulary is taught in the context of

learning new subject matter where new word meanings can be related to information already possessed by the learner. The knowledge position is consistent with the schema-theoretic view of reading since it describes an interactive process in which conceptually generated knowledge is combined with information in the text. When the concept of a word is understood, learning a word requires learning an association between the word and the concept. If children do not understand the concept, it must be developed before they can assimilate the word into their vocabulary.

There is considerable debate about the best way to develop children's vocabulary (Taylor, Harris & Pearson, 1988). The two most widely used instructional methods for increasing meaning vocabulary are direct instruction in word meanings and indirect instruction through the use of context.

Many researchers have argued that direct instruction in vocabulary enhances comprehension (Beck, Perfetti & McKeown, 1982; Stahl, 1983). However, recent research on the growth of meaning vocabulary indicates that children between grades 3 and 12 increase their vocabularies at a rate of about 3000 words each year (Nagy & Herman, cited in White, Power & White, 1989) and only a small part of this growth can be attributed to direct instruction in definitional word meanings. A much larger portion of meanings learned is attributed to learning word meanings from context (Herman & Dole, 1988). Direct instruction in specific words is a slow and inefficient method of vocabulary development. Nagy, Herman and Anderson (1985) conducted an experiment involving 57 eighth graders and found that repeated exposure to the same words in different contexts is a better source of vocabulary acquisition than direct instruction.

Other researchers claim that children acquire a meaning vocabulary from wide

reading experience and from hearing the language of literature when they are read to (Nagy, Herman & Anderson, 1985). Good books offer a variety of experiences and vocabulary that are interesting and pleasurable and provide a rich understanding of word meanings. In a study by Elley (1989), two experiments were conducted by classroom teachers in New Zealand who read stories aloud to elementary school children in an effort to extend their vocabulary acquisition. It was found that children who received no teacher explanation of word meanings made gains of 15 percent on vocabulary tests while children who received teacher assistance made gains of 40 percent. These findings concluded that children did learn incidently from listening to stories but children who received teacher explanations of unknown words made more than double the gains in vocabulary acquisition than those children who just heard the stories.

It appears that children learn new words by a combination of both direct instruction and through reading and hearing words in context. Teachers can expand children's vocabulary by helping students derive meanings from context, direct vocabulary instruction, reading aloud, and encouraging them to engage in regular independent reading.

Sight Vocabulary

A sight vocabulary (also referred to as word recognition) consists of whole words, stored in a reader's memory, that can be recognized and pronounced instantaneously. All educators agree that children need to learn to recognize words immediately if they are to be successful readers. Some educators believe that this is the most essential prerequisite to a successful reading experience (LaBerge & Samuels, 1974; Durkin, 1978) while others believe that considerations such as background knowledge, understanding

vocabulary and general language proficiency are equally important (Goodman, 1986; Smith, 1982).

Skilled readers are able to automatically identify and recognize most words as sight words. They use word identification strategies when they are unable to recognize an unfamiliar word immediately. Word identification refers to the ability of the reader to use context clues, morphemic analysis, syllabic analysis, phonics analysis or a combination of these, to help identify unknown words. When the context is not sufficient to enable the reader to identify an unknown word, the reader also uses visual cues such as the spellings of words and their parts to search for the identity (Pearson & Johnson, 1978). For instance, if the word care is known, readers often recognize and know the meaning of careful. As well, once the reader has made a guess at the unknown word, phonics can then be used to eliminate the uncertainty (Smith, 1982). For example, if a reader has reduced his alternatives to "apple", "orange", or "pear" in the sentence "My mom put an _____ in my lunch bag." then, the use of phonics to identify the beginning sound would reduce the uncertainty of the unknown word.

During the past twenty years there has been considerable controversy about whether it is best for beginning readers to learn sight words in context or in isolation (Ehri & Wilce, 1980). It appears that there are benefits to both approaches since children learn more about the semantic features of words when they are exposed to them in context but learn more about their orthographic features when they are exposed to them in isolation. Consequently, Ehri & Wilce recommend that instruction in sight words should include work with words in context and in isolation.

McNinch (1981) developed an approach which uses both context and isolation to

teach sight vocabulary. Prior to actual instruction in specific sight vocabulary, it is important for the teacher to explain to students exactly what they will be learning, why it is important, and when it will be helpful. First, the teacher explains to students that they will be learning a word that is difficult for children to remember but which shows up many times in books. The teacher presents the particular sight word in the context of an oral sentence. The word is then written into one or two sentences on the blackboard and is highlighted or underlined as the teacher reads the word to the students. Second, the sight word is written on the chalkboard, in isolation, and the students are asked the following questions. What is the first letter? What is the last letter? How many letters are in the word? Please spell the word. Please trace the word in the air. Third, the students practice the word in written sentences or phrases. Fourth, the students practice reading the word in actual text such as language experience charts or books. Fifth, students engage in independent activities such as trying to find the word in other books, playing games using the word, and reading the words into a tape recorder.

Some theorists believe that word recognition and word identification skills should only be taught in a meaningful context (Weaver, 1988; Arnold & Miller, 1980; Goodman, 1976; Smith, 1978) and that repeated exposure to meaningful print is the key to developing both word identification skills and sight vocabulary (Eldrege, 1988; Smith, 1982). Continual exposure to words in context enables the reader to distinguish the unique visual characteristics of each word (Arnold & Miller, 1980). Children learn to decode print in much the same way they learn to decode aural language (Goodman, 1973). By using the phonemic and grammatical structures of the language, children learn to decode meaning through repeated exposure to speech. Similarly, they are introduced

to reading through oral sequences and patterns which are represented by graphic sequences and patterns. During the decoding of print, readers map the graphic sequences on to the patterns of oral utterances. When they continue to meet these words in a variety of contexts, association and recognition become automatic and the words become part of the reader's sight vocabulary (Arnold & Miller, 1980).

Since the presence of meaningful context is a potential aid to word recognition and word identification, many researchers believe that the best way to acquire a sight vocabulary is to read and reread often. Instruction and practice in word recognition from this perspective focuses, as much as possible, on the reading of connected text. As a result, teaching words in isolation is kept to a minimum. Because children acquire a sight vocabulary through repeated exposure to print (storybooks, rhymes, jingles, poems, or language experience stories) it seems that reading aloud, shared reading and independent reading help children acquire a large sight vocabulary.

Writing Ability

Traditionally, children began learning to write by copying or drawing the 26 letters of the alphabet. They were expected to be able to identify and make the sound of each alphabet letter before using the letters to transcribe the sounds of speech. Once the letters were learned, children could put them together to make words. As children answered questions in workbooks or on worksheets, words were written into partial sentences. Full sentences were then attempted and, finally, sentences were written into stories (Beebe, 1988). Correctness of spelling, punctuation, and capitalization were considered to be more important than the message. Such an approach to teaching writing has recently come under considerable criticism.

Studies in the past fifteen years have documented that children from a very young age are surrounded by print, wonder about it, distinguish it from other visual stimuli and, therefore, gain considerable knowledge about the writing system before they come to school (Smith, 1978). If given the opportunity, children by the age of five will scratch, scribble, draw and produce letter and number like shapes as they begin to experiment with the written language. In a New Zealand study, Clay (1975) analyzed the writing samples of children between the ages of four and eight years. She concluded that there may not be any fixed sequence of learning to write through which all children must pass but there are certain forms which always occur as young children begin to write.

Scribbles and drawing represent the child's first form of writing. Then, letter like figures begin to appear in their drawings and their scribbles begin to look more like writing. They may compose stories or personal messages which contain letter strings and go back and forth between scribble, letter strings, and drawings. This is soon replaced or accompanied by invented spellings, where one letter (usually the initial consonant) is used to represent a word, such as d for dog. As children continue to experiment with spelling, other consonants are used at the beginning, the middle and the end of words. For example, the letters ILVHR might represent the sentence "I love her". As children's writing becomes more sophisticated, they begin to use letters which represent vowels, consonant blends and digraphs. At this point, they are formulating their own rules about spelling as they struggle to choose letters which best represent the sounds they are trying to convey. For example, the sentence "I saw the dragon fight" might be written "I sa the dragun fite." Conventional or standard spelling is the final form of writing and it takes children many years of reading and writing before they will spell most words correctly

(Weaver, 1988).

It seems that children's writing development progresses along a continuum rather than in sequenced stages. If teaching writing allows children to follow the same type of natural development exhibited by those children who learn to write before going to school, then errors in spelling will be seen as a natural part of learning to write (Staab & Smith, 1985). In order for children's writing ability to develop, they must be provided with a literacy rich environment which would: a) encourage and accept children's emergent writing in their play and in their work; b) encourage children to use writing in response to the literature they hear or read; c) encourage children to share their writing and to respond to other children's writing; and, d) encourage children to use writing to communicate with other people.

Many teachers and educators disenchanted with the quality of writing produced by school children, especially older students, (Reutzel & Hollingsworth, 1988) now follow the process approach to the teaching of writing proposed by Donald Graves (1984). He believed that one way to improve the quality of all student's writing was to spend more time on composing and less time practising isolated skills related to writing. Graves identified three phases of the composing process namely; prewriting, composing, and post-writing. Prewriting occurs immediately preceding actual writing and focuses on experiences to stimulate and experiment with ideas. This phase may include such activities as story telling, discussion, brainstorming, drawing, dramatizing, and reading. A rehearsal for composing, prewriting helps forms the basis for the actual writing. It is in this stage that the purpose for writing is set. Students can draw on their own experiences, interests, or specific classroom activities to help set their purpose for writing.

The composing phase begins and ends with the actual writing of a message. The children put their ideas down on paper in a tentative written form. They are encouraged to take risks, to experiment and to explore with written language. At this stage, they should not be inhibited in their writing by demands for the correct spelling of every word. Activities such as consulting resources, rereading, and sharing the writing with the teacher or peers can be observed in this stage. Conferences take place between the child and the teacher to discuss a specific piece of writing in which the student is engaged. The purpose of the conference is to help generate more ideas, to organize the ideas that are already there, or to plan how the writing will be presented and/or published.

The post-writing phase refers to the final stage of the composing. Activities include revising for meaning, editing for spelling and grammar, sharing, displaying, and solicitation of approval from others. The students prepare for publishing by carefully transcribing their revised and edited piece. The writing is then presented in its final form. It is important that students have the opportunity to share their finished piece of writing with an audience because this adve ises the importance of the writers, their thoughts and beliefs, and the effort that went into the writing.

It is important to note that not every piece of writing goes through the complete writing process, especially in the primary grades. For example, the first sentences and compositions of beginning readers may be dictated by the child and written by the teacher. As writing ability begins to develop in the children, teachers may underwrite their scribbles, drawings and early attempts to write. Students above the beginning level are able to write independently in the form of journals, letters, and written responses to storybook readings. These types of activities are considered free writing and are not

meant to be taken through the total process. Prewriting, however, is essential to any kind of writing.

The Whole Language Approach

Whole language more adequately reflects the current understanding of how children learn, how the development of reading and writing parallels the acquisition of oral language, and how listening, speaking, reading and writing interrelate and stimulate one another. The term whole language is used extensively throughout the literature (Reutzel & Cooter, 1990; McKenna, Robinson, & Miller, 1990; Gunderson & Shapiro, 1988; Altwerger, Edelsky & Flores, 1987; Weaver, 1988; Goodman, 1986) but there is not always complete agreement about the meaning of the term. There is, however, consensus on the following four basic assumptions underlying whole language teaching.

First, it is agreed that children learn to read and write in the same way they learn to speak. Second, it is generally accepted that language learning and teaching must be personalized. Third, language learning is considered part of making sense of the world by communicating with others in a social environment. Fourth, language is learned holistically and in context.

These fundamental assumptions create considerable disagreement when theorists attempt to give an exact definition of whole language. Some think of it as a philosophy while others contend that whole language is a methodology or an approach. Nonetheless, whole language immerses children in an environment that features quality literature and is rich in a variety of print and non-print resources. Such an atmosphere encourages children's attempts to create meaning and to make sense of the world around them through the processes of listening, speaking, reading and writing.

Whole language followers view reading as an interactive process which develops according to socio-psycholinguistic principles (Weaver, 1988; Anderson, 1984). Both bottom-up and top-down processing are involved in reading and the reader's schemata, the context of the reading situation, and the utilization of reading strategies work together to determine how the text will be perceived and what meaning will be assigned to it. The meaning does not come from the page to the reader, but rather emerges as the reader transacts with the text.

> Reading is a transaction between the mind (schemas) of the reader and the language of the text, in a particular situational or social context. Thus reading means bringing meaning to the print in order to get meaning from it (Weaver, 1988, p.38).

The reader is seen as an active learner who uses background knowledge and experience, the information suggested by the written text, and the context of the reading situation to construct meaning from the print. This orientation recognizes that meaning develops as a result of the interaction of the reader with the print and is further influenced by the reading situation.

From the beginning, advocates of whole language expect children to read familiar language that draws on concepts and experiences they already have. It may be words in their environment like McDonalds, street signs, or rhymes, chants, and phrases remembered from games they have played or words or stories they make up themselves.

Stories based on children's own experiences are often dictated and recorded on charts or made into books. For example, experiences such as someone's birthday, the first snow, or Halloween might be selected. The teacher guides the discussion and assists children in organizing their ideas orally and in selecting those they wish to record. Children dictate their stories which are written on charts or made into big books by the

teacher. The stories are read aloud by the teacher, the children then join in during the reading of the stories and, finally, the children read their own stories independently. Such a procedure allows children to understand the relationship between their language, their experiences, and reading and writing.

Reading storybooks aloud to young children is an integral part of the daily routine of the whole language program. Teachers engage the children in discussions about the author, the title, the characters and their motivations. Children are also encouraged to make predictions about the story and its upcoming events. When the story read aloud is completed, the teacher once again involves the children in discussion to confirm or reject their predictions, to draw inferences, to examine the authors use of language and to link the information in the books to their own real life experiences. This helps to develop an appreciation of the narrative structure of books and motivates children to read independently. More importantly, it assists children in understanding the meaning of the story and in internalizing book language (Teale & Sulzby, 1989).

Reading material which incorporates patterned language is utilized to enhance children's early reading development. For example, predictable books like Brown Bear, Brown Bear (Martin, 1971) or Fire! Fire! Said Mrs. McGuire (Martin, 1970) are often made into big books to develop reading comprehension using a shared book approach. A big book is an enlarged version of a child's book which allows all the children in a class to clearly see the print and to follow along with the words of the story as the teacher reads it aloud. After the first reading, the children are invited to react to the story and are encouraged to discuss the events. Reading comprehension is developed as the teacher poses various questions about the setting, events and characters in the story. The

children are also encouraged to relate any experiences or feelings similar to those
encountered by the events and/or characters in the story. The teacher then rereads the
story and tracks the print using a finger or a pointer and invites the whole class to join
in wherever they can. The illustrations provide clues for predicting endings of sentences
which also enables the children to join in with parts of the reading. Each subsequent
rereading of the big book could have its own special purpose. For example, sight
vocabulary, compound words, letter sound relationships, or meaning vocabulary could be
specifically addressed through a particular reading. Big books create confidence in
beginning readers and help develop an interest in reading and writing (Holdaway, 1979).
Fables, poetry, folktales, humorous stories, and information books can also be made into
big books.

