CONNECTIONS IN LEARNING TO WRITE AND READ:

A STUDY OF CHILDREN'S DEVELOPMENT THROUGH KINDERGARTEN

AND GRADE ONE

by

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Connections in Learning to Write and Read: A Study of

Children's Development through Kindergarten and Grade One

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ABSTRACT

Researchers have rarely studied the nature of school
children's reading and writing development within the same
investigative framework. Yet research into preschool
literacy has shown that children are already learning about
both aspects of written language before they enter school and
that the two aspects are mutually-supportive in their
development. It is logical to expect that children in the
first two years of their schooling also benefit from an
integrated instructional program. But just how reading and
writing are intertwined in the learning process has not been
clearly defined. This dissertation sets out to document
children's writing and reading and to uncover relationships
in their development. To this end the author initiated a
systematic sampling routine which enabled her to trace
children's progress through their Kindergarten and Grade One
years. Within an environment conducive to language learning
she asked children to read and write in any way they could,
extending her definitions to include all responses to writing
and reading events. The study was designed to assemble a
number of clinical case studies to bring out common patterns
of development. The subjects were eighteen children
attending an inner-city school, some learning English as a
second language.

In the analysis the author identified children' strategies as readers and writers and compared their use at the same points in time. She found children exploring the mechanics of written language when they wrote and read their own writing, and only later applying such strategies when they read storybooks. But initially their responses were more complex and book-like when they read storybooks, thus sugesting that composing strategies develop in that context. In other words the children were working at specific aspects of written language in the context of one task, and the strategies they were developing then become available for use in the other. Writing and reading were supporting each other with a transfer of strategies occurring in both directions.

ACKNOWLEDGEMENTS

DEDICATION

I dedicate this work to my husband, Bud, and
my daughters, Gayle, Jackie, Denise and Teresa.

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CHAPTER ONE

Introduction

Problems and Purposes

Reading and writing are two aspects of the written
language system. We would, therefore, expect them to be
mutually supportive in literacy learning. Yet the vast
majority of researchers have focused on reading and the
effectiveness of the various methods used to teach it, in
isolation from writing. Some researchers such as Read (1971)
have investigated preschoolers' developing knowledge of
phonology as indicated by their early writing. And others
have described the writing process, and how it develops
(Graves, 1983). But research which traces the concurrent
development of writing and reading, examines the
relationships between them, and considers their relative
contributions to literacy learning is rare, especially in the
context of school learning. Such information, however, is
important for researchers and educators alike. Without it,
there will not be a complete picture of reading or writing
acquisition, or of literacy learning in general.

Teachers have traditionally taught reading first, but some
teachers/researchers suggest that children find it easier to
write first, with children spelling in any way they can
(Chomsky, 1979; Clay, 1975; Hurst, Dobson, Chow, Nucich,
Stickley & Smith, 1984). An interesting facet of this
approach is that the young writers are readers also, for they

read their own writing. How does writing and the reading of

one's own writing affect the acquisition of reading?

Conversely, how does reading affect writing? Educators need

such information from integrated studies before they can make

informed decisions about curricula. They need to recognize

the strategies involved in reading and writing and the ways

they interact in the course of the development. They also

need to reflect on the teacher's role in an integrated

reading/writing program. Knowledge about children's growth

as readers and writers will help them to set up the kind of

environment which promotes literacy learning.

The purpose of this dissertation is to address some of

these concerns. It reports on children's growth as readers

and writers over their first two years at school, comparing

what they do in response to reading/writing tasks at the same

points in time and analyzing the connections between them.

In order to obtain longitudinal observations I asked the

children to read and write in any way they could and included

their earliest responses in the documentation. The plan

involved four steps.

1. A series of bi-monthly observations of children

writing and reading over the first two years of their

schooling.

2. Analyses of the observations to infer the

strategies being used and the underlying knowledge on which

the strategies are based.

3. Comparisons of the children's strategies as

writers and their strategies as readers at the same points in time.

4. A consideration of the similarities and differences in the children's strategies across the two tasks and the ways in which, and the extent to which, they may be influencing and interacting with each other.

A Perspective on Literacy Learning

The research into literacy learning which provided the direction and support for this study is distinguished by its approach to reading and writing as whole tasks which develop as a series of successive refinements and its consideration for children as thinking individuals who both affect, and are affected by, their environment. Its researchers have attempted to explore the world of literacy from a child's point of view. They have focused on preschool learners, reporting on early experiences with literacy events and observing just what children actually do in their attempts to read and write (Jagger & Smith-Burke, 1985). The research rests on two propositions: first, that children actively construct a written language for themselves in much the same way as they have already constructed their oral language; and second, that they become literate as they interact with written language in a variety of contexts over time (Genishi & Dyson, 1984).

The findings in this area of research, now called emergent literacy (Teale & Sulzby, 1985), suggest that preschool

children are learning a written language when they hear and observe examples of reading and writing and when they attempt to read and write themselves. The learning occurs as they pay attention to signs, notes, books, etc. and respond to them in reading-like ways. They include children's writing-like marks on papers, walls, etc. and their reading-like responses to these marks. Such literacy experiences enable children to discover function and form.

Children's initial attempts to read and write are not conventional in many respects. However, researchers have extended their definitions of reading and writing to include all reading-like and writing-like events. They have concluded that early occurrences of literacy behaviour are not mere signs of readiness for formal instruction but early manifestations of reading and writing themselves. Their findings suggest that progress occurs in a developmental sequence which takes the form of a series of approximations gradually approaching the conventional (Bissex, 1981).

Researchers who have studied the early development of children's strategies as readers and writers have attempted to infer just why children act as they do and the underlying knowledge which sustains them. The main approach to data gathering is through informed observations, but such observations may also be supplemented by judicious probes for further information. Such a strategy reflects the belief that the learners have reasons for what they do, even when their reasons are not the conventional ones (Ferreiro, 1986).

The application of this perspective to empirical and theoretical work has significantly transformed the way in which we understand preschool children's use and development of written language. But it also suggests a way of investigating the progress of children who are at school, a way that is rather different from the usual teach and test procedures. Research undertaken from this perspective asks children to use written language in any way they can and analyzes the results in terms of individual development. The emphasis is on learning rather than teaching. Such a perspective is inherent in the present investigation.

Preliminary Investigations

Teachers who reflect on their pupils' work are naturally led into research because their constant question is, "What and how are my pupils learning?" They are also uniquely privileged to conduct their own investigations for they have constant access to the same children over time and a measure of control over the teaching/learning environment. My colleague, Marietta Hurst, and I were resource room teachers and in that capacity we attempted to put recent theoretical formulations to the test. Hurst (1982) searched the literature for key elements which were thought to foster language development and listed these factors as imperatives for the establishment of an environment for literacy growth (Appendix A contains the 1985 revision). With these in mind she and I set up a classroom environment in which we expected

children to communicate as readers and writers in any way they could.

The preliminary findings (Dobson, 1985) confirmed the positive effect of the learning environment. A subsequent study of Grade One children's development as writers (Dobson, 1986) supported Hurst's (1982) theoretical model of a continuum of emergent literacy (Appendix B) and elaborated on the writing strand (Appendix C). The results indicated a developmental sequence similar to that reported by Gentry (1982) and Temple, Nathan and Burris (1982). It also pointed out the intellectual nature of the children's problem-solving approach to writing. Such findings encouraged an extension of our investigations to include Kindergarten children's writing and the concurrent development of reading.

The first step was to set up a plan for observation and interaction with the children. To this end we decided on a systematic, bi-monthly sampling of their reading and writing from the beginning of Kindergarten to the end of Grade One. The sampling sessions took place in the resource room where we maintained the nurturing environment which had sustained our previous studies. There, we asked children to read and write with the communication of meaning as the central focus. To further narrow our reactions we constructed checklists of observational items (Appendices D, E, F, G) which previous researchers (Clay, 1984; Y. Goodman, 1980; Read, 1971) and our own classroom experience suggested were signposts to children's development. We reported on children's progress

toward literacy in the context of Gentry's (1982) developmental stages (Dobson & Hurst, 1986). It is the same data collection which I describe and analyze in this dissertation.

The Contents of the Dissertation

This chapter introduces the rationale, the problems and the approach that will be used to investigate them. The next chapter reviews the research that inspired and informed this study of literacy development and suggested a route for its investigation. Chapter Three considers the appropriateness of the approach and provides a detailed outline of the method. It describes the time-sampling plan, the environmental context, and the observational and probing procedures. Chapters Four and Five contain a documentation of the children's writing and reading over the two years of the study, set out under strategy headings. I discuss the examples in terms of their place in children's development and what they may imply in terms of underlying knowledge and understanding.

Chapter Six draws on the writing and reading data displayed in the previous two chapters to compare children's writing and reading at the same points in time. In it I examine the children's reading and writing at five levels of development, considering their strategies and the knowledge implied at each level. A number of comparisons of reading and writing strategies over time allows for informed

speculation about the ways in which each activity contributes toward progress in the other and toward literacy learning in general.