Instruction is often carried out using thematic units that integrate various aspects
of language acquisition. This approach uses large blocks of time to explore a particular
topic. For example children might be interested in developing a theme on bears,
dinosaurs, whales, winter, or any particular topic which may be of interest to them. Once
a topic has been selected, teachers begin building on children's background knowledge
by having them share the information they know and any new information they gather
from children's literature, pictures, materials and other resources. Activity centers, areas
of the classroom which contain creative and stimulating activities that revolve around a
particular theme, can be used to stimulate independent work and problem solving.
Activity centers might include a book center, a listening center, a writing center, an arts
and crafts center, and a nature center.

The whole language approach utilizes the knowledge position to develop a mean-

ing vocabulary. New words are related to each other and to the learner's schemata. Exposure to an assortment of books offers a variety of experiences and a rich vocabulary which assists in the development of meaning vocabulary. During the reading aloud of a storybook, teachers often give explanations of unknown words and concepts to increase children's knowledge and understanding. After the story has been read, the teacher guides group discussions of words and concepts and provides further interpretations to help develop meaning vocabulary. Children are encouraged to relate other words they are aware of which may have similar or opposite meanings to a particular new word or concept which has been introduced through the read aloud.

Prediction strategies are often used by whole language teachers to develop meaning vocabulary. Children are given opportunities to discover or predict unknown words by using the context clues in a sentence or in nearby sentences. Information from the sentence often provide hints or clues to the meaning of an unknown word. Cloze is an example of a prediction strategy whereby the teacher pauses occasionally while reading aloud to give children an opportunity to fill in an anticipated word. After several readings, specific sentences from the story selected are written on a chart or the chalkboard and one word is deleted from each sentence. Children are encouraged to think of as many contextually plausible words as they can. For example, although many children may readily guess that the word "day" fits into the sentence "Kyle wore a blue shirt all _____ long", they will enjoy thinking of other words like night, month, and year as other possibilities. Each time a new word is offered it can be written into the blank and tested to determine whether or not it fits. In this way, the children learn a great deal about the meanings of words and the syntax of the language.

Semantic mapping is a systematic procedure used to develop children's concepts on the basis of their existing background knowledge and centers around associating the new to the known in order to teach word concepts. A semantic map is a graphic representation of a word and associated terms and is constructed in the following manner. A central theme or concept word is written on the chalkboard or large poster paper and students are asked to think of as many words as they can that are related to the central word. The teacher can lead discussion of how new words relate to familiar words and concepts and children can relate information about any experiences they may have had with the concepts. These words are then put into categories and are written on the board or poster paper around the central theme. For example, the semantic map of the theme Halloween might look like the following.

Emotions/Reactions	Creatures/People
scary	goblins
funny	ghosts
frightened	bogeyman
spooky	Dracula
shaking	witches
chills	alien

Halloween

Places	Other Words
door to door	costumes
graveyard	broomsticks
haunted house	trick or treat
funeral parlor	pumpkins
dark alley	candy
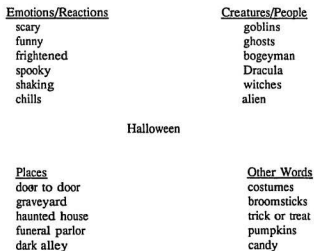
Figure 1. Semantic Map for the Theme Halloween

In a whole language setting children often enjoy illustrating new words they have learned, making up simple crossword puzzles, and playing games such as Scrabble and

Spill and Spell. These activities help to promote general vocabulary growth and to develop students' interest in words.

Advocates of whole language believe that a sight vocabulary is better learned in the context of repetitive predictable books and language experience charts than through basal reader use (Bridge, Winograd, & Haley, 1983). The whole language approach stresses the importance of learning words in context and using graphophonic, syntactic, and semantic clues to predict, infer, or associate word identification and/or the meaning of an unknown word. For example, the teacher reads a predictable book aloud to the children and then rereads it encouraging them to join in as much as possible. The students join in chorally, reading the book with the teacher. The same story is then reproduced on a chart so that the children can practice without the aid of the pictures. Later, the children are given sentence strips to place under the appropriate lines of the story on the chart or in pocket charts to recreate the story in the proper sequence. They are also given individual word cards which they place under the matching words on the chart or into pocket charts to form sentences from the story. Group language experience stories can be used in the same manner. The assumption is that children will learn sight words in a more natural way and without instruction of words in isolation.

Individual language experience stories and children's literature stories are often made into booklets for the children to repeatedly read in order to develop sight vocabulary. The children might zero in on a particular sight word by reading through their stories to see how many times they could find examples of this word. In addition, a number of these stories can be put on tape so that students can listen and follow along in their little booklets. This would provide further opportunity for meaningful exposure

to the sight words.

Group repeated readings of appealing poems, song lyrics, rhymes, and chants are frequently used to develop sight vocabulary. The teacher first reads the selection aloud and the children follow along either with their own copy or on a large chart. Next, the children repeat after the teacher, individual phrases, lines, or sentences of the selection. Finally, the teacher and the children chorally read the selection. For independent practice, the children continue to read the selection themselves or read it to a partner.

The following procedures are examples of focusing techniques which may be used with charts or big books to assist children to focus on a word while preserving the context. Masking is a procedure which is used when a word needs to be isolated from its context (Holdway, 1979). The teacher utilizes a mask to cover all the other words in the sentence except for the particular sight word. In this way, the children are able to focus on the specific details of a word. Pointing is an excellent strategy which encourages children to see the one to one relationship between spoken and written language (Clay, 1975). During the reading aloud of a selection, the child or the teacher can point to each word as it is being read. Clay recommends that pointing should be done word by word rather than in a sweeping motion. Using different sizes and colors of print to highlight specific sight words when preparing text is another strategy which has been successful in assisting children to focus their attention (Ryall, 1985).

The writing skills so rigorously taught in the traditional basal series are acquired quite naturally in a whole language classroom as children independently make discoveries about written language. Learning to write is an activity that parallels learning to read and learning to talk. When children begin school, they are immersed in oral and written

language. Shared reading, group discussions, teacher-pupil conferences, taped stories in the listening center, music, and poetry readings are all part of the rich language environment that provides the model for children to follow as they begin writing.

From the earliest grades, children are encouraged to experiment and explore with written language using drawings, scribbles, letters, and invented spellings. Correct spelling is believed to evolve through experiences with the composing process. Children are encouraged to write lists and notes, label pictures, make signs, and write stories.

Conferencing with children individually during their writing and assisting them in developing their ideas more effectively can facilitate the development of mechanical skills. In this way, children are encouraged to notice how the conventions of written language are used in printed texts and they are made responsible for gradually learning and applying such skills in their writing (Weaver, 1988).

Children are encouraged to write about their own experiences and interests. This could be accomplished using a language experience chart with a primary class or through individual writing in a private journal where children could record personal experiences of their own. Children can share their ideas with the teacher in the form of a dialogue journal where the teacher responds to the message while modelling standard spelling, punctuation and sentence structure. This is an excellent way to encourage communication and to provide a way for children to share some of their feelings and experiences.

Teachers can involve children in writing about literature they have read by having them write alternative endings, or sequels to the book. These stories can then be typed for them (perhaps one or two sentences per page) and combined into illustrated books. This encourages the children to feel like authors and it provides considerable material for

the whole class to read.

Reading and writing are closely connected in a whole language classroom. Children not only learn to read by reading and to write by writing, but they also learn to write by reading and to read by writing (Newman, 1985; Smith, 1982). Reading and writing both involve the use of language to communicate with others. Readers use their background knowledge and experience to construct meaning from text and writers use their background knowledge and experience to compose meaning into text (Tierney & Pearson, 1983). Whole language classrooms provide a rich language environment that requires, uses, and demonstrates the usefulness of print so that children can explore, invent, create, and try out print related activities.

Perhaps the most important ingredient of a successful whole language program is provision of the necessary time for children to listen, speak, read and write in order to learn and grow through purposeful language experiences. This is accomplished by giving children the necessary opportunities to share their reading and writing activities with a partner, the teacher, the class, or other audiences as opposed to spending time completing worksheets and workbook exercises.

Research on Whole Language

In the last decade whole language has been gaining popularity around the world. For almost twenty years, many schools in Great Britain have used what has come to be known as a whole language approach, even though the term itself is relatively new. In New Zealand, parts of Australia, and some of the provinces of Canada, whole language has become the official policy and approach (Weaver, 1988). In fact, Canada has become a leader in whole language instruction (McConaghy, 1988). Whole language views are

represented in official documents in British Columbia, Alberta, Manitoba, Saskatchewan, Ontario, Quebec, Nova Scotia, New Brunswick, and Newfoundland (Goodman, 1986).

In order to properly implement a whole language program, it is crucial that teachers become learners themselves. Teaching and learning is viewed as a partnership in which the students and teachers work together. The role of the teacher is observer, supporter, researcher and facilitator of learning. Teacher's observations of children engaged in reading and writing activities are often used as the basis for program development. Whole language teachers are concerned with how children learn rather than how teachers should teach. Cameron (cited in McConaghy, 1988) describes the whole language teacher in this way.

> Teachers like these are committed to their own learning -- their own growing mastery of the language as well as to their students' growth. If there is hope in the struggle for literacy, it's here -- turned-on teachers who really care about language, intent on sharing their own sense of joy and discovery with our children. With teachers like that we may yet become a literate nation. (p.26)

The majority of teachers confronted with the whole language philosophy for the first time are concerned about how their beliefs on teaching reading and writing differ from whole language beliefs (Goodman, 1986). The differences between whole language and the skills approach with respect to reading and writing instruction are complex and comprehensive (Reutzel & Hollingsworth, 1988). Whole language practices stand in stark contrast to the current practices which appear in the traditional basal reading series and there is little in the way of quantitative research to assess the value of such practices.

There have been relatively few studies done to compare the effectiveness of a whole language approach to a skills approach. Holdaway's (1979) comprehensive ethnographic report on a shared book experience program developed in New Zealand was

probably the first. This whole language approach to reading was modeled on the home reading experiences of preschool children and used enlarged versions of regular predictable storybooks, referred to as big books, to introduce children to literacy. Using the big books, the children were able to share both visually and vocally in the reading. This approach was found to be successful in leading inner-city children, many of whom were learning English as a second language, to become readers.

Ribowski (1985), in a quasi-experimental study, investigated the comparative effects of a whole language approach and a skills approach on the emergent literacy of 53 kindergarten children. According to Ribowsky, this study represented one of the first quantitative studies which compared the whole language approach to a skills approach. The children in the experimental group received instruction in Holdaway's shared book experience program and children in the control group received instruction in Lippincott's Beginning to Read, Write and Listen program, a skill emphasis approach. Posttest results on The Test of Language Development, Primary Level (TOLD-P), The Book Handling Knowledge Task (BHKT), and The Metropolitan Achievement Test-The Reading Instructional Tests (Primer Level-MAT) indicated significant treatment effects favouring the whole language group. These results corroborated Holdaway's previous research which indicated a high level of success with the shared book experience program.

A more recent study conducted by Reutzel & Cooter (1990) compared 53 first grade children in two whole language classrooms and 38 first grade children in two basal classrooms on the Gates-MacGinitie Reading Survey Test at the end of grade one. The results indicated a significant difference in favor of the whole language group on total reading scores as well as on the vocabulary and comprehension subtest scores at the

conclusion of grade one.

Research documented in the report, Becoming a Nation of Readers (1985), acknowledges the success of home environments in fostering emergent literacy but does not fully endorse the whole language approach.

> It is noteworthy that these approaches are used to teach children to read in New Zealand, the most literate country in the world, a country that experiences very low rates of reading failure. However, studies of whole language approaches in the United States have produced results that are best characterized as inconsistent. In the hands of very skillful teachers, the results can be excellent. But the average result is indifferent when compared to approaches typical in American classrooms, at least as gauged by performance on first-and second-grade standardized tests. (p.45)

The report's conclusions regarding the efficacy of whole language approaches are not to be taken as definitive since the research summary dealt with studies conducted twenty years ago and are outdated and unreliable because they do not reflect present approaches that are characterized as whole language (Weaver, 1988).

A four year informal research study, conducted by Phinney (cited in Weaver, 1988), followed a class from kindergarten to grade three using the whole language approach to teaching reading and writing. The children in this longitudinal study made significant gains on The Canadian Test of Basic Skills. The results concluded that children did learn skills without direct teaching and that they learned them as well or better than children who had been taught using a skills approach.

There are studies which suggest that there is very little difference in the reading comprehension of children who have been taught using the basal skills approach as opposed to those using a whole language. Stahl and Miller (1989) conducted a quantitative research synthesis of combined whole language and language experience approaches

for beginning readers. Results indicated that whole language/language experience approaches were not reliably different from basal reader approaches in their effects. However, it was noted that the whole language/language experience approach may be more effective for kindergarten children. It was interesting to note that of the 117 studies used in this analysis, there were only five studies which actually used holistic or whole language terminology.

Smith (1989) conducted a two year study in Newfoundland which compared a basal reader approach to teaching language arts with a whole language approach in grades four and five. Reading comprehension was measured using a subtest of the Canadian Test of Basic Skills; spelling ability was measured by the Schonell Graded Word Spelling Test; and writing ability was measured by the thematic maturity subtest of the Test of Written Language. Results indicated that there was no difference in reading and spelling ability, however, writing ability was highly responsive to the whole language approach.

Another Newfoundland study conducted by Payne (1989) investigated the relationship between teacher experience with whole language instruction and student achievement. Reading comprehension and vocabulary were measured using the Gates McGinitie Reading Test and an investigator designed evaluation was used to evaluate the writing ability of three grade one classes which comprised 69 students. Results indicated that there was no significant differences in reading comprehension and vocabulary development amongst the three classes. However, students receiving instruction from the most experienced whole language teacher scored higher in writing.

Ryall (1985), examined the use of a whole language approach to develop sight vocabulary in high risk grade one students. Results measured by the Slosson Oral

Reading Test concluded that there was no significant difference in the sight vocabulary of these children after one year of exposure to whole language. However, testing at the end of two years indicated that the high risk children who were in whole language programs did acquire a larger sight vocabulary than did those using the traditional basal reader.

A recent study carried out by Gunderson and Sharpiro (1988), compared the vocabulary generated by grade one students in a whole language classroom with that of the vocabulary used in basal reading programs. The writing samples of 52 grade one students in a whole language class were collected for the entire year. The children's writing was then transcribed into computer files and the vocabulary was compared to the vocabulary contained in the basal reader. Results concluded that the children in whole language classes generated 18 times the number of words they would have encountered in grade one basal reading programs. They further concluded that high frequency words generated by the children in whole language classes were similar to those found in basal readers.

Varble (1990) conducted a study to examine the writing quality of grade two and grade six students who were taught using whole language and traditional writing approaches. The writing samples were rated on the quality of content and the mastery of mechanics. The results were as follows: a) second graders taught using the whole language approach produced better writing samples when evaluated on meaning and content; b) there was no difference in writing samples in the correct ·· ,. ·.· f second graders taught by either approach; and, c) there was no differe· · ·nting samples of sixth graders taught by either approach.

CHAPTER III

METHODOLOGY

The purpose of this chapter is fourfold. First, the hypotheses for the study are presented. Second, the sample is described. Third, the conceptual models are presented and the variables and the instruments used to measure them are described. Fourth, the materials and instructional procedures used with both groups are discussed.

Hypotheses

The hypotheses for this study stem from the research questions posed in chapter one and, for the most part, are supported by the related research presented in chapter two. The first four hypotheses are related to student achievement at the beginning of grade two.

Hypothesis 1: Students who have been exposed to a whole language approach for one year will attain a higher level of reading comprehension ability than those taught using a skills approach for one year.

Hypothesis 2: Students who have been exposed to a whole language approach for one year will attain a higher level of meaning vocabulary than those taught using a skills approach for one year.

Hypothesis 3: Students who have been exposed to a whole language approach for one year will attain a higher level of sight vocabulary than those taught using a skills approach for one year.

Hypothesis 4: Students who have been exposed to a whole language approach for one year will attain a higher level of writing ability than those taught using a skills approach for one year.

The second set of hypotheses are related to student achievement after two years of exposure to whole language for one group and only one year of exposure to the same program for the other group.

Hypothesis 5: Students who have been exposed to a whole language approach for two years will attain a higher level of reading comprehension ability than those who have

been exposed to the skills approach in the first year and the whole language approach in the second year.

Hypothesis 6: Students who have been exposed to a whole language approach for two years will attain a higher level of meaning vocabulary than those who have been exposed to the skills approach in the first year and the whole language approach in the second year.

Hypothesis 7: Students who have been exposed to a whole language approach for two years will attain a higher level of sight vocabulary than those who have been exposed to the skills approach in the first year and the whole language approach in the second year.

Hypothesis 8: Students who have been exposed to a whole language approach for two years will attain a higher level of writing ability than those who have been exposed to the skills approach in the first year and the whole language approach in the second year.

Sample

Before beginning the research, a letter of request to conduct the study was submitted to the assistant superintendent of the Roman Catholic School Board for St. John's who responded and granted permission (Appendix C). After written approval was granted, it was decided to increase the case base to four classes of grade two students instead of the. Permission to do this was given verbally. A letter was then sent to the parents of all the students involved in the study explaining the need for the research and requesting their co-operation (Appendix D).

Four grade two classes, consisting of 104 students from two different schools in St. John's, constituted the case base for this study. The experimental group was made up of two classes of grade two students who had been exposed to a whole language program in grade one during a pilot project. This group contained 52 students (26 males and 26 females) whose ages ranged from six years, nine months (6.9) to eight years, six months (8.6). Figure 2 shows a graphic representation of this age dispersion. There were 26 subjects in each class.

53
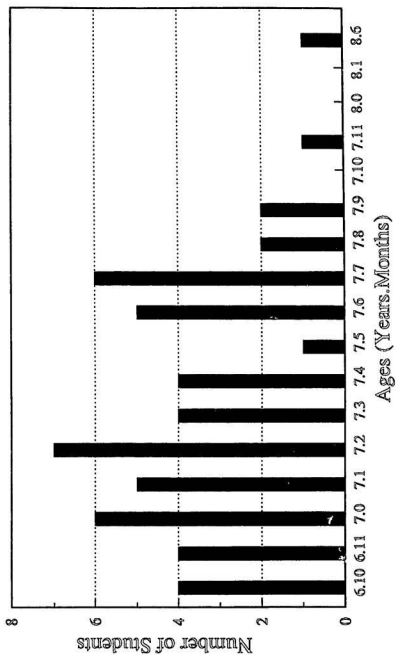
Figure 2. A bar graph representing the range of ages for the experimental group.

The control group was selected in consultation with the primary language arts co-ordinator from the school board on the basis of a close socioeconomic match to the experimental group. The group was comprised of two classes of grade two students from a school which had used the traditional basal program during the children's grade one year at the same time that the pilot school used a whole language program. There were 27 subjects in one class, and 25 subjects in the other, making a total of 52 students (24 male and 28 female). Their ages ranged from six years, ten months (6.10) to eight years, two months (8.2) and is shown in Figure 3. During their grade two year, the students in the control group were in whole language classes. All four classes were heterogeneously grouped and were taught by four teachers of the same general age bracket with approximately the same amount of teaching experience. These teachers had the same introduction to the new whole language approach during three conference type workshop days conducted by the school board in the previous year.

Variables and Instrumentation

Dependent Variables

All subjects participating in the study were administered a pretest (time one) in October and a posttest (time two) in April. These tests were given in order to measure performance on the four outcome variables namely; reading comprehension, meaning vocabulary, sight vocabulary, and writing ability.

Reading Comprehension

Reading comprehension was measured using the reading comprehension subtest of the Gates-MacGinitie Reading Test Level B, Form 1 at time one and Form 2 at time two. Each form of the comprehension subtest consists of forty passages. The initial

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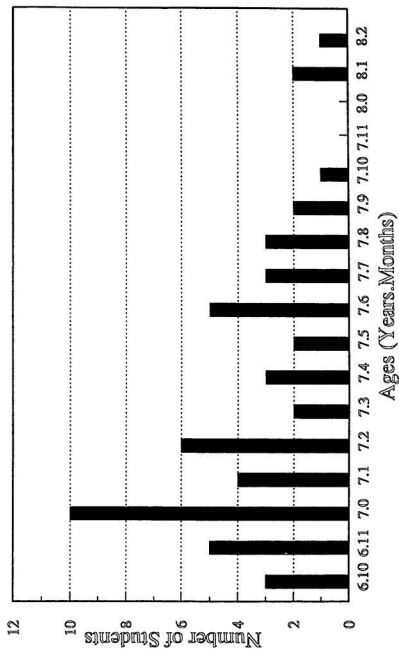
Figure 3. A bar graph representing the range of ages for the control group.

passages present simple sentences followed by passages of gradually longer sentences and more complex verbal relationships. Each passage is accompanied by four pictures and the subject is required to choose the picture which best illustrates the passage or answers a question about the passage. Each response item on the test is worth one point. Correct responses are totalled to give a raw score which is then converted to a grade equivalent score. The subjects are given thirty-five minutes to complete the comprehension subtest.

The Gates-MacGinitie Reading Test was standardized throughout Canada on a selected sample of 46,000 subjects. Evidence of validity was provided through content, construct, and criterion-related validity. Reliability coefficients were computed for each test level from the Canadian standardization data and ranged from .85 to .92 for the comprehension subtest.

Meaning Vocabulary

The Peabody Picture Vocabulary Test-Revised (PPVT-R), Form L for time one and Form M for time two, was used to measure the meaning vocabulary of the subjects. Both forms contain 175 test items arranged in order of increasing difficulty. Subjects are shown plates containing four simple black and white pictures. They are required to select the picture which best illustrates the meaning of a stimulus word presented orally by the investigator. Testing is conducted in a quiet room, on an individual basis and takes approximately ten to fifteen minutes.

The PPVT-R can be used for subjects whose ages range from two-and-a-half to forty years and there is no requirement that subjects be able to read. In order to score the test, instructions are given for establishing basal and ceiling points. To arrive at a basal, the examiner must begin subjects at their starting points (recommended for each

age level) and work forward until subjects make the first error. If eight or more consecutive correct responses have been made, a basal has been established. The testing then continues forward until subjects make 6 errors in 8 consecutive responses. The last response becomes the ceiling item. If however, the chosen starting point was too high and subjects immediately begin making errors, testing must continue backwards until eight consecutive correct responses have been made in order to establish a basal. Testing then continues forward from the point of the first error. Due to errors patterns, it sometimes happens that more than one basal is established. The highest basal is used to compute the raw score and all items below this basal are counted as correct. All errors between the ceiling and the basal are subtracted from the number of the ceiling item. This difference makes up the raw score which is then converted into age equivalents, standard score equivalents, percentile ranks, and stanines. For the purpose of this study, age equivalent scores were used.

Standardization samples for the PPVT-R consisted of 4200 children and youth, and 828 adults. Evidence of validity was provided through content validity, construct validity and criterion-related validity. Two types of reliability coefficients, split half and alternate form, were calculated. A split-half reliability coefficient for two-and-a-half to 18 years old ranged from .67 to .88 on Form L and from .61 to .86 on Form M (Dunn & Dunn, 1981).

Sight Vocabulary

The Slosson Oral Reading Test (SORT) was used to measure the subjects' sight vocabulary at time one and time two. This test was given individually and is based on the ability to pronounce, immediately, isolated words at different levels of difficulty.

There are ten graded word lists containing twenty words each. The first list (List P) is considered the primer level and is recommended for the first few months of grade one. List 1 is for the remainder of grade one, and list 2 is for the second grade. Each list then corresponds to one grade level until the last list which is recommended for grades nine through twelve. For the purpose of this study, these lists were enlarged, placed on cards, and presented to the subject one list at a time. The subjects began with a list where they could pronounce all 20 words correctly. The test continued until the subjects encountered a list in which they were unable to pronounce any words. Subjects were given no more than five seconds to respond to each word. The total number of words pronounced correctly plus any words below a subject's starting list were converted to a reading grade level in years and months. This test took approximately 3 to 5 minutes to administer. Although the SORT is standardized, no information regarding tl e population involved in the standardization was provided.

Writing Ability

One writing sample was collected from each subject during the first week in October and a second sample was collected during the first week in April. Each class was asked to write about a topic of interest to them and was given the following prewriting activity.

For the time one period, the investigator introduced the topic of pets, as an example, and children were asked whether or not they had a pet or would like to have one. Approximately ten minutes was used for discussion and brainstorming of ideas. The investigator also offered suggestions and shared a sample story aloud. Examples of stories about pets were elicited from individual children who wanted to share their

thoughts with the class. The students were given time to think about the story they would write. They were then requested to verbally share their story with a partner as a rehearsal for the writing activity. Finally, students were asked to write their own story and were told to spell words as best they could. Ample time was given for the children to finish their piece of writing. The same procedure was used for the posttest and the subjects could select a topic of their own choice.

Specific evaluation criteria was used to assess the subjects writing ability in a holistic manner. The development of meaning and the communication of ideas were the primary concerns of the evaluation. Tiedt (1989) believes that "the intent of holistic assessment is to provide a score that indicates the general quality of a student's writing as a whole with no attempt to analyze specific errors" (p. 178). The following four point rating scale used for this study is an adaptation of scoring samples provided by Tiedt (1989), Payne (1989), and Noseworthy (1988).

<div align="center">Story Structure</div>

<div align="center">Coherence</div>

Score

   0. There is no evidence of story structure.

   1. The story is not well developed or is the retelling of a known story.

   2. The story is developed, with ideas following logically from beginning to end.

   3. The story is well constructed and contains originality, such as an interesting beginning or a novel ending.

<div align="center">Characterization</div>

   0. No characters are identified.

   1. The characters are identified but not described.

2. The characters are identified and also described.

3. The characters are described and behave according to their description.

Dialogue

0. There is no evidence of dialogue.

1. Dialogue is stilted or implied.

2. Appropriate dialogue is used for the characters.

3. Appropriate dialogue is used for the characters and is particularly effective.

Setting

0. There is no indication of setting.

1. Time and place are generally indicated.

2. Specific time and place are given.

3. Specific time and place are given and described.

Self-expression

Emotion

0. No emotional feeling is expressed.

1. Little emotional feeling is expressed.

2. Some emotional feeling is expresses. It may be repetitive.

3. Emotional feeling is clearly portrayed, contributing to the effectiveness of the story.

Communication

0. No message is communicated.

1. The message is brief and/or is limited to a few words or a simple sentence.

2. The message is more complex but is not fluent.

3. The message is fluent and is supported by examples and/or detail.

Language

Vocabulary

0. There are no recognizable words.

1. The writing contains less than 15 words.

2. The writing contains 15 or more words. Common verbs are used but few adjectives or adverbs are included.

3. A variety of verbs and a selection of adjectives and adverbs are appropriately used and contribute to the quality of the story.

Sentence Structure

0. There is no evidence of sentence structure. The writing is confined to scribbles and/or letters.

1. The writing is confined to simple sentences.

2. "And" is used to connect simple sentences. Subordination is not used.

3. The writing contains both simple and complex sentences.

Independent Var able

The independent variable for the study was whether the children were in the control group, which received basal reading instruction during grade one and whole language instruction during grade two, or the experimental group, which received whole language instruction in grade one and two. This variable was scored by assigning the value of 1 to the control group and 2 to the experimental group.

Conceptual Models

Two conceptual models were designed for this study. Conceptual model one

(Figure 4) is a graphic representation of the first part of the study which was designed to find out whether the experimental group would attain higher achievement levels than the control group after one year exposure to the treatment. Conceptual model two (Figure 5) is a graphic representation of the second part of the study which was designed to find out whether two years exposure to the treatment would result in higher achievement levels for the experimental group than for the control group.
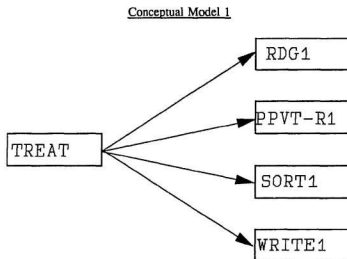
<u>Conceptual Model 1</u>

Figure 4. Conceptual model of the responsiveness of language arts to whole language instruction at the end of the grade one/beginning grade two.

Key: TREAT = Whether member of the experimental group or not; 1 = control group (basal reader instruction in grade one), 2 = experimental group (whole language instruction in grade one).

RDG 1 = reading comprehension beginning grade two;

PPVT-R 1 = meaning vocabulary beginning grade two;

SORT 1 = sight vocabulary beginning grade two;

WRITE 1 = writing ability beginning grade two.