Chapter Seven identifies and elaborates on the major findings. I examine the writing/reading connections and consider how the exercise of one activity has seemed to affect the other. A consideration of their meaning for research and education suggests that learners and teachers may find new roles for themselves as collaborators in literacy learning, making literacy accessible to all.

CHAPTER TWO

Research in Literacy Learning

Language Processes

A key theoretical premise underlying this study is that language is learned by using it. And written language is a category of language; thus, what is true for language in general is true for written language as well (Altwerger, Edelsky & Flores, 1987). Teachers who assume this model of language learning immerse learners in a literate environment where purposeful engagement in reading and writing is the norm. Meaning is the central focus (Dobson & Hurst, 1986). The assessment of growth then is mainly observational and focuses on the development of learners' strategies and understandings.

Such a stance is in opposition to a more traditional theoretical model which assumes that language consists of isolatable skills. Such a theory suggests that it is possible to identify and then teach skills that contribute to a proficient performance. According to this view written language is learned by practising its parts until at a later time they can be assembled to produce a whole. Teachers and researchers who assume such a model generally focus on graphophonic cueing systems, and assess progress and programs using test-teach-test methods.

The approach of the present investigation is holistic and observational, with an emphasis on teaching that is

collaborative rather than instructional. It assumes that the cueing systems of language (phonology in oral language, orthography in written language, morphology, syntax, semantics, pragmatics) are simultaneously present and interacting in any instance of language. Such a view precludes the study of strategies in isolation from the whole and demands an environment of real meaning making (Wells, 1986).

The conception and implementation of this study into written language learning is based on an acquisition model of language in use, and the body of literature which takes that stance. In this chapter I cite a number of studies which contribute to and demonstrate the theory. Initially, I consider the application of theories of oral language learning to learning a written language and how they affect the acquisition model. I continue with references to children's early encounters with written language, the nurturing environment, and relationships between learning to read and to write. I conclude with research into writing and reading development and consider the significance of the present investigation.

Language Learning

N. Chomsky (1968) elaborated upon the creative nature of language and his ideas led to new fields of inquiry regarding its acquisition. Such researchers as Brown and Bellugi (1964), Cazden (1972) and Ervin-Tripp (1973) documented

recurring examples of rule-governed errors in children's oral language. They proposed that learners actively form and test hypotheses and thereby deduce the rules of language. Initially, children generate or devise a language for themselves, but over time it develops in a stage-like progression toward the adult norm (Miller, 1973).

K. Goodman (1970) applied a similar perspective to the study of reading acquisition. He defined reading as a psycholinguistic guessing game involving an interaction between thought and language. According to his theory readers use increasingly fewer graphic cues as they develop reading skill and speed. They select the fewest, most productive cues necessary to produce guesses that are right the first time. They go beyond the graphic features of text and simultaneously process three sub-systems of language: the semantic, syntactic and graphophonic.

K. Goodman proposed a specific procedure to evaluate readers' use of these cueing systems. He asked his subjects to read aloud from a selection that was slightly too difficult for them. He analyzed the resulting errors and inferred readers' strategies. He called the errors "miscues" and his analysis "miscue analysis", in order to avoid the negative connotations inherent in the word "error". His conclusions (K. Goodman, 1969; 1976; 1978; K. Goodman & Burke, 1973) and those of other researchers (Biemiller, 1970; Clay, 1968; Weber, 1970; Williams & Clay, 1973) were that all readers of English, regardless of their proficiency or their

language background, must learn to use cues from the three
language sub-systems. Where they differ is in how well they
integrate these cues. The Reading Miscue Inventory (Y.M.
Goodman & Burke, 1972), a clinical version of the research
instruments, sets out a procedure which can be used for
diagnosis and evaluation.

Frank Smith (1978, 1979) stressed the central role of
meaning in any language enterprise. He claimed that readers
rely on their language competence to uncover the rules of
written language because they insist that their reading both
make sense and sound like language. He postulated that two
cognitive insights are essential antecedents of reading: that
written language is meaningful, and that it is different from
oral language (Smith, 1977). He also extended the view of
the active learner to include literacy learning. He said
that readers "learn to read by reading" (Smith, 1978) and
"learn to write by writing" (Smith, 1982). Such statements
put an emphasis on language learning through engagement and
the collaborative nature of the interactions between learners
and teachers. Smith (1981) described the role of the teacher
as one which, "demonstrate(s) to children the manifold
possibilities of what is to be learned and assist(s) children
in achieving those possibilities." (p. 19). Similarly, Wells
(1986) argued that literacy learning is optimal when teachers
and learners participate as much as possible on an equal
footing.

Certain cognitive psychologists have emphasized the

interactive nature of written language learning. Rystrom
(1977) and Rumelhart (1977) proposed a model of the reading
process which took account of both a reader's prior knowledge
and the text. Elaborating further on the hypothetical
knowledge structure of readers, Anderson (1977), Hansen
(1981), and Pearson and Spiro (1982) described a schema which
included all the learner's previously accumulated knowledge
about a topic as well as the organization of that knowledge
(Allen, 1985). However, as Pearson and Spiro (1980) and
Strange (1980) stressed, readers must not only possess the
knowledge they need to connect with the text, they must
actively apply it. This view does not seem inconsistent with
Piaget's theory of accommodation and assimilation (Gallagher
& Reid, 1981). As language learners, readers select from the
information available in the environment those aspects which
can be assimilated into their present knowledge.

Tierney and Pearson (1983) have suggested that not only
are the processes of reading and writing closely connected,
they involve "essentially similar processes of meaning
construction" (p. 568). This is a constructivist point of
view which argues that readers as well as writers actually
compose meaning. Wittrock (1983) supported this position
when he explained how readers and writers both generate
meaning by building relationships between their own knowledge
and experience and the text. If reading and writing do
involve the same kind of constructive processes then it is
reasonable to assume that they not only interact with but

also facilitate each other. In both instances readers and writers who control the process will actively induce the rules.

Early Encounters with Written Language

Teachers are generally aware that some children learn to write and read before attending school. However, it is usually assumed that such children are exceptionally clever and/or have been specifically taught by their parents. Recently, researchers have begun to recognize that such early learning may have other roots. A number of studies have reported on children's early experience with written language. Many have shown that children are actively engaged in making sense of written language from a very early age. This concusion has served to underline the importance of children's early encounters with literacy events.

In Children's Minds , Margaret Donaldson (1978) argued that all humans, from the beginning, relate actively to the world. She sees children as questioners who approach the world with wonder. In our culture children are surrounded by demonstrations of functional literacy. Not only books, magazines, and papers, but signs, labels, and the television are full of print. Examples of people reading and writing are a common experience in every-day life. Children respond to the literacy events which occur in their environment. The events become examples which guide their attempts to take on the roles of readers and writers (Baghban, 1984). Y. Goodman

(1980) identified five roots of reading. They were:
"development of print awareness in situational context,
development of print awareness in connected discourse,
development of the functions and forms of writing, use of
oral language to talk about written language, and
metacognitive and metalinguistic awareness about written
language." (p.4). She observed that the beginnings of
reading development often go unnoticed in children.

Clay (1979) initiated the use of the term "emergent" in
connection with children's early experiences with reading and
writing. Such experiences include: obtaining access to books
and stories, seeing and using the written language of the
environment, creating written materials with the help of a
caring adult, and reading whatever they can in any way they
can (McKenzie, 1977). Other researchers stressed the
significance of such activities in literacy development also,
particularly focusing on "lap reading" and the "bedtime
story" (Doake, 1979; Holdaway, 1979; Teale, 1984). They
claimed that repeated readings of favourite stories encourage
children to engage in early reading-like behaviours, such as
attempting to retell stories or parts of stories for
themselves.

Researchers have attempted to identify children's early
knowledge about print. Mason (1980) investigated four-year
old children's knowledge of letters and words, and Hiebert
(1981) studied three-year olds' responses to print. Baghban
(1984) kept a diary of her daughter's encounters with oral

and written language from birth to age three. She reported that, "By 12 months, her book-handling behaviour was clearly established." (p.27). "By 17 months, she attempted to grab pens and paper when we tried to write ... With only a few demonstrations of how to hold the pen, she began to scribble" (p. 45).

Read (1971) studied the development of preschool children's knowledge of phonology. He found that his subjects knew the names of the letters of the alphabet and they used that knowledge to represent the sounds in words. They categorized the speech sounds on the basis of their place of articulation in the mouth. Significantly, the children arrived at roughly the same system. Read explained their spellings in terms of hypotheses about the children's implicit organization of English sounds. Bissex (1980) documented her son's growth as a reader and writer. He took turns working intensively on writing and then on reading. The development of his writing was consistent with that of Read's young writers.

Previously, educators considered such early responses as showing "readiness" for school instruction. According to the new interpretation however, children's growth is viewed as a gradual evolution from a holistic attribution of meaning to print toward an understanding of conventional representations. Such a view calls the condition of "readiness" into question. As Reid (1981) stated, "There is no readiness different from reading itself and reading is

primarily cognitive and linguistic and not visual and perceptual." (p. 70). This viewpoint is inherent in the design of the present investigation.