Conceptual Model 2
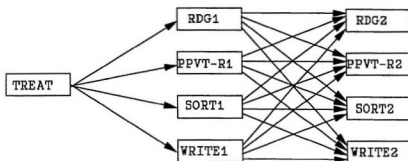
Figure 5. Longitudinal model of the impact of whole language instruction on language

arts at two points in time - the beginning of grade two and end of grade two.

Key: TREAT = Whether a member of the experimental group or not; 1 = control group

(basal instruction in grade one, whole language in grade two); 2 = experimental

group (whole language instruction in grade one and two).

RDG1 = reading comprehension beginning grade two;

PPVT-R1 = meaning vocabulary beginning grade two;

SORT1 = sight vocabulary beginning grade two;

WRITE1 = writing ability beginning grade two;

RDG2 = reading comprehension at the end of grade two;

PPVT-R2 = meaning vocabulary at the end of grade two;

SORT2 = sight vocabulary at the end of grade two;

WRITE2 = writing ability at the end of grade two.

Materials and Instruction

Two different reading approaches requiring different materials and instructional procedures were used with the two groups of subjects during their grade one year. The experimental group was exposed to a whole language program in grade one and grade two. The control group was exposed to a basal reader program in grade one and a whole language program in grade two.

<u>The Experimental Group</u>

The experimental group was exposed to the Networks (McInnes, 1987) primary language arts program which is based on a whole language approach to literacy development. The authors base their beliefs on an understanding of child growth and development, a meaning based approach to language learning, and the belief that reading and writing are closely related and emerge naturally and simultaneously.

The material for every grade level is presented in four units, each of which is composed of four, five, or six themes that have a personal, a curriculum, and/or a literature focus. In the teacher's manual, these foci are described by the authors in this way.

> The personal focus arises from an understanding of the needs, interests, abilities, and aptitudes of children as they deal with emotions, with the children's adjustments to school life, with peer and family relationships, and with larger issues of community life and mutual dependencies.
>
> Some of the themes have a curriculum focus, providing language experiences from across the curriculum, including the natural and physical sciences, mathematics, history, and geography. Selections provide a stimulus for a variety of exploratory and interpretive activities.
>
> The selections in the themes with a literature focus have been chosen with a view to instilling in children an appreciation of the richness of literature. Some of the selections derive from the oral tradition of rhymes, folk tales, and legends; some come from more recently published words of gifted authors and illustrators; while some have been written for NETWORKS. (p.35)

This program consists of five components. First, the teacher's planning guide provides an overview of the program and a rationale for the themes. It also contains a set of lesson plans for each theme which are organized under three major headings: a) planning the learning experience; b) developing the learning experience; and, c) evaluating the learning experience. Three reproducible language development checklists and one anecdotal profile per unit are also included.

Second, the anthology is the core component of the program and contains a variety of narrative, poetic, and informational selections. There are four anthologies for each grade level (Appendix A). A typical lesson using the anthology employs a systematic instructional plan which includes four steps: a) focusing; b) reading and reviewing; c) consolidating; and, d) extending and sharing. First, the children are introduced to a reading selection through focusing activities which help to activate their background knowledge. Activities might include discussions, story telling, sharing knowledge, and anticipating the language and structure of the selection to be read. Then, the children are involved in reading and reviewing the selection through activities like shared reading, teacher assisted reading, peer assisted reading, or independent reading. Reviewing involves the children in understanding the language elements of the story while reading or reviewing the text. Activities might include discussing the events, characters, details of the story, structure and language patterns, and reporting and recording information. Next, consolidating activities are incorporated to provide practice with specific aspects of the text such as structure, form, and vocabulary. Children may be involved in discussion, oral reading, role playing, composing charts, writing and/or choral reading in order to understand and reinforce what they have learned during the

reading and reviewing. Finally, children are engaged in extending and sharing activities which help them to apply what they have learned. They are encouraged to share and discuss what they have accomplished and perhaps extend their newly acquired knowledge in alternate ways.

Third, the activity book engages children in learning both independent and collaborative activities designed to develop their composing and thinking skills. There is one activity book for each of units 1 and 2. From unit three on, there are two activity books per unit; one for the more experienced reader and writer and one for the less experienced reader and writer. This makes a total of six activity books in grade one and eight activity books in grade two (Appendix A).

Fourth, the big book is intended for shared reading and relates to the anthology and independent readers in theme, genre, and language forms. It includes traditional and contemporary children's literature, as well as informational material in the form of charts, maps, experiments, photographs and reports. There are four big books (one for each unit) provided for the grade one level and one for the first unit of grade two (Appendix A).

Fifth, the independent readers are provided for additional reading experiences and are related to theme, genre, and linguistic forms of the big book and the anthology. There are eight independent readers for each grade which are developed at two different reading levels, one for the less experienced reader and one for the more experienced reader (Appendix A).

The program also provides one set of listening tapes and one set of blackline masters for each grade level. At the grade one level, there are four puppet animal characters who appear in a number of stories in the anthology and independent readers.

The Grade One Program for the Experimental Group

     In addition to the Networks program, the grade one children in the experimental group were exposed to other language arts activities. There was a daily fifteen minute silent reading period where each child in the classroom read or perused a book of their choice. These books were chosen from the school library, the classroom library, or the children's own personal library. The teacher read aloud to the children as part of a daily routine. Books were chosen from various genres of children's literature including folk tales, fairy tales, realistic and imaginary stories, information books, poetry, and humorous books. Each classroom had a listening center where the children could listen to taped stories and also record, and listen to themselves read. The teacher provided a daily opportunity for shared reading and for the children to work in pairs and read aloud to each other.

     Reading and writing were integrated as much as possible across the curriculum. Each child was encouraged to write on a daily basis. The writing took the form of personal journal writing, language experience stories, and written responses to literature they read or heard. Message writing to peers or family members on special occasions such as birthdays or anniversaries was also incorporated. The teachers encouraged the use of invented spelling and did not mark on the children's writing. Each classroom was equipped with an author's chair where students who wanted to, could share their writing with others.

     Each night the children were required to take home a book of their own choice to read aloud to their parents. If the book was too difficult, the parent was encouraged to read to the child and to discuss the story in detail when the book was completed.

The Grade Two Program for the Experimental Group

In addition to following the Networks program theme approach, the grade two teachers in the experimental group used many other activities to teach the children how to read and write. Once each day, the children were engaged in silent reading for fifteen to twenty minutes. The teachers also read aloud daily to the children. Books were chosen from a variety of different genres including Caldecott winners, folktales, fairy tales, humorous books, poetry, and information books. Predictable books were often used for shared reading and the children were asked to chime in on repeated phrases. Sometimes the teacher would use masking tape and cover certain key words and the students would have to fill in the missing word.

A typical language arts class began with the teacher choosing a particular book or topic. Considerable time was spent brainstorming which meant that the children discussed the information that they might already know about the subject. On chart paper or the chalkboard, the teacher recorded the words and ideas of the children in the form of a semantic map. The children were asked to predict what the story might be about and the teacher also recorded this information. Once the story was read, the teacher spent time questioning the children about the events, characters, the problem, and the final outcome. The teachers also encouraged the children to relate any similar experiences or feelings which they may have experienced. Finally, the children would respond to the book in writing. For example, the children might be asked to draw a picture or their favourite part and write why they liked it, or to write an alternate ending to the story.

Reading and writing were related as much as possible not only during the

language classes but also throughout the content areas. The children were involved in personal journal writing twice a week, in writing group and individual language experience stories, in responding to children's literature, in story writing on self selected topics, and in the writing of group and individual messages and letters which were based on the children's needs and/or interests. The entire class often worked together to rewrite a favorite story in their own words which they would then read as a group. They might also write, read, and illustrate stories about specific classroom activities such as a field trip.

Children were encouraged to use invented spelling and whenever possible the children had an opportunity to share their writing. Those children who did not want to share their writing were not compelled to do so, however, the teacher tried to encourage them as much as possible. Due to time constraints and class size, children did not always get a chance to share their writing. On these occasions, provisions were made for those children to share their compositions on another day.

Each night the children were expected to read aloud from a self selected book. Parents were asked to take an active role in the reading by listening to their children read, questioning them about what they read, and discussing the events of the story.

The Control Group

The control group was exposed to the Nelson Language Development Reading Program (McInnes, 1977). This program has since been replaced by the Networks program. The primary language development reading program was based on a skills approach to reading instruction. The following components comprised the program.

The teachers resource manual provided teaching procedures for the introduction

and treatment of each selection in the basal reader. Throughout the manual, these instructions were organized into units which outlined specific skill development in a scope and sequence chart. At the back of the manual, there were reproducible activity pages keyed to specific skills.

The basal readers were the student's text books which made up the core of the program. There was one basal reader for each level of the program. There were a total of fourteen levels beginning with level 1 for kindergarten; levels 2, 3, 4, 5, and 6 for grade one; levels 7, 8, 9, and 10 for grade two; levels 11, 12, 13, and 14 for grade three.

Workbooks and activity books accompanied each basal reader and served to reinforce the skills taught through the lessons. They also provided the basis for independent seatwork. The exercises contained in the activity books were used to assist in the development of word recognition skills which were closely related to the reading selections in the corresponding basal reader. Teachers used the exercises in the activity books at their own discretion. However, the I Can Read workbooks were compulsory for each child. The workbook pages were completed sequentially and coincided with the basal reader selections.

An evaluation resource book was provided to assess individual skill development after the children completed each level of the program. These tests were intended to help teachers monitor the children's ability to perform the expected skills outlined in the teacher's manual.

Supplementary materials in the form of extra reading books, filmstrips, and language development pictures were also provided. These materials were used to help motivate and encourage children to read and write.

At the grade one level the control group were instructed in levels 2, 3, 4, 5, and 6 of the program (Appendix B). The five basal readers, accompanying workbooks and optional exercises from the activity books, teacher manuals, and supplementary materials were utilized to teach the grade one program.

The Grade One Program for the Control Group

During the grade one year, the reading lessons were structured and followed the procedure outlined in the guidebook. Selections from the basal readers were introduced and taught in a prescribed sequence. On the first day, the teacher read the complete basal story to the children and asked questions to insure the story had been understood. On the second day, the whole class read the story silently. On the third day, the children were required to read aloud individually in a round robin fashion. Following this, the reading skill lessons to accompany each story were selected from the published scope and sequence chart. These skills were then explained by the teacher. Finally, the children were given appropriate worksheets or workbook exercises designed to reinforce the particular skill which had been taught. The teachers also supplemented these exercises with duplicated sheets from a phonics workbook. Children also spent considerable time learning basic sight words and were often given lists of individual words from the Dolch (1960) list of sight words to take home and study.

The children were read to on a daily basis and were involved in one scheduled fifteen minute silent reading period per week. For the most part, it was the children who had completed their assigned worksheets that were given the opportunity to sit and read a book independently. The basal reader was sent home on a regular basis and children were expected to practice reading the stories aloud to their parents each night.

Writing was taught separately from reading and emphasis was placed on the proper formation of the letters, neatness, and correct spelling with little or no emphasis on the message. Story writing was held once a week for a thirty minute period and emphasis was placed on the mechanics of the language. The teacher always spelled any words that the children wanted to know. Occasionally, perhaps once every two weeks, the children were involved in language experience activities where they related their thoughts about a particular topic of interest. The teacher recorded their ideas on chart paper. The class then read the story as a group and the chart was put up on the wall.

The goal of instruction for the control group in grade one was considered to be the completion of the basal readers, mastery of the skills outlined in the scope and sequence chart, and the passing of the published skill tests.

The Grade Two Program for the Control Group

At the grade two level, the control group was exposed to a whole language approach. The subjects utilized the Networks program along with the same activities described for the grade two students in the experimental group.

CHAPTER IV

FINDINGS AND INTERPRETATION

Introduction

The purpose of this chapter is to present and interpret the results of the statistical analysis of the data collected during the study in light of the questions posed and the experimental treatment. Several statistical procedures were used. First, descriptive statistics were generated for the dependent variables of reading comprehension, meaning vocabulary, sight vocabulary and writing ability at both time one (the fall) and time two (the spring).

Second, one way analysis of variance was used in order to assess the differences between the control group (1) and the experimental group (2) on the scores for reading comprehension (RDG1), meaning vocabulary (PPVT-R1), sight vocabulary (SORT1), and writing ability (WRITE1) at time one testing and for reading comprehension (RDG2), meaning vocabulary (PPVT-R2), sight vocabulary (SORT2), and writing ability (WRITE2) at time two testing. In this analysis the variability of the observations within the group (around the mean) and the variability between the group means were observed in order to determine whether the between-group variance was significantly greater than the within-group variance (Borg & Gall, 1983).

Third, the investigator used the Pearson product-moment correlation to determine the relationships of the variables to each other. A ten by ten correlation matrix was constructed to show the relationship between the treatment and the various dependent variables.

Finally, a three stage multiple regression was computed for the dependent

variables reading comprehension, meaning vocabulary, sight vocabulary, writing ability and the independent variable, treatment. Multiple regression is a more stringent test for determining the effects of the treatment on the outcome variables after placing statistical controls on selected independent variables. Subsequent to the second multiple regression, a factor analysis was conducted to reduce the number of variables in the model and to verify the findings. To do this, a single composite variable, called achievement (ACH1), was constructed from the four moderate to highly inter-correlated variables (RDG1, PPVT-R1, SORT1 and WRITE1). The stability of regression equations is a function of the number of variables in relation to sample size. A frequently cited figure is 30 to 1 (Pedhazur, 1982, p.148). The larger the sample in relation to the number of independent variables the more stable the results. In this study, the stability was enhanced through data reduction using factor analysis; that is, by construction of a linear composite out of the four achievement indicators.

Descriptive Statistics

Means, standard deviations, kurtosis, skewness, and minimum and maximum values were generated for the dependent variables for the total sample of 104 students and are presented in Table 1. A comparison of means shows that for the spring testing the mean scores of all the dependent variables were larger than those of the previous fall testing. This indicates that both the control group and the experimental group made gains in reading comprehension, meaning vocabulary, sight vocabulary and writing ability.

A comparison of means by group showed that the means of the four dependent variables for time one and time two were higher for the experimental group than for the control group (Table 2). Writing ability both at the beginning and end of grade two

Table 1

Means, Standard Deviations (S.D.), Skewness, Kurtosis, Maximum (Max.) and Minimum (Min.) Scores for Dependent Variables (N = 104).