The Nurturing Environment

Children learn their oral language in a social environment which offers encouragement and support. In this environment there is an acceptance of experimentation, and children receive immediate feedback regarding the successful communication of their meaning (Cazden, 1972). Halliday (1975) conducted a longitudinal study of his son's oral language development. He concluded that meaning is the driving force in language growth. Adults usually attend to the utterances of young children with the expectation that meaning is intended, even if the phonological and syntactic forms are incorrect in conventional, adult terms (Brown, Cazden & Bellugi, 1973).

Studies of young readers and writers suggest that growth in written language is fostered by similar environmental conditions (Cohn, 1981; Doake, 1979). Clark (1976) and Durkin (1966) identified early readers and, in retrospect, tried to uncover the factors which were relevant to their development. Although none of the subjects could be said to have learned entirely by themselves, neither direct teaching nor high intelligence seemed to account for their achievement. However, a common pattern in their home life was the importance placed upon literacy activities,

particularly reading to the children. Significantly, most of the parents stated that their children had taken the initiative to becoming independent readers by asking the questions they needed to ask in order to learn. Other researchers have reported similar findings (Teale, 1984; Wells, 1981). They have noticed that parent/child interactions which are initiated and controlled by children often appear "natural" to parents.

The literate adult has been shown to play a significant role in such encounters (Cochran-Smith, 1984; Holdaway, 1979; Ninio & Bruner, 1978). Snow (1983) identified certain characteristics of adult/child interactions which support the development of both language and literacy. Her reports of dialogues which occurred during book-reading episodes demonstrated the relevance of three specific aspects of these interactions. The first, semantic contingency, includes adult expansions of the content, extensions into new information, clarifications of the utterances and answers to the child's questions. The second, scaffolding, refers to the support adults give when they hold certain aspects of a task constant so that the child is enabled to complete it. The last, accountability procedures, refers to the adult's insistence that children produce the most sophisticated behaviour they are capable of giving. She also pointed out the importance of establishing routines (or formats) that are highly predictable events in children's lives. She concluded that children who expect reading and writing to be a part of

everyday life come to view themselves as readers and writers. They expect stories to be meaningful and acquire an implicit knowledge of book procedures and story conventions (Applebee, 1978).

Hurst (1982) searched the studies and theories of language learning for factors in the environment that seemed to foster its growth. She summarized her findings into nine imperatives which she stated as principles (Appendix A) and which are elaborated in Chapter Three. These principles were first put into effect in a resource room setting and were later instituted in classrooms. Dobson's (1985; 1986) reports of the positive effect of this environment for pupils' progress as writers have confirmed their usefulness.

Researchers and educators have described classroom environments and/or programs based upon similar principles (Birnbaum, 1980; Bissex, 1981; Calkins, 1983; Clay, 1982; Deford & Harste, 1983; Giacobbe, 1981; Haley-James, 1982; Holdaway, 1979; Milz, 1980). Teachers in such environments provide a multiplicity of demonstrations of literacy events. They expect learners to actively engage in the use of language, taking what they can from the adult model and establishing control of their own learning (Harste, Woodward & Burke 1984). Jagger and Smith-Burke (1985) suggested that the teacher's task may not be so much to teach language, as to create an environment which enables language learning to occur.

Reading and Writing Relationships

It is often assumed that writing is at the top of a language learning hierarchy. But in recent years some researchers have suggested that children begin to write more easily than they begin to read (C. Chomsky, 1971, 1973; Clay, 1975). Chomsky reported on the writing of young children who used letters to represent sounds of language and thereby produced their own "invented" spellings. Such an approach to writing engages learners in problem-solving and also enables them to become active participants in teaching themselves to read (C. Chomsky, 1979; Temple, Nathan & Burris, 1982). Clay (1975) also pointed out the importance of early writing for young learners of written language, but she focused more on their ability to print a number of words.

Hall, Moretz and Statom (1976) identified early writers enrolled in four Nursery/Kindergarten classes. In interviews with parents they attempted to discover common factors in the home backgrounds of the pupils and ascertain the sequence of learning to write in relation to learning to read. In 17 out of 18 cases interest in writing preceded interest in reading.

Donaldson (1978) considered the relationship between production and comprehension in language learning. She pointed out that one fact strongly favours production; that is, when you produce language you are in control and you need only initiate topics of your own choice.

The Goodmans (1983) pointed out, however, that such findings do not necessarily suggest that writing precedes

reading. They argued that children's early writing indicates a knowledge of letter forms, sound/letter associations, and word units. And to have such knowledge writers must have been engaged in reading-like activities.

Although instructional practices are generally based on the view that reading is learned before writing, a number of researchers/teachers have proposed methods which involve beginning readers in aspects of writing. Montessori (1912/1964), for example, prepared children for reading by first giving them extended practise in writing. The "language experience approach" (Allen, 1976) and the "key word approach" (Ashton-Warner, 1963) involved children in the composition of their own reading material which was scribed by an adult. Hildreth (1963) studied children's development in the writing of their own names. More recently, Dobson (1985) and Lancaster, Nelson and Morris (1982) reported on writing programs designed for children having difficulty in learning to read, finding that success in writing resulted in later success in reading. One reason may be that writers are reading their own text and in so doing they are actually acquiring and practising reading strategies (Aulls, 1975; K. & Y. Goodman, 1983).

Wilson (1981) reviewed the available research and concluded that reading and writing should be taught simultaneously. In a later review of integrated reading/writing research Stotsky (1983) searched for studies which connected progress in reading and progress in writing.

Her report did not include any studies which investigated these connections at the early stages of schooling, and she stressed the need for more knowledge at all levels.

The present study rests on the assumption that writing and reading are aspects of a single language system and as such they develop simultaneously and as parallel processes. In a review of "emergent literacy" Mason (1986) recommended "integrated writing/reading research ... to determine how reading and writing are intertwined in the learning process and how they might be assessed." (p. 38). This recommendation embodies the intention of the present investigation and draws attention to its significance.

Writing Development

Vygotsky (1978) drew a unified, historical line which detailed children's progress from scribbling to drawing objects to representing speech. Gibson (1972) presented a similar sequence and discussed possible parallels between the development of speech (from babbling) and the development of writing (from scribbling). Read's (1971) study of children's developing sense of phonology revealed the systematic nature of their representations and pattern of development. Drawing on his work Forester (1980) described a sequence of spelling development noting, however, that learning is not linear but one of gradual synthesis and integration.

Henderson and Beers (1980) identified stages of spelling development which Gentry (1982) later elaborated on, using

data from Bissex (1980). Gentry set out five stages as representing qualitative changes in writers' conceptualizations of English orthography.

1. <u>Precommunicative stage.</u> Children may use symbols, cursive-like scribble or alphabet letters to represent their messages. The one factor which excludes writing from this category is if the writer applies a knowledge of letter-sound correspondence.

2 <u>Semiphonetic stage.</u> Children begin to apply the alphabetic principle, that letters can be used to represent the sounds in words.

3. <u>Phonetic stage.</u> Children provide a total mapping of the perceived letter-sound correspondence as they understand it. The letter choices are systematic although they do not necessarily conform to conventional English spelling.

4. <u>Transitional stage.</u> Children undergo a transition from reliance on phonetics for representing words in the printed form to an increasing reliance on visual and morphological representations. C. Chomsky (1973) described this as a shift in emphasis from a phonetic to a lexical interpretation of the spelling system.

5. <u>Correct stage.</u> Children's knowledge of the English orthographic system and its basic rules is firmly established.

Dobson (1985) documented Grade One children's progress in a daily writing program. She found similar patterns in the children's development and described her data within Gentry's

categories, expanding the categories to include other characteristics besides spelling. Temple et al. (1982) identified similar levels of spelling development. Dobson & Hurst (1986) described the present data within these stages using the descriptive labels "prephonetic" and "conventional" for the first and fifth stages, respectively.

Ferreiro and Teberosky (1982) studied the development of four to six year old children learning to read and write in Spanish. Their results indicated a regular progression which did not significantly alter its pattern with the onset of school instruction. They defined five successive levels of understanding about the writing system, the first three being prephonetic in nature. Level 4 marked the passage to the alphabetic hypothesis. They found that children who were the most advanced prior to school entry continued their rapid progress. Their conclusion was that the systematic instruction given in most schools is particularly suited to these children.

Reading Development

Researchers who have conducted case studies of children's early reading development have reported a sequence of development extending from "pretend" reading based on context and experience to the conventional reading of text (Baghban, 1984; Bissex, 1980). However, retrospective studies identifying children who had learned to read before they attended school (Clark, 1976; Durkin, 1966; Torrey, 1969)

have not been able to explain just how this early learning took place.