Variables	Mean	S.D.	Skewness	Kurtosis	Max.	Min.
			Time One Scores			
RDG1	2.40	1.00	1.54	1.68	5.40	1.50
PPVT-R1	7.42	1.04	0.24	0.75	10.70	4.70
SORT1	2.45	1.49	1.29	1.43	7.80	0.20
WRITE1	10.33	3.32	0.38	0.61	20.00	1.00
			Time Two Scores			
RDG2	3.34	1.32	0.49	-1.03	5.60	1.50
PPVT-R2	8.56	1.25	0.28	-0.79	11.50	6.11
SORT2	4.02	1.70	0.90	0.32	8.80	0.90
WRITE2	14.81	3.42	0.12	-0.10	24.00	6.00

NOTE: Time one (fall testing) = 1; Time Two (spring testing) = 2; RDG = grade equivalent scores in reading comprehension; PPVT-R = age equivalent scores in meaning vocabulary; SORT = grade equivalent scores in sight vocabulary; WRITE = raw scores in writing ability.

Table 2

Comparison of Means and Standard Deviations: Time One and Time Two Scores.

Variables	Experimental		Control	
	Mean	S.D.	Mean	S.D.
RDG1	2.43	.90	2.38	1.10
RDG2	3.67	1.36	3.01	1.19
PPVT-R1	7.45	1.16	7.39	.92
PPVT-R2	8.77	1.26	8.35	1.21
SORT1	2.70	1.63	2.20	1.30
SORT2	4.28	1.74	3.76	1.64
WRITE1	11.62	2.80	9.04	3.33
WRITE2	16.48	2.79	13.13	3.18

NOTE: RDG = grade equivalent scores in reading comprehension; PPVT-R = age equivalent scores in meaning vocabulary; SORT = grade equivalent scores in sight vocabulary; WRITE = raw scores in writing ability.

shows the largest difference and appears to be considerably better for those students in the experimental group. Although the mean scores for reading comprehension showed little difference at time one, it was interesting to note that the second largest difference in the mean scores occurred at time two in favor of the experimental group. The third largest difference between the mean scores occurred in sight vocabulary at the beginning and end of grade two in favor of the whole language group. Meaning vocabulary showed the least difference in mean scores at time two but it was also in favor of the experimental group.

Analysis of Variance

An inherent weakness of this study is the fact that the subjects were not randomly selected to the treatment groups. This occurred because the investigator capitalized on a natural experiment. Some grade one teachers had introduced whole language to their grade one students as part of a pilot study. Thus, when all students were introduced to a whole language in grade two, those who had not had whole language treatment in grade one could be compared to those who had. Random selection of students for experimental purposes is seldom possible in natural settings (Borg & Gall, 1983). In these circumstances, it is not uncommon for the analyst to explore the relationships in the data by first conducting a one way analysis of variance on the treatment effects with regard to the achievement at the beginning and the end of a grade.

Results

All eight hypotheses were tested using analysis of variance. The first four hypotheses were related to student achievement at time one or at the beginning of grade two and were as follows.

Hypothesis 1: Students who have been exposed to a whole language approach for one year will attain a higher level of reading comprehension ability than those taught using a skills approach for one year.

Hypothesis 2: Students who have been exposed to a whole language approach for one year will attain a higher level of meaning vocabulary than those taught using a skills approach for one year.

Hypothesis 3: Students who have been exposed to a whole language approach for one year will attain a higher level of sight vocabulary than those taught using a skills approach for one year.

Hypothesis 4: Students who have been exposed to a whole language approach for one year will attain a higher level of writing ability than those taught using a skills approach for one year.

The analysis of variance for the dependent variables at time one indicated a .816, .763, .084 and .000 level of significance for RDG1, PPVT-R1, SORT1 and WRITE1, respectively (Table 3). For each of the first three variables, the level of significance was unacceptable at the chosen 0.05 which indicates that the groups were not significantly different in reading comprehension, meaning vocabulary and sight vocabulary at the beginning of grade two.

However, there was a significant relationship between the treatment and writing ability in favor of the experimental group. Therefore, hypotheses 1, 2 and 3 were rejected and hypothesis 4 was accepted.

The second set of hypotheses tested, using the analysis of variance, were related to student achievement at time two. These hypothesis were as follows.

Hypothesis 5: Students who have been exposed to a whole language approach for two years will attain a higher level of reading comprehension than those who have been exposed to a skills approach in the first year and a whole language approach in the second year.

Hypothesis 6: Students who have been exposed to a whole language approach for two years will attain a higher level of meaning vocabulary than those who have been exposed to the skills approach in the first year and a whole language approach in the second year.

Table 3

ANOVA Results for RDG1, PPVT-R1, SORT1, WRITE1 by TREAT (Time One Scores).

Dependent Variables	Source	SS	DF	Square	F	Sig
RDG1	1	.055	1	.055	.055	.816
	2	103.724	102	1.017		
PPVT-R1	1	.100	1	.100	.091	.763
	2	111.922	102	1.097		
SORT1	1	6.600	1	6.600	3.037	.084
	2	221.658	102	2.173		
WRITE1	1	172.654	1	172.654	118.264	.000
	2	964.231	102	9.453		

NOTE: 1 = between groups; 2 = within groups; SS = sum of squares; DF = degrees of freedom.

Hypothesis 7: Students who have been exposed to a whole language approach for two years will attain a higher level of sight vocabulary than those who have been exposed to the skills approach in the first year and a whole language approach in the second year.

Hypothesis 8: Students who have been exposed to a whole language approach for two years will attain a higher level of writing ability than those who have been exposed to the skills approach in the first year and a whole language approach in the second year.

The analysis of variance for the dependent variables at time two indicated a .009, .083, .124 and .000 level of significance for RDG2, PPVT-R2, SORT2 and WRITE2 respectively (Table 4). For PPVT-R2 and SORT2, the level of significance was unacceptable at the chosen 0.05 which indicates that there were no significant differences between the experimental and the control group on meaning and sight vocabulary at the end of grade two. However, RDG2 and WRITE2 showed a statistically significant level in favor of the experimental group. Therefore, hypotheses 6 and 7 were rejected and hypotheses 5 and 8 were accepted.

Interpretation

The analysis of variance (Table 3) shows that the treatment had little effect on reading comprehension after one year. This confirms the findings of Stahl & Miller (1989), Smith (1989), and Payne (1989) who all found that the whole language approach and the basal reading approach were equally effective in helping beginning readers develop reading comprehension. However, after two years the experimental group in this study showed a difference of over 6 months according to the mean scores (Table 2) and was significant at the .009 level (Table 4). This gain in reading comprehension demonstrated a lagged effect which may be due to the fact that the experimental group were given many more opportunities to read and enjoy books during their grade one year. In other words, the experimental group was probably better at comprehending because

Table 4

ANOVA Results for RDG2, PPVT-R2, SORT2, WRITE2 by TREAT (Time Two Scores).

Dependent Variables	Source	SS	DF	Square	F	Sig
RDG2	1	11.379	1	11.379	6.964	.0096
	2	166.655	102	1.634		
PPVT-R2	1	4.679	1	4.679	3.056	.0834
	2	156.162	102	1.531		
SORT2	1	6.906	1	6.906	2.411	.124
	2	292.163	102	2.864		
WRITE2	1	291.115	1	291.115	32.522	.000
	2	931.039	102	8.951		

NOTE: 1 = between groups; 2 = within groups; SS = sum of squares; DF = degrees of freedom.

they spent more time engaged in a variety of reading activities like daily uninterrupted silent reading, shared reading, and paired reading whereas those in the control group did not have such exposure during their grade one year. The children in the experimental group were read to on a daily basis and were involved in much more discussion about stories, the characters, the problems and the outcomes. Whole language instruction focused primarily on meaningful stories the children wrote themselves and on children's literature while the traditional program focused on basal reader instruction and the mastery of individual skills through drill and practise during their grade one year.

With regard to meaning vocabulary, it is interesting to note that after one year the results of the PPVT-R revealed a mean score of 7.45 for the experimental group and 7.39 for the control group. There was little difference between the experimental and control group which indicates that the whole language and the basal skill approaches seemed to be equally effective for teaching meaning vocabulary. After two years exposure to whole language, the experimental group revealed a 4 month advantage over the subjects in the control group. Although the mean scores were not significant during the second part of the study, they were in the hypothesized direction. This could, perhaps, be accounted for by the increased amount of reading that went on in the whole language classrooms. While it is difficult to determine why this increase in meaning vocabulary did not occur during the grade one year, it is speculated that the higher interest in reading, the increase in the amount of reading done, the variety of children's literature presented, and the kinds of activities (brainstorming, semantic mapping, and general discussions) carried out during that first year probably contributed to the gains in meaning vocabulary during their grade two year.

Sight vocabulary testing at time one (Table 2) on the SORT revealed a mean score of 2.70 for the experimental group and 2.20 for the control group. This five month advantage is an important finding in light of the fact that many teachers using whole language for the first time believe that instruction and drill in sight vocabulary is crucial to beginning reading instruction. The results indicate that using repetitious materials and predictable books to develop sight vocabulary in grade one is just as effective as the drill and practice of basic sight words. The fact that the difference is not significant confirms, to some degree, the findings of Chall (1983) who has been claiming for years that children learn to read from a bottom-up model of reading and that drill and practice in sight words is necessary before children can learn to read. However, it seems that providing sufficient drill and practice can also be done through the use of real reading material. Using repetitious material and predictable books also has the advantage of developing comprehension ability at the same time. At time two in the study, the findings continued to indicate a five month advantage according to the mean scores of 3.76 and 4.28 (Table 2) in favor of the experimental group. Therefore, it seems likely that using whole language strategies is a better approach to helping children acquire sight vocabulary than is a drill and practice approach. In the long run, it appears that children who are exposed to a wide variety of books and spend a lot of time reading will learn more sight words. The direct relationship between the amount of time spent reading and the increase in word recognition has been supported by theory (Anderson et al., 1985).

From the results of the analysis of variance, there appears to be a strong relationship between the treatment and writing ability in favor of the whole language group both at time one and time two. The mean scores from Table 2 show a consider-

able advantage in favor of the experimental group and a significance level of .000
(Tables 3 & 4) at both testing periods. This confirms the findings of Varble (1990),
Smith (1989), and Payne (1989) that children exposed to whole language exhibit superior
writing ability than those exposed to the skills approach. The findings in this study may
be due to the fact that the children in the experimental group were expected to write from
the first day of school. The use of invented spelling was encouraged so that they could
express their ideas more readily without worry about the mechanics of the language. The
children engaged in complementary reading and writing activities that evolved naturally
from their reading. Activities included responding to the literature which was read to
them by writing about their favorite part, composing different endings to the stories they
heard, keeping journals, sending written personal letters or notes to family members or
other community members. The integration of reading and writing is supported by theory
(Weaver, 1988; Goodman 1986; Anderson, 1984) and is believed to be a major
contributor to the superior performance of the children in the experimental group. The
children in the control group were not given many opportunities to write during their
grade one year. Story writing was held one period per week which did not provide
adequate time for writing practice. The writing period was considered separate from
reading and emphasis was placed on mechanics and proper letter formation with much
less attention to the message.

Correlation Coefficients

In order to test the accepted hypothesis more stringently, regression techniques
were used. Since regression analysis is based on a correlation matrix, correlations for all
the variables are presented in Table 5. The correlations between the independent variable

Table 5

Correlation Matrix for Variables at Time One and Time Two.

Variables	TREAT	RDG1	PPVT-R1	SORT1	WRITE1	RDG2	PPVT-R2	SORT2	WRITE2
TREAT	1.000	0.408	0.381	0.042	0.000	0.005	0.042	0.062	0.000
RDG1	0.023	1.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000
PPVT-R1	0.030	0.257	1.000	0.009	0.041	0.000	0.000	0.002	0.001
SORT1	0.170	0.819	0.231	1.000	0.000	0.000	0.000	0.000	0.000
WRITE1	0.390	0.383	0.171	0.503	1.000	0.000	0.004	0.000	0.000
RDG2	0.253	0.691	0.510	0.654	0.442	1.000	0.000	0.000	0.000
PPVT-R2	0.171	0.408	0.611	0.362	0.260	0.493	1.000	0.000	0.000
SORT2	0.152	0.746	0.288	0.933	0.486	0.677	0.358	1.000	0.000
WRITE2	0.492	0.458	0.293	0.531	0.586	0.478	0.400	0.520	1.000
$\bar{X}$	1.50	2.40	7.42	2.45	10.33	3.34	8.56	4.02	14.81
SD	0.50	1.00	1.04	1.48	3.32	1.32	1.25	1.70	3.42

NOTE: Correlation coefficients below the diagonal; significant levels above the diagonal.
P values <.05 are statistically significant.

TREAT and the dependent variables of WRITE1, RDG2, and WRITE2 were .39, .25 and .49 respectively. These relationships were all statistically significant at the .01 level or less. This confirmed the ANOVA results and the earlier acceptance of hypotheses 4, 5 and 8. This means that there is a definite relationship between the whole language treatment and writing ability both at the beginning and end of grade two and between the treatment and reading comprehension at the end of grade two.

It is also interesting to note that the correlation between TREAT and SORT1 was .170 and between TREAT and PPVT-R2 was .171. Both relationships were statistically significant at the .04 level. This means that the students in the experimental group had a better sight vocabulary at time one and a better meaning vocabulary at time two than those students in the control group.

Multiple Regression

A three stage multiple regression was used to examine the magnitude of the relationships between the independent variable and the dependent variables in the study. Path analysis was then possible using the results from the multiple regression analysis. Borg and Gall (1983) state that "path analysis is a method for testing the validity of a theory about causal relationships between three or more variables that have been studied using a correlational research design." (p. 606) The path coefficients are the same as the Beta coefficients calculated in the multiple regression. "A path coefficient is a standardized partial regression coefficient indicating the direct effects of one variable on another in the path analysis" (Borg & Gall, 1983, p. 610). Having determined these path coefficients (direct effects) it was also possible to calculate the indirect effects among the variables. In the analysis of path models a distinction can be made between the direct

effect of a variable and its indirect effect. The direct effect is one which is not mediated or transmitted by any other variable whereas the indirect effect is the part of the independent variable that is transmitted or mediated by one or more intervening variables (Pedhazur, 1982).

<div align="center">Stage One</div>

Stage one of the regression model was executed to determine whether the treatment that the children received in grade one affected their achievement levels at the beginning of grade two. In this stage, there is a single independent variable which is the treatment. The outcome variables RDG1, PPVT-R1, SORT1, and WRITE1 are regressed on the treatment. The parameter effects in models with only one predictor are the same as the Pearson correlation coefficients. The results of this analysis are presented in Table 6 and a graphic representation is provided in Figure 6. In the case of RDG1, PPVT-R1, and SORT1, the treatment effects are negligible because the parameters are .17 or less and the residual terms are .91 and higher. It appears that whatever is accounting for the increased achievement levels has little to do with the treatment they received. However, in the case of WRITE1, the parameter is .39 and the residual is .78. This means that the treatment is definitely one factor accounting for how well the children write. Stage one of the regression model, therefore, indicates that while the treatment did not seem to have much effect on the reading comprehension, the meaning vocabulary, and the sight vocabulary of the students, it had a definite effect on their writing ability. The earlier rejections of hypotheses 1, 2, and 3 and the acceptance of hypothesis 4 were confirmed.

<div align="center">Stage Two</div>

Stage two of the regression model was utilized to examine the effects of the

Table 6

Standardized Regression Coefficients for Stage One Model Parameters.

Independent Variable		Dependent Variables			
		RDG1	PPVT-R1	SORT1	WRITE1
TREAT	Beta	.023	.030	.170	.390
	Sig T	.408	.381	.042	.000
Residual		.988	.985	.911	.781
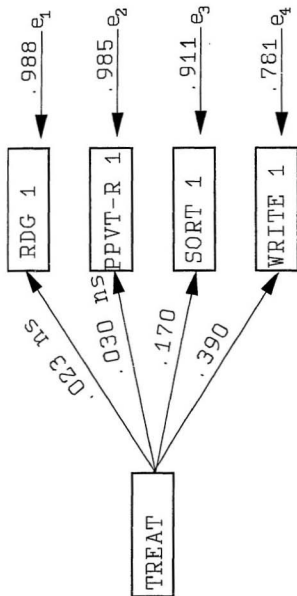
Figure 6. Path Diagram for Stage One Regression Model.

treatment on the outcome variables at time two while controlling for the subjects performance in reading comprehension (RDG1), meaning vocabulary (PPVT-R1), sight vocabulary (SORT1), and writing ability (WRITE1) at time one. Four multiple regression equations were created using the four criterion variables plus the treatment variable.

(1) RDG2 = function of (TREAT, RDG1, PPVT-R1, SORT1, WRITE1)

(2) PPVT-R2 = function of (TREAT, RDG1, PPVT-R1, SORT1, WRITE1)

(3) SORT2 = function of (TREAT, RDG1, PPVT-R1, SORT1, WRITE1)

(4) WRITE2 = function of (TREAT, RDG1, PPVT-R1, SORT1, WRITE1)

The estimates of these equations were used as a final test for the hypotheses. While the ANOVA and the correlation results tended to support higher achievement in reading comprehension and writing ability by the experimental group at time two, the results were tentative. Controls had to be placed on the potentially confounding variables of prior achievement in reading comprehension, meaning and sight vocabulary, and writing ability at time one before firm conclusions could be drawn about the results of the research.

The estimates for equation one are contained in Table 7 and Figure 7 presents a graphic view. This equation provided the effects of TREAT on RDG2 while controlling for RDG1, PPVT-R1, SORT1, and WRITE1. The earlier tentative acceptance of hypothesis 5 concerning the relationship between reading comprehension and the whole language program was reconfirmed and accepted. The t-value of 2.623 was significant at the .01 level and the beta coefficient between TREAT and RDG2 was .162.

Data for the second equation is contained in Table 8 and Figure 8 shows the

Table 7

Regression Coefficients, Standard Errors, Standardized Regression Coefficients, T-Values and Significance Levels for the RDG2 Path Model.

Independent Variables	B	SE(B)	BETA	T	Sig T
	Dependent Variable RDG2				
TREAT	.424	.162	.162	2.623	.010
RDG1	.082	.015	.551	5.544	.000
PPVT-R1	.443	.074	.352	6.018	.000
SORT1	.050	.093	.057	.540	.591
WRITE1	.029	.028	.073	1.634	.304

Constant -2.761
Mult. R   .829
R-Square .687

NOTE: B = regression coefficients; SE(B) = standard errors; Beta = standardized partial regression coefficients;
       T = t-values; Sig T = significance levels.
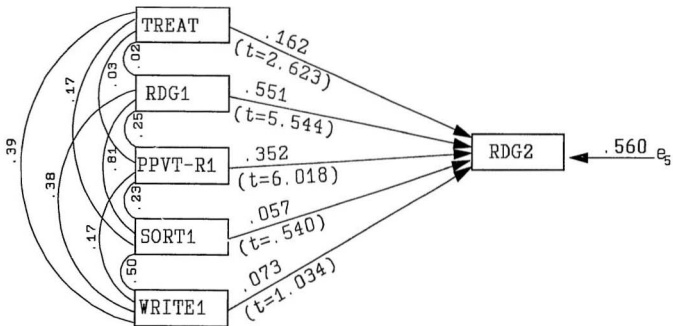
Figure 7. Path Diagram for Reading Achievement Model at Time Two.

Table 8

Regression Coefficients, Standard Errors, Standardized Regression Coefficients, T-Values and Significance Levels for the PPVT-R2 Path Model.

		Dependent Variable PPVT-R2			
Independent Variables	B	SE(B)	BETA	T	Sig T
TREAT	.361	.204	.145	1.771	.080
RDG1	.342	.204	.275	2.119	.037
PPVT-R1	.644	.092	.537	6.991	.000
SORT1	-.015	.114	-.017	-.127	.899
WRITE1	.006	.035	.015	.165	.869

Constant 2.395
Mult. R   .681
R-Square   .463

NOTE: B = regression coefficients; SE(B) = standard errors; Beta = standardized partial regression coefficients; T = t-values; Sig T = significance levels.

Figure 8. Path Diagram for Meaning Vocabulary Achievement Model at Time Two.

relationship between PPVT-R2 and TREAT while controlling for RDG1, PPVT-R1, SORT1, and WRITE1. The t-value was 1.771 with a beta coefficient of .145 and a significance level of .080. Therefore, the rejection of hypothesis 6 was confirmed.

Equation three was generated to determine the effects of TREAT on SORT2 while controlling for RDG1, PPVT-R1, SORT1, and WRITE1. The data is contained in Table 9 and a graphic view is presented in Figure 9. The beta coefficient between TREAT and SORT2 was -.014 with a t-value of -.395 and a significance level of .720. Hypothesis seven was also rejected.

The fourth equation examined the effects of TREAT on WRITE2 while controlling for RDG1, PPVT-R1, SORT1, and WRITE1. Table 10 contains the data for the fourth equation and Figure 10 is a diagrammatical representation. A beta weight of .349, a t-value of 4.62, and a significance level of .000 confirms the fact that the treatment effect was significant for writing over and above the effects of the control variables. Therefore, hypothesis eight was accepted.

The stage two regression analysis did support the ANOVA results. When controls were placed on the four achievement variables at the beginning of grade two, the treatment effects accounted for significant improvement in reading comprehension and writing ability but not for meaning vocabulary or sight vocabulary. However, there was some evidence that these findings were due to a phenomena called multicollinearity. This sometimes happens when independent variables such as reading comprehension, meaning vocabulary, sight vocabulary, and writing ability are contained in the data set and have moderate to high correlations. In these circumstances, there may be a tendency for the parameters of the model to be unstable due to the low number of cases, the large

Table 9

Regression Coefficients, Standard Errors, Standardized Regression Coefficients, T-Values and Significance Levels for the SORT2 Path Model.

Dependent Variable
SORT2

Independent Variables	B	SE(B)	BETA	T	Sig T
TREAT	-.047	.131	-.014	-.359	.720
RDG1	-.002	.012	-.010	-.155	.877
PPVT-R1	.122	.059	.075	2.043	.044
SORT1	1.047	.076	.9151	3.858	.000
WRITE1	.012	.023	.023	.514	.609

Constant .531
Mult. R .936
R-Square .877

NOTE: B = regression coefficients; SE(B) = standard errors; Beta = standardized partial regression coefficients; T = t-values; Sig T = significance levels.
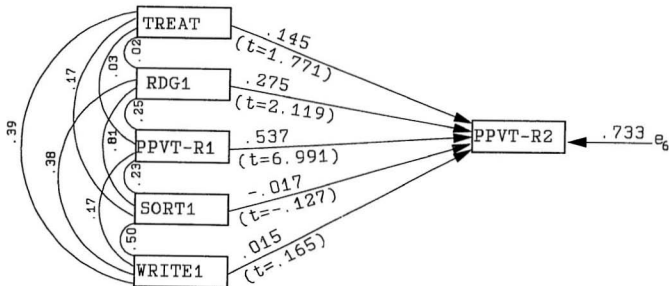
Figure 9. Path Diagram for Sight Vocabulary Achievement Model at Time Two.

Table 10

Regression Coefficients, Standard Errors, Standardized Regression Coefficients, T-Values, and Significance Levels for the WRITE2 Path Model.

| | | Dependent Variable WRITE2 | | |
Independent Variables	B	SE(B)	BETA	T	Sig T
TREAT	2.378	.515	.349	4.620	.000
RDG1	.641	.408	.188	1.570	.120
PPVT-R1	.503	.233	.153	2.163	.033
SORT1	.328	.289	.143	1.135	.159
WRITE1	.288	.088	.280	3.300	.001

Constant 2.192
Mult. R   .737
R-Square .543

NOTE: B = regression coefficients; SE(B) = standard errors; Beta = standardized partial regression coefficients; T = t-values; Sig T = significance levels.
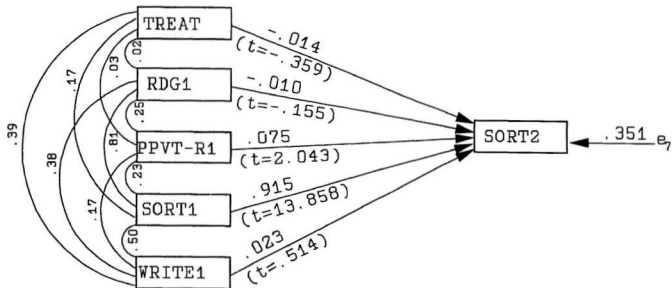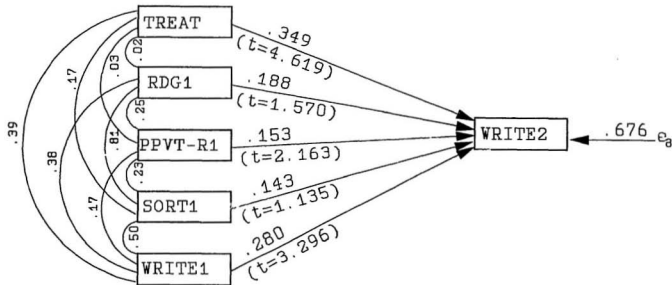
Figure 10. Path Diagram for Writing Achievement Model at Time Two.

number of variables, and the high correlations between the independent variables (Pedhazur, 1982, p.232-237). Consequently, a third regression analysis was conducted.

Stage Three

In order to check whether multicollinearity was a problem in the previous regression analysis, the number of independent variables was reduced. A composite variable called achievement (ACH1) was constructed from the four variables RDG1, PPVT-R1, SORT1, and WRITE1 using a factor analysis (Table 11). The equation for constructing the linear composite variable was as follows: $ACH1 = .388 \ (RDG1 - 2.40)/1.00 + .185 \ (PPVT-R1 - 7.42)/1.04 + .403 \ (SORT1 - 2.45)/1.29 + .304 \ (WRITE1 - 10.33)/3.32$. This gave a composite ACH1 with a mean of 0 and a standard deviation of 1.0. Since regression is based on a correlation matrix, correlations for all ten variables including ACH1 are presented in Table 12. ACH1 was then substituted for the four previously defined variables and the third stage of the regression analysis was conducted. The results presented in Table 13 indicated that the stage three regression was congruent with the stage two model except for RDG2 where the collinearity reduced analysis did not indicate a significant direct effect for the TREAT parameter. This meant that reading comprehension was not affected by the treatment over and above the effects of the composite variable ACH1 of the time one indicators.

Using the results from the stage three regression, it was then possible to calculate the indirect effects among the variables. Table 14 presents the results of the total causal effects (direct effects plus the indirect effects) of the treatment on the outcome variables via ACH1. The direct effect between TREAT and RDG2 at the beginning of grade two is .085. However, the indirect effect of .167 plus the direct effect is .252. In other

Table 11

Factor Analysis Results: ACH1 Construct

Variables	$\bar{X}$	S.D.	Factor Loading	Communality	Eign Value	% of Variance	FSC
PPVT-R1	7.42	1.04	.421	.177	2.272	56.8	.185
SORT1	2.45	1.29	.917	.841	.893	22.3	.403
WRITE1	10.33	3.32	.692	.478	.664	16.6	.304
RDG1	2.40	1.00	.881	.776	.171	4.3	.388

Item Alpha Reliability = .72

FSC = Factor Score Coefficients or composite weights.

Table 12

Correlation Matrix for all variables including ACH1 at Time One and Time Two.

Variables	TREAT	RDG1	PPVT-R1	SORT1	WRITE1	ACH1	RDG2	PPVT-R2	SORT2	WRITE2
TREAT	1.000	0.408	0.381	0.042	0.000	0.012	0.005	0.042	.062	0.000
RDG1	0.023	1.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PPVT-R1	0.030	0.257	1.000	0.009	0.041	0.000	0.000	0.000	0.002	0.001
SORT1	0.170	0.819	0.231	1.000	0.000	0.000	0.000	0.000	0.000	0.000
WRITE1	0.390	0.383	0.171	0.503	1.000	0.000	0.000	0.004	0.000	0.000
ACH1	0.222	0.849	0.421	0.917	0.691	1.000	0.000	0.000	0.000	0.000
RDG2	0.253	0.691	0.510	0.654	0.442	0.772	1.000	0.000	0.^000	0.000
PPVT-R2	0.171	0.408	0.611	0.362	0.260	0.478	0.493	1.000	0.000	0.000
SORT2	0.152	0.746	0.288	0.933	0.486	0.874	0.677	0.358	1.000	0.000
WRITE2	0.492	0.458	0.293	0.531	0.586	0.623	0.478	0.400	0.520	1.000
$\bar{X}$	1.50	2.40	7.42	2.45	10.33	0.000	3.34	8.56	4.02	14.81
SD	0.50	1.00	1.04	1.48	3.32	.999	1.32	1.25	1.70	3.42

NOTE: Correlation coefficients below the diagonal; Significant levels above the diagonal; P values <.05 are statistically significant.

Table 13

Regression Coefficients, Standard Errors, Standardized Regression Coefficients, T-Values and Significance Levels for ACH1.