The assumptions of researchers have a strong influence on how they approach their work. Researchers who expect children to use their own knowledge and experience to make sense of situations for themselves have set open-ended tasks and observed the learners (Harste et al, 1984; Jagger & Smith-Burke, 1985). They have asked children to interpret environmental print (Y. Goodman & Altwerger, 1981), read their own dictated stories (Harste et al., 1984), and reread familiar stories (Doake, 1979; Holdaway, 1979). What these reading materials have in common is contextual information which enables children to focus on the meaning and give inherently sensible answers without having to attend closely to the graphic features of the print.

Sulzby (1985) followed this approach when she asked Kindergarten children to respond to familiar storybooks at year-beginning and year-end. She found children using their knowledge of the story and the illustrations to make meaningful responses in both instances, but there were also signs of a developmental progression. She reported on children's progress from reading pages as discrete units to building stories across a book's pages, and from using speech that was distinctly oral to speech that is generally written.

Researchers taking a more traditional approach have acknowledged the relevance of such responses but placed them within a "prereading" stage (Chall, 1979) or a stage of

"contextual dependency" (Biemiller, 1970). Chall called this "Stage 0" and the second stage, Stage One, which seemed to imply that this is where she thought "real" reading began. At stage one, she said, learners attend to the graphic features of print and work at its conversion to speech. Differences in children's strategies within this stage have been attributed to developmental trends (Stanovich, 1986) and to instructional method (Barr, 1986). Chall identified the next stage (Stage 2) as one in which readers integrate graphic and contextual cues.

In general, such reading studies have not reported on their subjects' writing experience, nor considered the effect that writing may have on children's reading. Researchers have investigated an instructional approach in which learners dictate their messages to an adult scribe (the language experience approach described in Allen, 1976). Such an approach provides learners with reading material that they have composed themselves, but it does not involve them in making their own transcriptions. Similarly, the key word approach (Ashton-Warner, 1963) had learners choosing their own word units to read, but the teacher acted as scribe.

More recently, researchers have proposed curricula in which reading and writing have an equal part to play from the beginning (Calkins, 1986; Harste et al, 1984). The programs are described as reading-writing classrooms (Butler & Turbill, 1985), emergent literacy (Clay, 1984) and whole language (K. Goodman, 1986). They have developed from a

holistic perspective on language learning in use, which views reading and writing as parallel processes which develop together and therefore should be integrated in the curriculum. Yet, how these two aspects of written language learning are intertwined in the learning process has not been ascertained (Mason & Allen, 1986).

The present study attempts to throw some light on such matters. It reports on a bi-monthly sampling of children's reading and writing over two years. Therefore, it provides a record of literacy learning longitudinally and across its two aspects, reading and writing. The intention is to examine reading and writing strategies at the same point in time and uncover the connections between them. Such knowledge is necessary before we can understand just how it is that children acquire written language.

CHAPTER THREE

Method

Researchers who undertake to investigate learning from a
new perspective often choose designs that are descriptive
rather than experimental (Mason, 1986). One reason for this
choice is the greater flexibility that allows researchers to
observe a number of variables in interaction with each other.
Descriptive techniques are also chosen to trace influences
and reveal development over time. A number of researchers,
such as Wells (1986), have approached the study of children's
oral language learning through naturalistic observations.
More recently, this approach has been used to study written
language development (Baghban, 1984; Bissex, 1980; Calkins,
1983; Graves, 1983). Such investigations usually take place
within the subjects' normal setting of home or classroom
because the researcher wishes to construct a picture which,
taken as whole, may be more than the sum of the parts (Bogdan
& Biklen, 1982). Such a holistic approach to research is
said to give a wider perspective on subjects' knowledge and
understanding because it takes into account all the various
interactions which may affect performance. It is an
investigation into the internal dynamics of a living system
(Diesing, 1971).

Kantor, Kirby and Goetz (1982) and Humes (1983) have
described the advantages of this approach for studies in
English education. They have emphasized its particular

appropriateness for those researchers who are questioning traditional assumptions about the growth of reading and writing. When Harste et al. (1984) wished to further their understanding of children's development as readers and writers, they stood back and observed them going about these tasks. Such observations took place within children's normal learning environments of home and classroom and include a variety of activities. The intention was to find out what children are actually doing as they go about their everyday routines.

In many such studies researchers have acted as participant-observers, interacting with children whose responses they wished to record (Calkins, 1983; Clay, 1984; Cochran-Smith 1984; Hickman, 1982). In these circumstances the researcher's participation was also an item of analysis. Such a technique requires considerable subjectivity and flexibility on the part of the researchers for it often involves responses to open-ended tasks rather than correct answers. However, as Hickman (1982) has stated, "Long term, holistic approaches may be cumbersome, but they are also rich sources of basic and useful data about questions which are otherwise unanswerable." (p. 353).

Sampling Children's Writing and Reading

Dobson and Hurst had been working together in a resource room setting for some years. In this setting they taught

children who were having difficulty learning in regular classroom situations. Their main concern was literacy learning. Over the years they had established a consistent framework for teaching and research which was based upon a shared view of literacy and its growth. Within this framework they had individualized all their interactions with the children, offering them open-ended tasks, connecting and confirming their prior knowledge, and assisting them to extend their strategies.

They wished to discover the nature of children's progress as readers and writers when meaning is the central focus. To this end they set up a systematic time sampling plan which spanned the first two years of school; that is, 20 months. For their subjects they selected the children enrolled in Kindergarten in a particular year. They monitored the progress of these children to the end of the following Grade One year. The children attended the resource room once every two weeks to read and to write. In order to encompass all the children's responses, the researchers extended their definition of reading and writing to include all reading-like and writing-like events. They analyzed the resulting data within Gentry's (1982) developmental stages (Dobson & Hurst, 1986).

The present study is based upon the same data. The sampling procedures described in this chapter are the ones Dobson and Hurst set up for their two year study. In this

case, however, the reporting and the analyses focus on comparisons of the children's growth as readers and their growth as writers and the relationships in the development of these two aspects of written language.

Educational Setting

The setting for the research was a formalized extension of the one Dobson and Hurst had previously set up for teaching children to read and write. To establish their practices they were guided by certain imperatives which Hurst (1985) identified from the literature as principles for nurturing the development of the language learner (Appendix A). These principles follow along with a description of their implementation. Each category pertains to one aspect of the whole but they are not mutually exclusive.

Provide a warm social setting.

Adherence to this principle required the maintenance of a positive affective climate in all respects. To feel secure the children needed to know they were accepted for whatever they did rather than for what they might be able to do. Therefore, the researchers paid careful attention to all researcher/child and child/child interactions. They treated the children's work seriously, in all its forms, giving it their complete attention without becoming interrupted as listeners or responders, not even by note-taking. By asking and expecting the children to figure things out for

themselves, the researchers made it clear that they thought the children were capable of solving their own problems. They wanted the children to take the risk of trying out their own ideas, and so did not compare their work with others or with a "correct" adult model.

Immerse learners in a literate environment.
The resource room was well-known in the school as a place for reading and writing. Books were in the most convenient and conspicuous places, and there were lots of them. On the walls were displayed examples of purposeful writing (information, alphabet) and enjoyable reading (poems, stories) by adults and children. Blank paper and writing and drawing implements lay on tables. Literacy activities were clearly of central importance in the room.

Accept and encourage successive approximations of literacy.
The researchers expected the children to use whatever they knew about written language to read and write. They believed that as the children became more experienced readers and writers they would become more conventional in their representations. The researchers acknowledged whatever the children did without making suggestions, alterations, or corrections. They responded to all reading-like and writing-like behaviour in a positive manner and confirmed its reading-like and writing-like qualities. If the children asked, "Is it right?" They might respond, "It's your writing/reading, does it make sense to you?" The underlying

message was, "It's your work and you are in control of it. However you do it is fine with me but just make sure you feel comfortable."

Expect self-selection of materials and of topics. The children had complete control over their choice of topics as writers, although they could talk amongst themselves and influence each other. The researchers presented three storybooks to each reader and asked her/him to choose one. This limit on the self-selection of storybooks was a compromise, but it was compatible with the controlling idea, that the responsibility for selection rests with the individual reader.

Respond to intended meaning as the absolute priority. Parents recognize the meaning in infants' early speech and respond to that rather than to its form. The researchers responded to the children's reading and writing in a similar manner. They let the children know they had understood the meaning by continuing the conversation - asking for more information, offering their own related experience, or by paraphrasing the original message. In this way they emphasized the communicative aspect of reading and writing and confirmed the value of what the readers/writers were saying.

Emphasize the process rather than the product. In their conferences with the children the researchers did not evaluate or judge the writing/reading but responded to the good thinking and hard work represented in the work. For

example, they said, "What a good idea! How did your know to do that?" They were interested in the children's strategies and the knowledge that was implied, as well as the resulting products. They observed the children intently and noted any details that suggested just how they might be regulating and monitoring the process.

Expect hypothesis-testing and self-correction. The researchers expected the children to make sense of reading and writing for themselves, and therefore made no attempts at correction. At times, however, the children themselves noticed that their efforts and intentions did not match and they tried to self-correct. The researchers noted all such attempts and inferred the source of their discomfort. They applauded the children for making such corrections by saying, "Good correcting", or "I see that you're really thinking about that". When a child was reading his/her written work aloud, a pencil remained nearby. If he/she said, "Oh, I made a mistake", they said, "Well, what can you do about it?"

Expect a developmental progression along a learning continuum.
It was the expectation of such a continuum that led the researchers to set up the study in the way they did. The procedural tone of the data collection was non-instructional. The researchers set up open-ended tasks and an accepting environment to encourage the children to apply their knowledge of written language in ways that made sense to

them. The researchers were tracing the development of each
child as readers and writers over time.

Evaluate individually and longitudinally.

One way to assess the growth of an individual is to keep
track of accomplishments over time. The present study was
conducted as a number of case studies. The following
chapters report on these studies, looking at growth of
individuals, relating them to each other and considering the
similarities and differences between them. The intention is
to identify general characteristics of children's development
as readers and writers.

Classrooms, Programs and Participants

The research took place in a school located in a low
socio-economic urban area. Included as participants were all
those Kindergarten pupils who understood enough English to
respond to instructions and who were expected to remain in
the school for the next two years. The study began with 30
children but 12 of them transferred out of the school before
it was completed. Thus this report is based on the work of
the 18 children, nine boys and nine girls, who were present
for the duration of the study. Ten of these children spoke
English as a second language (ESL). There were seven
languages represented in addition to English. The first
language variable was not specifically investigated as a
factor in the children's development but it was not
overlooked. Although learning in a second language may

entail an earlier entry level and slower progress for a time, it does not alter the nature or pattern of growth (Chow, 1986).

The children attended two separate Kindergarten classes but they shared the same teacher and therefore experienced similar classroom programs. In Grade One there were two classes again but these classes were taught by different teachers. These two teachers believed in the importance of the principles outlined for this investigation and put them into practice in their instructional programs. In general, they designed their literacy programs so that their pupils would encounter a number of varied language and literacy experiences.

The Kindergarten teacher reported her classroom activities in the following way:

      -daily reading of one or more stories to the children

      -teacher printing and reading of the children's morning news

      -attention to signs around the school

      -the chanting of rhymes and patterned stories (10 min. daily) followed by independent writing (20 min.)

      -teacher's printing of a child's dictation

      -games in which children identify letters, names or labels of objects whose initial sounds are similar.

She instructed her class in the areas listed below and had them practice the tasks. These were:

      -the formation of upper and lower case letters

accompanied by tracing practice

-naming letters

-printing own name

-single letter to sound relationships (begun in January).

The Grade One teachers reported a holistic approach to the teaching of written language (Nucich, 1986). They grouped the wide range of language activities which they provided within four program components.

1. Shared reading.

-many stories and poems, especially fairy tales and nursery rhymes

-morning news on the chalkboard

-signs in the environment.

2. Shared writing.

-teacher-transcribed language experience stories and classroom news composed by pupils.

3. Independent reading.

-stories especially chosen for their predictability of language and storyline

-stories chosen from a number of basal readers

-daily opportunities for sustained reading.

4. Independent writing.

-daily uninterrupted drawing and writing with teacher/pupil interactions (Hurst et al., 1984).

The teachers introduced children to a sight reading vocabulary in the context of stories. They printed words on

individual cards and the children used the words to build

sentences. The teachers taught phonics lessons in a direct

manner - one teacher spent 20 minutes per day on a lesson and

drill while the other spent 10 minutes per day.

Instruments

Checklists.

Hurst and Dobson made lists of observational items which

previous researchers (Clay, 1984; Y. Goodman, 1980; Read,

1971) and their own classroom experience suggested were

signposts to development. They grouped the items under

related headings, producing an observational checklist for

writing (Appendix D) and reading (Appendix F). The intention

was to provide a focus for observations and analyses. The

researchers filled in the checklists during and following

each session and made anecdotal notes. By the beginning of

November in the second year the children had advanced to a

point where some categories could be eliminated and others

elaborated. Therefore, the researchers revised the

checklists to reflect the changes (Appendices E and G).

Storybooks.

Dobson and Hurst presented reading books from the Get

Ready and Ready-Set-Go, series (Story-Box Readers , Melser,

1980). These books are attractive in terms of story and

illustration, and popular with children of the subjects'

ages. There are thirty-two books in each series, numbered A1

to A8, B1 to B8, C1 to C8, and D1 to D8. All the books in

the Get Ready series are eight pages long. The first eight books in the Ready Set Go series are eight pages also and the remaining twenty-four books are sixteen pages long. There are a maximum of twelve words per page. The books contain structural patterns of language based on rhythm, rhyme, and/or repetition. The children in the study did not see these books in any other situation.

Two other books that the children had already experienced were presented to the children on one occasion each. They were Brown Bear, Brown Bear (Martin, 1970) and My Shirt is White (Bruna, 1972).

Typescripts.

Typescripts were prepared for each storybook (Appendix H). The researcher at the reading table followed the typescript as the children read their books and noted what she could, especially those observations which could not be taped. Following each session she transcribed the content of the audiotape onto the reading appropriate typescript.

Procedure

During the first weeks the two researchers made a visit to the Kindergarten classrooms to introduce themselves to the children. One of them read a storybook to the children using titles in the Read Together set of the Story-box Readers (Melser, 1980). The selections have refrains, rhythm, and rhymes which invite the children to join in. The classes made one visit to the resource room as well.

In mid-October a routine began which was followed through that school year and the next. The children attended the resource room in groups of five or six at a specified time once every two weeks. They entered the room and sat at an oval table according to the random placement of their writing books. These were regular school exercise books, half-lined and half plain. Felt tipped pens and pencils were in the centre of the table. One researcher sat at the writing table while the other listened to the storybook reading. The researcher called the children to select and read a storybook in turns. The two researchers shared their observations and interpretations following each session and alternated roles every two months.

The writing sessions.

The children were seated at the writing table and asked to "Draw a picture and write about it." They soon became used to this routine and began to initiate it themselves. Those children who were reluctant to write were encouraged with such comments as, "Just use your own writing", "Do it your own way" or "You may use pretend writing". When asked for help, the researcher replied, "It's your writing, we want you to do it your own way". From the outset they intended to put the control and responsibility for writing firmly in the hands of the children. Such comments also signalled their acceptance of what the children might do. They did not make suggestions or supply information, but encouraged any efforts to self-correct and add information.

The researcher dated each day's work (unless the children wished to date their own) and observed the children as they worked. The researcher recorded those happenings which seemed significant. These were: how they began; how they ended; how the writing proceeded, left to right, top to bottom; whether they vocalized as they wrote; whether they seemed to plan, and if so in what form; and how they interacted with one another at the table, i.e. discussed topics, technique, copied or whether they offered or asked one another for help.

When the children finished their writing, they read it to the researcher at the writing table in any way they wished. The researcher completed the communication by responding to the intended message. She might add a comment, ask a question, or paraphrase the reading. She wrote the children's reported message in the back of the exercise book using cursive writing and indicated any occurrence of match and mismatch between their reading and the print. She dated the writing and her notes for cross-reference.

Following her response to the meaning, she sometimes probed further if she felt there had been a significant change in their representations. She was trying to discover if the change was intentional and what it might imply. Some useful probes were:

"Read it with your finger."

"Show me where it says ..."

"Read it again."

"How did you know to do it this way?"

"Tell me about this part." (pointing to unexplained text)

Following each session she recorded her observations in the appropriate categories on the appropriate checklist (Appendices D and E).

The reading sessions.

The researcher called the children to the reading area one at a time in a random order. Three books were lying on the reading table and she asked each child to select one to read. The books were offered in a specific order, beginning with the Get Ready series, A1, A2 and A3. The same three books were offered in the second session except for the book already read. This book was replaced by A4. This pattern of presenting four books over two sessions made up a cycle. The second cycle began with books A5, A6 and A7, and two weeks later A8 replaced the book already read. Books B1, B2 and B3 began the third cycle and the pattern continued to Book D8. At this point the researcher began with the Ready Set Go series, books A1, A2 and A3. The last cycle of the study involved books D5 to D8 from that series, less the book already read.

The researcher told the children to read their book in any way they could. She recorded the entire reading session on audiotape and transcribed it onto the previously prepared typescript (Appendix H) in a manner similar to that used in the Reading Miscue Inventory (Y. Goodman & Burke, 1972).

She filled in the categories on the checklists (Appendices F and G) and added any pertinent observations. If she felt that the children had more knowledge than they were able to display or if she had uncertainties she wished to resolve, she would probe further. At times these probes provoked the children to extend or correct their previous responses. Immediately following each session the researcher listened to the tape and made any necessary additions or corrections to the appropriate records.

Two familiar stories were presented during the Kindergarten year; <u>Brown Bear, Brown Bear</u> (Martin, 1970) at the end of February, and <u>My Shirt is White</u> (Bruna, 1972) in June. The intention was to discover if the children would alter their strategies when they were reading books with familiar content and wording.