Dependent Variables

ACH1

Independent Variables	B	SE(B)	BETA	T	Sig T
TREAT	.442	.192	.222	2.304	.023

Constant -.664
Mult.R   .222
R Square .049

RDG2

Independent Variables	B	SE(B)	BETA	T	Sig T
TREAT	.223	.169	.085	1.319	.190
ACH1	1.007	.271	.766	3.711	.000
TREAT*ACH1	-.011	.170	.013	-.064	.949

Constant 3.008
Mult.R   .777
R-Square .603

Table 13 cont'd

		Dependent Variable PPVT-R2			
Independent Variables	B	SE(B)	BETA	T	Sig T
TREAT	.168	.224	.068	.753	.453
ACH1	.631	.359	.491	1.170	.000
TREAT*ACH1	-.023	.225	-.030	-.103	.981

Constant 8.309
Mult. R   .482
R-Square .232

		Dependent Variables SORT2			
Independent Variables	B	SE(B)	BETA	T	Sig T
TREAT	-.151	.168	-.045	-.900	.370
ACH1	1.380	.270	.811	5.129	.000
TREAT*ACH1	.082	.169	.077	.486	.628

Constant 4.235
Mult.R   .876
R-Square .768

Table 13 cont'd

Dependent Variable

WRITE2

Independent Variables	B	SE(B)	BETA	T	Sig T
TREAT	2.522	.475	.371	5.311	.000
ACH1	3.280	.762	.959	4.303	.000
TREAT*ACH1	-.945	.478	-.440	-1.979	.051

Constant 11.129
Mult. R   .733
R-Square   .537

Table 14

Total Causal Effects of Treatment on Outcome Variables via ACH1.

| | | TREAT | |
Relationship	Direct Effects	Indirect Effects	Total
TREAT/RDG2	.085	.167	.252
TREAT/PPVT-R2	.068	.103	.171
TREAT/SORT2	-.045	.196	.151
TREAT/WRITE2	.372	.120	.492

words, the treatment effects do account for reading comprehension at the end of grade two but only when it was taken into account via the time one scores. This means that the treatment did have an effect on reading comprehension at time two mostly because it had influenced, at least to some extent, the achievement levels at time one. The treatment was operating more through the time one learning than through the time two.

The direct effect of TREAT on PPVT-R2 while controlling for ACH1 has an indirect effect of .103 and a direct effect of .068. The total effects add up to .170. This means that the treatment had only a slight effect on meaning vocabulary at the end of grade two.

The relationship between TREAT and SORT2 is also negligible with a direct effect of -.045 and an indirect effect of .196. The total effects add up to .151. This means that the treatment had a minimal effect on sight vocabulary at the end of grade two.

The direct effect of the treatment on WRITE2 is .372 and the indirect effect is .120 which add up to a total effect of .492. This means that there is absolutely no ambiguity that the treatment accounts for the children's superior writing performance at the end of grade two.

CHAPTER V

SUMMARY, CONCLUSiONS, IMPLICATIONS AND FURTHER RESEARCH

Introduction

The purpose of this chapter is threefold. First, the study will be summarized and conclusions about findings will be drawn. Second, theoretical and practical implications of the study will be presented. Third, suggestions will be made for replication and/or extension of this research.

Summary and Conclusions

This experimental study was conducted to measure the effects of a whole language approach compared to the traditional basal approach on the achievement levels of grade two students in reading comprehension, meaning vocabulary, sight vocabulary, and writing ability at the beginning and end of grade two. The investigator capitalized on a natural experiment which meant that the subjects were not randomly selected to the treatment groups. The sample consisted of 104 students attending four grade two classes from two schools in the City of St. John's during the academic year 1989-1990. The experimental group included fifty-two students who had exposure to the whole language approach in grade one because they were part of a pilot project with the Roman Catholic School Board. The control group was comprised of fifty-two grade two students who had used the traditional basal program in grade one. They were selected on the basis of a close socio-economic match to the experimental group.

The first part of the study was conducted in order to measure whether the experimental group made greater gains in reading comprehension, meaning vocabulary, sight vocabulary, and writing ability than the control group during the grade one year.

The second part of the study was conducted in order to measure whether exposure to whole language in grade one and two would result in higher achievement levels than exposure to a skills approach in grade one and the whole language approach in grade two.

Based on the results of the ANOVA, it was possible to accept hypothesis four which stated that the students exposed to a whole language approach would produce a significantly higher level of writing ability than those students taught using a skills approach during their grade one year. Hypotheses one, two, and three, which suggested that this method would produce improved reading comprehension, meaning vocabulary and sight vocabulary, were rejected because the differences were not significant. However, the experimental group showed more improvement than the control group according to the mean scores. Hypotheses five and eight were accepted. They indicated that grade two students exposed to whole language in grade one would attain significantly higher levels of reading comprehension and writing ability than those students taught using a skills approach in grade one. Hypothesis six and seven which claimed that whole language instruction would produce higher levels of meaning and sight vocabulary were rejected. However, they were in the hypothesized direction according to the mean scores.

An inherent weakness in the study was the fact that the students were not randomly selected, therefore, the results of the ANOVA were tested using a very stringent three stage regression analysis. The results of the first regression supported the findings of part one of the study which found that the experimental group produced superior writing ability than the control group at the beginning of grade two. Stage two of the regression analysis placed statistical controls on the students prior ability in reading

comprehension, meaning vocabulary, sight vocabulary, and writing ability. The results of the stage two regression analysis confirmed the results of the ANOVA which found that grade two students, who were exposed to whole language in grade one produced superior ability in reading comprehension and writing ability than those students in grade two who were exposed to the skills approach in their grade one year.

To further enhance the stability of the study, a factor analysis was conducted to check whether multicollinearity was a problem. The four variables of reading comprehension, meaning vocabulary, sight vocabulary, and writing ability from time one were reduced to a single variable. Using this composite variable, a third and more rigorous regression analysis was then conducted. Results from stage three of the regression analysis confirmed the findings of the second regression with respect to writing ability but not for reading comprehension. However, using the results of the third regression, it was possible to determine the direct effects and the indirect effects among the variables. The total of the direct effects plus the indirect effects proved beyond the shadow of a doubt that reading comprehension and writing ability showed a significant difference for the students who were exposed to whole language in grade one over those students who were taught using a traditional skills approach.

Theoretical Implications

From the results of this study, it can be seen that both whole language and traditional approaches to literacy acquisition created gains in performance. There was no doubt that the increased performance in writing ability was a result of whole language treatment. However, the scores for the experimental group on reading comprehension demonstrate that while whole language treatment effects may not have been particularly

significant at the time of the treatment, it did have a lagged or delayed effect. Apparently, the effects of the treatment in grade one gave children advantages in reading comprehension in grade two. Children who did not receive whole language did not have this advantage. Expressed differently one could say that an early investment in whole language promoted additional language investments later on. Like a work of art, it was an investment that appreciated in value over time. The results suggest that the whole language approach had its strongest influence is the area of reading comprehension and writing ability.

Practical Implications

The main focus of this study was to examine the effects of the traditional basal reading and the whole language approach on the reading and writing development of grade two children. The study clearly indicated the feasibility of implementing the Networks whole language program along with additional whole language activities into primary classrooms.

The practical implications for reading and writing development indicate that a whole language approach appears to be significantly better than the traditional skills approach and, therefore, teachers should incorporate whole language strategies in their classroom instruction. Children should be provided with daily experiences in language activities like group discussions, read alouds, shared reading, paired reading, and participation in independent reading during a designated time period. Individual and group language experience stories and charts, children's literature, predictable reading books, cloze activities, big books, tape recordings of books and children's experience stories are examples of the kinds of materials that should be part of the whole language

classroom. Teachers must facilitate learning by providing an atmosphere which is risk free and where literacy is approached for pleasure and meaning, rather than as an exercise in the acquisition of discrete skills.

The results of this study also validate the fact that reading and writing are closely related and should be developed simultaneously. Children need to be immersed in an environment which encourages and motivates them to read and write. Teachers need to consider whether class activities are tied to the questions and interests expressed by the children in the classroom. From the first day of school children should be encouraged to write for reasons which are important to them. If they cannot, they are urged to pretend they can and use scribbles, drawings, pictures, letters, and spelling inve..tions. As they become more sophisticated, children should be encouraged to write labels, notes, letters, journals, and stories. Through reflecting on the ideas the students express when reading and writing their stories, teachers can better understand the special meanings that they are creating. If students become writers as they become readers, they will more readily made the link between writing and reading.

Recommendations for Further Research

To further test the effects of whole language, a similar study could be conducted to include the same four classes in their grade three year. This would provide an opportunity to extend the findings of this study and to determine any effects over a three year period.

This study could be replicated on a much larger scale somewhere in North America. This would give added credibility to the findings of this research.

Further research is needed into the affective domain. This would determine the

effect of whole language on the attitudes of students towards both reading and writing. It can be argued that one instructional approach would not necessarily have to be significantly better in its effects on reading and writing growth if an affective advantage could be ascertained.

Teacher attitude, including personality factors, should also be investigated. The success or failure of a program can be attributed to the attitude of the teacher responsible for its implementation. If teachers are not convinced of the value of whole language teaching and continue to use traditional approaches, then any perceived failure of the program could be erroneously ascribed to whole language teaching.

REFERENCES

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References

Altwerger, B., Edelsky, C., & Flores, B.M. (1987). Whole language: What's new? The Reading Teacher, 41, 144-154.

Anderson, G.S. (1984). A whole language approach to reading. Langham, MD: University Press of America.

Anderson, R.C (1985). Role of the reader's schema in comprehension, learning and memory. In H. Singer & R. Ruddell (Eds.), Theoretical models and processes in reading (pp. 372-384). Newark, DE: International Reading Association.

Anderson, R., & Freebody, P. (1981). Vocabulary knowledge. In J. Guthrie (Ed.), Comprehension and teaching: Research reviews (pp.77-117). Newark, DE: International Reading Association.

Anderson, R.C., Hiebert, E.M., Scott, J.A., & Wilkinson, I.G.A. (1985). Becoming a nation of readers. Washington, DC: National Institute of Education.

Arnold, R., & Miller, J. (1980). Word recognition skills. In P. Lamb & R. Arnold (Eds.), Teaching reading: Foundations and strategies (pp. 275-307). Belmont, CA: Wadsworth.

Beck, I., (1984). Developing comprehension: The impact of the directed reading lesson. In R.C. Anderson, J. Osborn, & R. Tierney (Eds.), Learning to read in American Schools (pp. 3-20). Hillsdale, NJ: Lawrence Erlbaum.

Beck, I., Perfetti, C., & McKeown, M. (1982). The effects of long-term vocabulary instruction on lexical access and reading comprehension. Journal of Educational Psychology, 74, 506-5`.

Beebe, M.J. (1988). Literacy theories informing teaching in primary and elementary grades. Paper prepared for the Conference on Exploring the Breath and Depth of Literacy, Memorial University, St. John's, NF.

Beebe, M.J. (1990). Literacy theories informing the teaching of reading: The transition to whole language instruction. In S. Norris & L. Phillips (Eds.), Foundations of literacy policy in Canada (pp. 157-170). Calgary, AB: Detselig Enterprises Ltd.

Bissex, G.L. (1981). Growing writers in the classrooms. Language Arts, 58, 785-791.

Borg, W.R., & Gall, M.D. (Ed.). (1983). Educational research: An introduction. New York, NY: Longmans.

Bridge, C., Winograd, P., & Haley, D. (1983). Using predictable materials vs. preprimers to teach beginning sight words. The Reading Teacher, 36, 884-889.

Calkins, L.M. (1985). I am the one who writes: New approaches to children's writing. _American Educator, 9_, 26-29, 42, 44.

Chall, J.S. (1967). _Learning to read: The great debate_. New York, NY: McGraw Hill.

Chall, J.S. (1983). _Stages of reading development_. New York, NY: McGrath-Hill.

Chall, J.S., & Stahl, S.A. (1985). Reading comprehension research in the past decade: Implications for educational publishing. _Book Research Quarterly, 1_, 95-102.

Clark, M.M. (1976). _Young fluent readers_. London: Heinemann.

Clary, L,.M., & Smith, S.J. (1986). Selecting basal reading series. The need for a validated process. _The Reading Teacher, 39_, 390-394.

Clay, M.M. (1975). _What did I write_? Auckland, New Zealand: Heinemann Education-al Books.

Cooper, C.R., & Petrosky, A.R. (1976). A psycholinguistic view of the fluent reading process. _Journal of Reading, 20_, 184-207.

Davis, F.B. (1942). Two new measures of reading ability. _Journal of Educational Psychology, 33_, 365-373.

Davis, F.B. (1944). Fundamental factors of comprehension in reading. _Psychometrika, 9_, 185-197.

Doake, D.B. (1985). Reading-like behaviour: It's role in learning to read. In A. Jaggar & M. Smith-Burke (Eds.), _Observing the language learner_ (pp.82-98). Newark, DE: International Reading Association.

Dobson, L. (1988). Connections in learning to write and read: A study of children's development through kindergarten and grade one. Technical Report No. 418. Center for the Study of Reading, Champaign, IL.

Dolch, E. (1960). _Teaching primary reading_. Champaign, IL: Garrard Press.

Dunn, L.M., & Dunn, L.M. (1981). _Peabody Picture Vocabulary Test-Revised_. Circle Pines, MN: American Guidance Service.

Durkin, D. (1966). _Children who read early_. New York, NY: Teachers College Press.

Durkin, D. (1978). _Teaching them to read_. Boston, MA: Allyn and Bacon.

Durkin, D. (1984). _Teaching them to read_. Boston, MA: Allyn and Bacon.

Ehri, L.C., & Wilce, L.S. (1980). Do beginners learn to read function words better in sentences or in lists? Reading Research Quarterly, 15, 451-476.

Eldelsky, C. (1990). Whose agenda is this anyway? A response to McKenna, Robinson, & Miller. Educational Researcher, 19, 7-11.

Eldrege, J.L. (1988). Improving the reading comprehension skills of poor readers. Reading Horizons, 29 (1), 35-42.

Elley, W.B. (1989). Vocabulary acquisition from listening to stories. Reading Research Quarterly, 24, 174-186.

Fagan, W. (1985). Basal reader/language arts materials: A professional responsibility. Reading-Canada-Lecture, 3, 29-35.

Flood, J., & Lapp, D, (1983). Teaching reading to every child. New York, NY: MacMillan.

Flood, J., & Lapp, D. (1986). Types of texts: The match between what students read in basals and what they encounter in tests. Reading Research Quarterly, 21, 284-297.

Glazer, S.M. (1980). Getting ready to read: Creating readers from birth to six. Englewood Cliffs, NJ: Prentice Hall.

Goodman, K.S. (1973). The psycholinguistic nature of the reading process. Detroit, MI: Wayne State University Press.

Goodman, K.S. (1976). Reading: A psycholinguistic guessing game. In H. Singer & R.B. Ruddell (Eds.), Theoretical models and processes of reading (pp.497-508). Newark, DE: International Reading Association.

Goodman, K.S. (1986). What's whole in whole language? Richmond Hill, ON: Scholastic-TAB.

Goodman, Y.M. (1983). Beginning reading development: Strategies and principles. In R.P. Parker & F.A. Davies (Eds.), Developing literacy: Young childrens' use of language (pp.68-83). Newark, DE: International Reading Association.

Gough, P.B. (1984). Word Recognition. In P.D. Pearson (Ed.), Handbook of reading research. (pp. 225-254). New York, NY: Longman.

Government of Newfoundland and Labrador. (1988). Experiencing language: Primary language guide highlights. Department of Education, St. John's, NF.

Graves, D. (1984). A researcher learns to write. Exeter, NH: Heinemann.

Gray, W. (Ed.). (1940). <u>Reading in general education: An exploratory study</u>. Washington, DC: American Council of Education.

Gunderson, L., & Shapiro, J. (1988). A comparison of vocabulary generated by grade 1 students in whole language classrooms and basal reader vocabulary. <u>Reading Research and Instruction</u>, <u>27</u>, 40-46.

Gunderson, L., & Shapiro, J. (1986). Some findings on whole language instruction. <u>Reading-Canada-Lecture</u>, <u>5</u>, 22-26.

Herman, P.A., & Dole, J. (1988). Theory and practice in vocabulary learning and instruction. <u>The Elementary School Journal</u>, <u>89</u>, 43-54.

Hiebert, E.H. (1981). Development patterns and interrelationships of preschool childrens print awareness. <u>Reading Research Quarterly</u>, <u>16</u>, 236-260.

Holdaway, D. (1985). <u>Stability and change in literacy learning</u>. Portsmouth, NH: Heinemann.

Holdaway, D. (1979). <u>Foundations of Literacy</u>. Sydney, Australia: Ashton, Scholastic.

Huck, C. (1977). Literature as the content of reading. <u>Theory into Practice</u>, <u>16</u>, 363-371.

LaBerge, D., & Samuels, S. (1974). Toward a theory of automatic information processing in reading. <u>Cognitive Psychology</u>, <u>6</u>, 293-323.

Liberman, I.Y., & Shankweiler, D. (1979). Speech, the alphabet and teaching to read. In L.B. Resnick & P.A. Weaver (Eds.), <u>Theory and practice of early reading</u>, (Vol. 2 pp. 109-132). Hillsdale, NJ: Erlbaum Associates.

Lipson, M. (1984). Some unexpected issues in prior knowledge and comprehension. <u>The Reading Teacher</u>, <u>37</u>, 760-764.

Logan, L., Logan, V., & Patterson, L. (1972). <u>Creative communication: Teaching the language arts</u>. Toronto, ON: McGraw-Hill Ryerson.

Malicky, G. (1980). Reading skills or processes or both. <u>Elements</u>, <u>11</u>, (7), Unpaged.

Malicky, G., & Norman, C. (1985). Reading process of "natural" readers. <u>Reading-Canada-Lecture</u>, <u>3</u>, 8-20.

Martin, B. (1971). <u>Brown bear, brown bear</u>. New York, NY: Holt, Rhinehart & Winston.

Martin, B. (1970). <u>Fire, fire, said Mrs. McGuire</u>. New York, NY: Holt, Rhinehart & Winston.

Mason, J.M. (1984). A schema-theoretic view of the reading process as a basis for comprehension instruction. In G.G. Duffy, L.R. Roehler, & J. Mason (Eds.), Comprehension instruction: Perspectives and suggestions (pp.26-38). White Plains, NY: Longman.

Mason, J.M., Peterman, C.L., & Kerr, B.M. (1989). Reading to kindergarten children. In D.S. Strickland & L.M. Morrow (Eds.), Emerging literacy: Young children learn to read and write (pp.52-79). Newark, DE: International Reading Association.

McConaghy, T. (1988). Canada: A leader in whole-language instruction. Phi Delta Kappan, 336-337.

McGuffey, W.H. (1962). McGuffey's fifth electic reader. New York, NY: The New American Library.

McInnes, J. (Ed.). (1977). The Nelson Language Development Reading Program. Scarborough, ON: Nelson Canada.

McInnes, J. (Ed.). (1987). The Nelson Networks Whole Language Program. Scarborough, ON: Nelson Canada.

McKenna, M., Robinson, R., & Miller, J. (1990). Whole language: A research agenda for the nineties. Educational Researcher, 19 (8), 3-5.

McNinch, G. (1981). A method for teaching sight words to disabled readers. The Reading Teacher, 35, 269-272.

Mercer, M. (1989). A whole language versus skills based approach to preschool education. Unpublished master's thesis, Memorial University, St. John's, NF.

Nagy, W.E., Herman, P.A., & Anderson, R.C. (1985). Learning words from context. Reading Research Quarterly, 20, 233-255.

Newman, J.M. (1985). Whole language: Theory in use. Portsmouth, NH: Heinemann.

Noseworthy, B. (1988). The effects of a literature program on a second-grade class. Unpublished master's thesis, Memorial University, St. John's, NF.

Otto, J. (1982). The new debate in reading. The Reading Teacher, 36, 14-18.

Payne, A. (1989). Whole language implementation: The impact on grade one teachers and students. Unpublished master's thesis, Memorial University, St. John's, NF.

Pearson, D.D., & Johnson, P.D. (1978). Teaching reading comprehension. New York, NY: Holt, Rhinehart & Winston.

Pedhazur, E.J. (1982). Multiple regression in behaviorial research. New York, NY: Holt, Rhinehart & Winston.

Reutzel, D.R., & Cooter, R.B. (1990). Whole language: Comparative effects on first grade writing. Journal of Educational Research, 83, 252-257.

Reutzel, D.R., & Hollingsworth, P.M. (1988). Whole language and the practitioner. Academic Therapy, 23, 405-416.

Ribowsky, H. (1985). The effects of a code emphasis approach and a whole language approach upon emergent literacy of kindergarten children. ERIC Document Reproduction Service, ED 269 720.

Robinson R., & Good, T. (1987). Becoming an effective reading teacher. New York, NY: Harper & Row.

Ryall, M. (1985). The use of a whole language approach to develop sight vocabulary in high risk primary children. Unpublished master's thesis, Memorial University, St. John's, NF.

Sampson, M.R., & Sampson, M.B. (1981). A comparison of the complexity of dictation and instructional reading materials. Paper presented at the National Reading Conference, Dallas, Texas.

Searfoss, L.W., & Readence, J.E. (1989) Helping children learn to read. Englewood Cliffs, NJ: Prentice Hall.

Slaughter, H. (1988). Direct and indirect teaching in a whole language classroom. The Reading Teacher, 42, 30-34.

Smith, E. (1989). A whole language approach to literacy in a grade four/five classroom. Unpublished Master's Thesis, Memorial University, St. John's, NF.

Smith, F. (1978). Understanding reading: A psycholinguistic analysis of reading and learning to read. New York, NY: Holt, Rhinehart & Winston.

Smith, F. (1982). Understanding reading (3rd ed.). New York, NY: Holt, Rhinehart & Winston.

Spache, G. (1963). Toward better reading. Champaign, IL: Garrard Publishing.

Spache, G., & Spache, E. (1986). Reading in the elementary school. Boston, MA: Allyn & Bacon.

Staab, C., & Smith, K. (1985). Classroom perspective on teaching writing. The Reading Teacher, 38, 841-844.

Stahl, S. (1983). Differential word knowledge and reading comprehension. _Journal of Reading Behavior, 15_, 33-50.

Stahl, S.A., & Miller, P.D. (1989). Whole language and language experience approaches for beginning reading: A quantitative research synthesis. _Review of Educational Research, 59_, 87-116.

Steuer, L., & Steddom, S. (1979). From McGuffey to the eighties: American basic reading programs. _Teacher, 96_, 58, 63-64, 66.

Strickland, D.S., & Morrow, L.M. (1988). New perspectives of young children learning to read and write. _The Reading Teacher, 42_, 70-71.

Taylor, B., Harris, L., & Pearson, P. (1988). _Reading Difficulties_. New York, NY: Random House.

Teale, W.H., & Sulzby, E. (1989). Emergent literacy: New perspectives. In D.S. Strickland & L.M. Morrow (Eds.), _Emergent literacy: Young children learn to read and write_ (pp. 1-15). Newark, DE: International Reading Association.

Thorndike, R.L. (1973-74). Reading as reasoning. _Reading Research Quarterly, 9_, 135-147.

Thurstone, L. (1946). A note on a reanalyses of Davis' reading tests. _Psychometrika, 11_, 185-188.

Tiedt, I.M. (1989). _Writing: From topic to evaluation_. Toronto, ON: Allyn & Bacon.

Tierney, R., & Pearson, P. (1983). Toward a composing model of reading. _Language Arts, 60_, 568-580.

Torrey, J.W. (1969). Learning to read without a teacher: A case study. _Elementary English, 46_, 550-556.

Trelease, J. (1985). _The read-aloud handbook_. New York, NY: Penguin.

Varble, M. (1990). Analysis of writing samples of students taught by teachers using whole language and traditional approaches. _Journal of Educational Research, 83_, 254-251.

Venezky, R. (1987). A history of the American reading text book. _The Elementary School Journal, 87_, 247-265.

Watson, D.J. (1983). Bringing together reading and writing. In U.H. Hardt (Ed.), _Teaching reading in the other language arts_ (pp. 63-82). Newark, DE: International Reading Association.

Weaver, C. (1988). Reading process and practice. Portsmouth, NH: Heinemann.

White, T., Power, M., & White, S. (1989). Morphological analysis: Implications for teaching and understanding vocabulary growth. Reading Research Quarterly, 24, 283-304.

APPENDIX A

APPENDIX A

The Networks Program (Whole language) for Grade One and Grade Two.

	Grade 1	Grade 2
Big Books	Read Today! Read Today! Tell a Story Sing A Lullaby Ask a Riddle	Today and Yesterday
Anthologies	Across the Water Round the Mountain Outside the Door In the Meadow	Take a Giant Step Find a Way Back Weave a Dream Reach for a Star
Activity Books	Across the Water Round the Mountain Outside the Door E.V. Outside the Door In the Meadow E.V. In the Meadow	Take a Giant Step Find a Way Back E.V. Find a Way Back Weave a Dream E.V. Weave a Dream Reach for a Star E.V. Reach for a Star
Teacher's Planning Guides	Across the Water Round the Mountain Outside the Door In the Meadow	Take a Giant Step Find a Way Back Weave a Dream Reach for a Star
Independent Readers	Ducks Can't Count E.L. Under the Orange Umbrella Green for the Queen E.L. The House on the Hill Playful Penguins E.L. The Littlest Penguin How I Saw the Parade E.L. Olaf Reads	The Giant's Child E.L. The Helpful Giant The Cat and the Rat E.L. The Know-it-all Frog The Beaver's Flat Tail E.L. The Moose's Loose Coat Squirrels on the Move E.L. What's Right for Roxy

NOTE: E.L. Easier Level; E.V. Easier Version.

APPENDIX B

APPENDIX B

The Nelson Language Development Reading Series for Grade One

Teacher's Resource Books

Surprise! Surprise!
Kittens and Bears
Pets and Puppets
Whiskers
Toy Box

Basal Readers

Surprise! Surprise!
Kittens and Bears
Pets and Puppets
Whiskers
Toy Box

I Can Read Workbooks
and Activity Books

Surprise! Surprise!
Kittens and Bears
Pets and Puppets
Whiskers
Toy Box

One Evaluation Resource Book

APPENDIX C

Site 5 , Box 31
Quigley's Lane
Torbay, Newfoundland
AOA 3ZO
August 5, 1989

Ms. Geraldine Roe
Assistant Superintendent
R.C. School Board
Belvedere, Bonaventure Avenue
St. John's, Newfoundland

Dear Ms. Roe:

I am writing this letter to request permission to conduct a
research project to examine the impact of the Nelson Networks
language arts program which is being introduced into grade two
classrooms in the St. John's district this September, 1989.
Specifically, I would like to investigate the impact of the
whole language approach on the language development of grade
two students in four areas; namely, meaning vocabulary, sight
vocabulary, comprehension and writing.

To do this, I would like to test three classes of grade two
students early in October and again in late April. The
following tests would be given:

1) The Peabody Picture Vocabulary Test-Revised (PPVT-R) is an
   instrument for assessing student's receptive vocabulary.
2) The Slosson Oral Reading Test (SORT) would be used to
   measure the student's sight vocabulary.
3) The Gates MacGinite Reading Comprehension Test is an
   instrument used to assess the students understanding of
   words and ideas in a passage.
4) A writing sample on a topic of importance or interest to
   each student would be gathered collectively during a period
   of approximately ten to fifteen minutes.

The first two tests would have to be given individually and
would take approximately 15 minutes to administer. The
comprehension test would take approximately 30 minutes to
complete. The total testing time required would be
approximately one hour.

I am a graduate student in Education working on a Master's
degree in Curriculum and Instruction. I am presently writng a
proposal for my thesis under the supervision of Dr. Mona
Beebe, Ph.D., an acknowledged expert in the area of reading.

Thank you for your consideration in this matter. If you have
any further questions regarding this research, please do not
hesitate to call (437-5885).

Yours truly,

Gwen Maguire

Roman Catholic School Board for St. John's

BELVEDERE
BONAVENTURE AVENUE
ST. JOHN'S, NEWFOUNDLAND
A1C 3Z4

1989 08 29

Ms. Gwen Maguire
Site 5, Box 31
Quigley's Lane
Torbay
Newfoundland
A0A 3Z0

Dear Ms. Maguire,

This is to acknowledge your request to conduct research
in our schools. Permission is granted to administer
the tests to three classes of Grade two students.

Mrs. Martha Sanger, Primary Coordinator, will make
arrangements with one of the schools. She will contact
you in September.

Best wishes for success in your work.

Yours truly,

Geraldine Roe
Associate Superintendent
Curriculum/Instruction

GR:msc

c.c. Ms. Martha Sanger

APPENDIX D

St. Paul's Elementary School

340 Newfoundland Drive
St. John's, Newfoundland
A1 A 3 R9

Dear Parent,

Your child's school has been selected to participate in a
research project to examine the impact of the new language arts
program which is being introduced into grade two classrooms in
the St. John's district this year. Both the school board and
your child's school are supporting this study.

As part of this research, your child will be tested early in
October and again in late April. These tests are used to examine
the effects of the new language arts program in the following
areas: vocabulary development, reading comprehension and writing.
The total testing time required will be approximately one hour.

Please be assured that all tests results will be confidential.
Neither the schools nor the children's name will be identified
in any written report.

I am currently a graduate student at Memorial University where I
am completing my Master's Degree Program in the area of language
arts. This research is the culmination of three years of
intensive study. The results of the project will advise the
Roman Catholic School Board of St. John's of the success of the
new program.

If you wish to have any further information regarding this
research, please do not hesitate to call (437-5885). Thank you
for your co-operation in this matter.

Yours sincerely,

Gwen Maguire B.ED.; B.P.E.
Graduate Student (Memorial University)