The researchers preserved a visual record of the sampling procedure and the children's responses by making one videotape in March of the second year of the study. The tape shows the four reading/writing groups in session, including all the eighteen children who completed the study. It provided another check on procedures and on the author's perceptions of her role within the investigative framework.

Interactions

Observers and/or evaluators affect a situation by their very presence. In the past researchers have tried to minimize this influence, but more recently researchers have

argued that interactions between observers and their subjects can add relevant information to the research (Calkins, 1983).

In the present study the researchers expected that the quality of the children's responses as readers and writers would be directly affected by the total context of the situation, including their presence. However, their aim was to observe. They did not wish to add to the children's information or suggest any particular kind of response. In the majority of instances they responded only to the meaning of the children's communications. However, when the children's responses suggested a significant change in understanding, they probed for further information about children's thinking.

Analysis

Dobson took three distinct steps in analyzing the data. The first step was to examine the data in total - the reading transcripts (Appendices H, I), the writing exercise books, and the checklists (Appendices D, E, F, G). These sources gave information about children's work and also included notes about interactions and observed processes. She identified similarities and differences across children, trends, possible strategy categories, and reading-writing connections. This overview gave shape and direction to the subsequent analyses.

The second step was an examination of writing and reading, one at a time. The checklists pointed to certain categories

and characteristics as important indicators of development. The writing books and the reading transcripts, however, were the focus of this analysis. Their data were divided at three-month intervals and examined in detail for common characteristics, strategies and implied knowledge and understandings. Dobson chose samples for chapters four and five that seemed to illustrate those characteristics typical of children's progress.

The third step was to relate writing and reading behaviours at the same points in time, analyze their features and identify underlying relationships in development. Dobson concentrated on the work of certain children whose progress seemed typical of the group. They appear as examples in chapter six. She categorized development in terms of levels of understanding which children must have before they can become conventional users of written language.

CHAPTER FOUR

Two Years of Children's Writing

Hurst and I conducted twenty-six sampling sessions during the two years of the study. We collected close to 468 writing samples from the eighteen children who completed the study. (Occasionally individual children missed a session because they were absent from school.) We filled in the checklists (Appendices D and E) and made observational notes. The result was a large amount of data.

I examined the notes, checklists and samples of each child's writing, seeking to identify the underlying knowledge and strategies implied. An analysis across children revealed a systematic development of strategies which were refined over time toward the conventional. Certain strategies seemed particularly significant in terms of development. They appear in this chapter as category headings. Many of them are integral to the task (e.g. book-handling), while others are more easily linked to learners' predispositions and experiences (e.g. naming).

Although the sequence of development was consistent, the rate of development varied greatly between children. This made it difficult to report, as one child's May was another's November. In this chapter I present the children's writing as it occurred over the two years of the study. For practical reasons the time is divided into six segments, with each segment corresponding to approximately three months of schooling. In each segment I highlight those events that

seemed particularly indicative of the children's developing knowledge and strategies.

Kindergarten

The First Three Months: September to December

Book-handling and format.

From the first instruction, "Draw a picture and write about it", the children righted and opened their exercise books, selected coloured pens and began to mark the pages with enthusiasm and confidence. They chatted freely amongst themselves as they worked, commenting on their intentions and sharing the coloured pens.

Twelve of the eighteen children followed the conventional left to right direction of written English from the beginning. Five others were variable in their approach, sometimes proceeding in one direction, sometimes another. It seemed necessary for further progress that the children adopt the conventional direction. However, one child established a right-to-left pattern which she followed even as she began to match sounds and letters (p. 58). This exception suggests that it is the consistency of direction that is necessary for progress, at least at the initial stages. Factors of language background and handedness may have accounted for the directional confusion of four of these children.

The children generally began writing on a top line and proceeded down the page. If they wished to print more letters but ran out of space, they added the letters where they could. When they tracked the print during reading, they

followed the path of the original writing (see the last line of Donald's message, p. 59). The children often worked on the right hand page before moving to the left.

Three children laid out their pages in the conventional manner, with drawing in the blank space at the top and writing on the lines beneath. Such an arrangement indicated their awareness of an organizing principle. Other children inter-mingled writing representations and drawing on a page.

Picture-reading.

When the children had finished their picture and writing they approached a researcher (R) and read their work as if it had been written in the conventional fashion. Zelko's first writing and his reading of it follows.

"This is my mom, this is my dad, this is me, this is my brother" (He touched the various characters as he spoke their names.)

He did not provide a clear representation for writing, but in the next session he drew a similar picture and added the following lines of letter-like symbols.

The message and the manner in which he read it was similar to the first session. He did not explain the symbols.

The instruction to draw and write about it set up a link between drawing and writing from the beginning. The children

maintained this link by labeling, explaining or constructing story-like messages based on their drawings. An early response was to place a finger on the portion of the picture referred to in the message and to ignore the writing representations. R said, "Tell me about this" (the writing). A common response was:

"That's just what I said."
or as one child confessed:

"I wrote it but I forgot it. I'll tell you tomorrow."
Although the children were picture-reading, their responses indicated that they knew it was the print which contained the message. As they scribbled and/or printed letters they would say:

"Now I'm doing writing."
even though they did not refer to that writing as they read.

Written representations.

From the beginning the children used the writing implements to draw and/or write in the exercise books. Then they read a message or explained their markings to R . Early representations of writing included letter-like symbols and cursive-like scribbles, sometimes both. Some children printed alphabet letters and identified them, while others printed their names.

Donald's writing contained both scribble and print. He proceeded in this way:

1. He drew his picture, a small house with a small

creature in the corner, in the blank space at the top of the page.

      2. He printed the alphabet in its upper case form (with the exception of <u>i</u>) on the lines beneath.

$$ABCDEFGHIJKM.VOPQRSTU$$
$$LWXIS$$

      3. He brought this work to the researcher and named the letters in order.

      4. Then he quickly explained, "That's not writing" and added the following writing-like scribble.

      5. He read, "This is the house of the rat."

Donald's initial use of upper case letters was typical across all the children's work. It seemed that this form is more distinctive than the lower case form, both for identification and printing. The appearance of "<u>i</u>" is an exception, but an interesting one because it seems to be the exception which proves the point. <u>I</u> is easily confused with the number one (1) and the lower case <u>L</u> (<u>1</u>), and therefore children who choose to print the lower case (<u>i</u>) are using its most distinctive form.

<u>Naming.</u>

Donald's response to the writing task was more advanced than many other children's because he demonstrated some control of a number of strategies. He printed and named alphabet letters, in sequence, but he also indicated that he realized the alphabet itself does not carry a message. He did this by adding a scribble to represent writing and tracking it as he read. His message contained the names of

the elements in his drawing and their relationship to each other. Thus, naming strategies appeared in a number of guises, which seemed to indicate that they were already a part of the children's repertoire.

The children seemed especially interested in representing both their own names and the names of others. Names and letters seemed to go together in some children's minds and it was often difficult to tell if the children were confusing terms or if they genuinely understood that groups of letters spell names. The following discussion with Karen illustrates this point.

     K: "Those are names." (pointing to letter-like
symbols)
     R: "Whose names?"
     K: "Just names."

Two months later Karen began to print 5 or 6 clearly identifiable letters in a row which she read as Grandma's name, Daddy's name, etc. She had developed the strategy of using word-like groupings of letters to stand for people's names. Other children identified their own names, letters and numbers as a part of their reading response. For example, Liam printed his name amongst his drawing and pointed to it at the appropriate time.

     "I wrote on the lines. I wrote me" (pointed at Liam)
"in the chalk drawings. Those chalk drawings can be very
funny."

Then he added,

     "A little squirrel is there.
     Look at the funny L ." (He had printed the lower
case form).

Ravi pointed to a printed number and incorporated it into his

story,

"That's the ghost's <u>10</u> dollars."
Some children identified the first letters of their own name,
the names of friends, classmates or family, and/or
environmental signs.

"Here's <u>B</u> for Bradley."   " <u>M</u> for McDonald's."

These examples show children making some connections
between printed symbols and speech. In one way or another
the children's work indicated their awareness of such an
association before they began to develop an alphabetic
strategy.

<u>Time of composition.</u>

Conventionally written text has a precise wording which
remains stable over time. The children's writing did not
meet this condition. We could not be certain as to when they
actually composed their messages but it would be consistent
with the data to say they were composing as they read. For
example, readers asked to read their messages a second time
would stick to the original meaning but alter or extend the
wording.

1st reading: "A huge giant bird flew down to the
buildings."
2nd reading: "A purple, red and white peace dove
flew down to the buildings and the people went ya, ya, ya."

Writers who are willing to compose afresh each time they
read do not need a coding system. But once they intend to
write a message with a particular wording and retrieve it as
written, then the alphabetic strategy will be functional for

them.

The Second Three Months: January to March

The children all knew the routine. They entered the resource room, found their books in place at the table, opened to an empty page and began drawing and writing. A quick look through their exercise books showed an increasingly thoughtful approach to page arrrangement and selection of features. Drawings were more complete and printed letters accompanied most of the drawings.

Written representations.

During these three months all the children were printing letters as well as drawing. Scribbling gradually disappeared, although a couple of children tried to refine their scribble by adding loops and inserting printed letters. The children showed their increasing knowledge of the alphabet by their printing and their comments. Janey, for example, spontaneously informed R about the deliberate nature of her choice of letters.

"I just wanted the Q to follow that A ".
Other children used and re-used the letters in their names (the next example was clearly written by David).

"They made a trap and it worked, so they cheered all night."

A few children tried to make the form of their writing reflect its meaning. Robbie, for example, printed his letters with very shaky lines. When asked about it, he explained:

"It's a very scary story."

Carol noticed similarities between the content of her message and the look of her writing. She read:

"Jumping bed".

And then exclaimed,

"See, the writing goes up and down like a bed does." Such strategies indicate a thoughtful approach and an awareness that a written text represents a certain meaning. But while they allow writers to express a feeling, they do not stand for a specifically worded message and they appeared fleetingly in children's work.

In the first three months we observed children acting like writers but producing rather unconventional-looking writing. Now their writing began to look much more like written text. Whole words and visual approximations to words appeared in some children's work. Six children chose to date their own work. They could have made an exact copy from the chalkboard or other children's exercise books but they seldom did. They reconstructed the form as they preceived it. Therefore, at various times the date appeared as FeB 23, Fb 32, Fne 20, FeB 8, FEB ℒ, F 20 and J25. The errors in their representations did not indicate visual difficulties, quite the contrary. These six children were among the first to produce their own, readable messages. I suspect that their determination to figure things out for themselves was actually a positive

factor in their progress.

Donald showed that he could reproduce the print in a familiar environmental sign. His house was for sale and with that fact on his mind he drew the following picture.
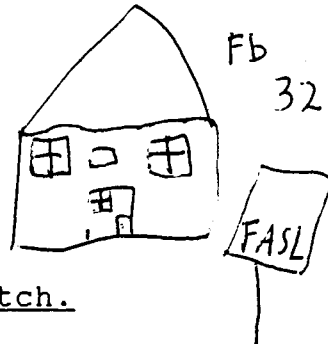
Time-space match.

A major advance occurred when the children began to match the time spent reading with the amount of print on the page. At first they tracked the print, usually with a finger, so that speech (reading) and print (writing) began together, and later, ended together. We documented four different strategies which the children used to attain this match.

1. As they read their own writing they slowed down or speeded up their finger-tracking according to the amount of print available and the length of their story.

2. They tracked the same lines of print several times until they had finished reading their message.

3. They added extra letters to accommodate a longer story.

4. They matched a printed letter to a single spoken word or syllable, omitting or adding letters as necessary.

David demonstrated the latter two strategies when he read the writing displayed on page 54. He ran out of print before he had completed his message so he spontaneously added the last two letters, i (for "all") and D (for "night").

No one child used all these strategies. But the use of any one of them suggested an increasing awareness of the time-space match so necessary in any coding system. In one way or another the children's responses reflected this understanding before they put the alphabetic principle into use.

Alphabetic strategies.

Initially, Jennifer used a cursive-like scribble to represent her writing. But her first use of alphabet letters indicated that she could use a number of alphabetic strategies. Her first alphabetic message appears below. The words and word parts of her reading are underlined to indicate where they match with her spellings.

ItWZISUNNNY DAYANDI W
IZ DRRIttMtZ

"It was a sunny day and I was driving to the mountains."

When children first begin to represent sounds, their perception of the required letters seems to rest upon their recognition of letter names as they sound their way through their messages (Dobson, 1986; Read, 1971). Jennifer's use of Z to represent /z/ in "was" and "mountains" suggests a letter-name strategy phonetically based on articulatory features. She was not limited to this strategy however, for she did not use a Y to represent /w/ in "one" and "we" as this strategy would predict. Her spelling of "sunny", "day"

and "and" indicated that she knew how these words should look. The use of T̲ for "the" would also be a visual approximation.

Story-like readings.

Jennifer was the first child to use sound-letter relationships to write, and then read, her message as written. The other children continued to invent their readings using their drawings as a guide. The number and variety of topics were quite amazing, as subsequent examples will show. Their experiences of stories and rhymes affected their choice of responses. Some began reading with the words, "Once upon a time". Others echoed the content and/or the rhythmic, repetitious format characteristic of some reading selections.

> "Bear eating a cat. More cats.
> Eating here, eating there, eating everywhere."

The Third Three Months: April to June

Alphabetic strategies.

During this period nine more children began to sound through words and to print letters to correspond to sounds. When they read they used letter-sound associations to retrieve the message as written. If R̲ was unsure about the readers' intentions she would check her perception with a probe. She might say, "Your story is about a cat. Can you show me where it says 'cat'?" or "This (pointing to a portion

of the text) makes me think of something. Can you tell me about it?" These probes usually brought about the desired identification, thereby resolving the doubts and also reinforcing the original intention.

The children's first attempts to use alphabetic strategies often occurred within a small portion of a longer message. Liam wrote:

TolTjoL ~LIAM ⁻ATi

"This story is about Tom" (he pointed to T) "and Jerry" (he squeezed in a J). "Liam" (he pointed) "is in the story too. Tom and Jerry live in the apartment."

Some children represented single words: mn (moon), tt (tent).

Sheryl was unusual because she matched letters to sounds before she established a conventional direction for her writing. She initially conducted the whole procedure from right-to-left: that is, writing, tracking while reading, and self-correcting.

Tracking with her finger along the top line from the right she read: "Mighty",
Moving to the second line she began "Mmm",
added an M and read: "Mouse".
Pointing to the   she read: "saved"
and on the last line: "the day".

The unconventional direction she had adopted had not hindered her progress in other respects. R did not call attention to her reversals but applauded her effort to solve problems as she encountered them. Nevertheless, from this point on all her writing contained some letter/sound associations and her writing followed the conventional direction (successive examples appear on p. 62).

In June Donald wrote the following message.

The devil
fire the
playground
and fire
Danny's leg.

His writing exhibited certain characteristics which were also observed in other children's early attempts to represent sounds by letters. They were:

- a continuing use of upper case letters

- strings of letters without spaces between words

- representations for consonants and long vowels

- articulation governing the choice of letters (D for "the", DBOL for "devil")

-the omission of the nasal before a final consonant because it is articulated in the same place as the consonant (AD for "and").

Story-like readings.

The children incorporated the new strategy of representing sounds in words without losing the fluency and spontaneity of their former compositions. It was notable that once graphophonic strategies appeared in a child's writing, they continued to do so.

Summary

During the Kindergarten year we witnessed a gradual refinement of the children's strategies and a resulting change in their approximations toward the conventional. Their writing representations looked more like printed text and their readings were becoming more book-like in language and structure. The children began at a prephonetic stage (Gentry, 1982), but their strategies indicated different levels of knowledge and understanding about how written language works. The patterns of development which emerged were similar across children and were consistent with those described by Ferreiro and Teberosky (1982).

The children all showed some knowledge of writing and its function from the beginning although some, like Jennifer (p. 56) and Donald (p. 59), showed more numerous and advanced strategies than others. Initially, the children's reading of their own work included two types of responses: a naming or explaining of how they had produced their representations, and a message in which they named objects and persons in their drawings. The former gave us clues to writers' awareness of their problem-solving strategies for transcription. The latter indicated composition strategies. As the children began to relate speech and print these two responses became more closely related.

The children's strategies were progressing from being picture-oriented to becoming print-related. By the end of the year ten children were using letters to stand for speech sounds. They were also using these associations to retrieve

their messages as written.

The eight other children had begun the year with fewer, less refined strategies. But their strategies were developing along similar lines. They were beginning to print and identify letters, print and read the alphabet in sequence, and date their own work. They were paying much more attention to the print, tracking it as they read and attempting a time/space match.

<u>Grade One</u>

<u>The First Three Months: September to December</u>

<u>Alphabetic strategies.</u>

The first sampling session occurred during the children's first week in Grade One. Their writing strategies were the ones we observed the previous June but they seemed more confident and consistent in the use of those strategies. They sounded through their messages, relating letters and sounds as they wrote. We could overhear what some were saying while others only moved their lips. Typical samples of writing from two children's books follows.

```
1. MCRSFMRWgD    My transformer was good.
2. ISArBoAHT     I saw a rainbow and house too.
```

These writers used only one or two letters, most often the first in a syllable, to stand for a whole word and they did not segment their messages at the word level. Children represent the sounds in words according to a tacit analysis of their phonetic features (Read, 1971). The child who wrote the first sentence spelled "transformer" with a <u>C</u> . He was substituting [k] for [tr], as many young children do, and calling these toys, "chransformers". Thus, while his perception of the required letter was not the conventional one, he was still using a productive strategy.

The children's earliest writing contained representations for consonants and long vowels but the short vowels were consistently omitted. Some children slowly drew out the words and recognized more sound categories than are usual.

The unconventional spelling of the following phrase underlines the arbitrary nature of the phonological discriminations made in the English language.

AMALECK (ELEAWD

"A magic cloud."

Such spellings did not become habitual errors for the children spelled the words anew every time. They articulated their message as they wrote and their spellings revealed their developing strategies. For example, Pat spelled "was" differently in three successive sessions: Y, in October; vs, on November 6; and ws, on November 20. His first spelling reflects a letter-name strategy applied to the initial sound in the word. His second and third spellings indicate his changing perception of the appropriate letter-sound connection and the final consonant.

There was a wide variation in the length of time the children spent working toward more conventional spellings. The ones who progressed easily and rapidly seemed to control their own learning by holding some aspects constant while working on others. They shortened their messages considerably and/or limited subject matter and/or used simple sentence patterns, sometimes repeatedly. This exercise of control allowed the children to demonstrate their alphabetic matches and reinforced their success. Four successive examples of Sheryl's work show her controlling the composition while she focused on various aspects of transcription.

1. TWATN	There was a tornado.
2. TW-AMSLD	There was a magical land.
3. TR WZ A	
BT A FL HS	There was a beautiful house.
4. TR WZ A	
BTAFL PESTD	There was a beautiful present.

Word awareness.

In the second line of writing Sheryl placed a dash between two elements in her sentence. It seemed that she meant to indicate a separation because two weeks later (line 3) she used spaces for such a purpose. She did not attempt to explain her use of this strategy but two other boys who used it in their writing did try to explain their reasons.

> Liam: "They connect ... you know, they divide up the
> ... so they don't go into each other."
> David: "They go together, but it keeps it away from each other."

Was the line meant as a dash or a hyphen? The children appeared to have two ideas here. They wished to separate the words but they also wished to show they were connected. Although the children had not been shown this strategy or had it explained, many of them used lines, periods, and slash marks in just this way. They seemed to feel the need to demarcate word boundaries but didn't want to leave empty spaces. Perhaps the reason was that they felt an equal need to show the connections.

In the third example Sheryl represented the sounds of all the consonants and separated syllables with space. By the time she wrote the fourth example she recognized "beautiful" as a word unit and spaced it accordingly. She also represented the short sound, /ĕ/, in "present".

Other children who continued to work at this stage for an extended period seemed to be struggling at working on a number of aspects at once. They tended to write long messages in which they found it difficult to establish and/or maintain a match. We knew they were transcribing their messages from sounds to letters because of their responses to our probes and because we heard them do so. But when reading their message they could not always match it to the print. They would be looking through the form to the meaning and predict a paraphrase of the original wording. This prediction interfered with their attempt to identify the original transcription. They encountered a similar problem in the midst of transcription when they stopped to read over what was already on paper. The telegraphic form they used and the lack of spacing, in particular, made the reading difficult both for them and for us. If a paraphrase was predicted then they would have to alter their representations to fit with the new wording, or become hopelessly lost.

Ravi, an ESL pupil, had been consistently sounding his way through his messages for some time. But when he came to read his messages, he could not retrieve the wording. Knowing there was more of a match than he could report, R sat close beside him one day and recorded the sounds as he made them. He and R simultaneously recorded the message.

```
        R wrote:   i/r/ing I saw /f/ow/r/
        He wrote:  ACPPAICFiR
        He read:   "In the fall I saw flower.", but got lost
trying to match these words to the letters he had written.
        "Oh! No!" he said, "it's summer."
```

He then identified CP as "summer" and changed the P to an

R so his final transcription looked like this:

ACRPAICFIR

     Then he said, "Oh, no, it was spring." and read a third version which came very close to the message R had recorded.
     "In the spring I see flower."

Now that he recalled his original intention his correction was not appropriate, but he ignored this problem and R did not call attention to it.

This sequence of events illustrates many of the facets involved in integrating composition and transcription. The task is complex not only for writers but also for anyone trying to help them make sense of it. It was not until February that Ravi produced a clear and complete match. By then he had a good idea of how the words should look and that seemed to make his task easier.

```
He wrote :    i liv pankakes.
              i eat pankakes.
And read:    "I love pancakes.
              I eat pancakes."
```

The other eight children began to achieve some alphabetic matches in their writing during these three months. Although they were behind the others in their development, they were basically following the same path. By December they too were beginning to incorporate an alphabetic strategy into their repetoire.

The Second Three Months: January to March

    Phonetic strategies.

Eight of the children had now progressed so that they were providing a phonetic mapping for all the perceived sounds.

This has been called the phonetic stage (Gentry, 1982; Hurst et al, 1983; Temple et al, 1982). Representation for short vowels appeared in their spellings but the vowels selected were seldom the conventional ones. Systematic short vowel substitutions were:

A for /e̬/   RAD (red)
E for /ĭ/   PEC (pink)
O for /ŭ/   FON (fun)
W for /ow/   HWS (house)

Henderson & Beers (1980) and Read (1971) documented similar shifts in vowel representations which they explained "on the basis of similarity in place of articulation, abstracting from differences in tenseness, diphthongization and possible length" (Read, p. 6). Donald's spellings reflected these classifications in the following message.

A KCID SOD A RAD
AND PEC HWS

"A kid sawed a red and pink house."

Donald did not represent the nasal <u>N</u> in <u>PEC</u>. Such an omission is typical in children's early spellings (Read, p. 18). When the nasal precedes a consonant it is articulated in the same place as the consonant and therefore it is not perceived as a separate sound.

The writers sounded their way through their messages and represented the sounds as they articulated them. Using this phonetic strategy they could represent any word in their oral vocabulary. Their use of spacing to separate words made their writing much more readable both for themselves and for

others. Although they showed that they were uncertain about the location of some word boundaries, writing Wan Saponatayme (Once upon a time) and capldays (couple of days), they had enough control over the transcription process to easily reread their messages. Thus they were also in a position to make their own editorial improvements.

Story-like compositions.

The children's messages became longer and included elements beyond those pictured in their illustrations. Jennifer, who had indicated during Kindergarten that she could match letters and sounds (p. 56), wrote 13 lines of print in the last session before Christmas. Her composition, which is reproduced below with its original spellings and letter forms (the bracketed words are for clarity), incorporated a number of story conventions.

    First she introduced her characters:
        "Ter (there) was a fiy Ter was a at (ant) and a
        ButrfLiy"
    Then she introduced a plot:
        "The ButrfLiy Loves The at anD The at Loves The fiy
But et
        was sreJ (strange) et was seley (silly) becase ..."

    At this point she strayed from her plotline, introducing the refrain,
        "I Dat (don't) no wiy i swolod a fLiy"

A similar refrain occurs in the favourite song, I Know an Old Lady which had been a classroom reading selection. She did not provide a conclusion.

    The content of other children's writing also reflected their reading experiences. They wrote their versions of such stories as Jack and the Beanstalk and The Gingerbread Man .

This is Stephen's version.

A woman Bekc
aqeqr drb man
But The gegrdrbmam
popt up AnDren

"A woman baked a gingerbread man but the gingerbread man popped up and ran."

The children were gradually adopting the strategies of more mature writers. They would write some words, stop and think, reread what they had written and continue to write. This procedure meant that they were alternately writing and reading, composing and transcribing. When Jennifer had finished writing her story about the fly and the ant she read it to herself word by word, editing her writing so that it conformed to her internal plan. She seemed to understand that a piece of writing can always be altered and improved.

Punctuation.

The children made steady progress toward conventional forms. They began experimenting with punctuation marks, though not always in the appropriate places, as the next examples show.

4 KcIf's   four cliffs

The captin of.   The captain of

The dot. the boat.

We asked the children about this new feature.

    R: "How did you know to do these? (pointing to the periods)
    Jay: "Mrs. S. told us to put those."
    R: "How did you know where to put them?"
    Jay: "After my writing I have to put a period."

The Last Three Months: April to June

    Integrating strategies.

By the end of the study the most advanced writers were developing increasing control over the mechanics of transcription so that they could concentrate more on the content. They expanded their spelling strategies to include visual and morphophonemic units which incorporate aspects of grammar and meaning.

The writing could now stand on its own and did not depend upon the context of a drawing. Children would sometimes write first and illustrate their story after it was written. In addition to writing journal pieces and retelling stories they wrote original stories like Sheryl's, which follows.

It was fun To
see The Little
Mos Becos

ShecIng Be Hoind
The cat and
The Dog was To

The mos
was

This story contains numerous sight words and the grammatical unit, ing. The writer has accommodated new

strategies which allow her to produce ever-closer approximations to conventional written English. She has also set up a situation and described an action. The content of her writing and its form are evolving together. Previously the children's stories were depicted in their drawings and they added writing as an accompaniment. Now the story was embodied in the text with the drawings as illustrations.

Summary

Ten children began the year associating speech sounds and letters in print. During the fall term the eight other children began to make these associations and their strategies now placed them within a semiphonetic stage (Gentry, 1982). Overall, the children were making systematic representations, revealing the developmental progression originally identified by Read (1971). The evidence indicated that it is appropriate to consider writing a problem-solving activity (Chomsky, 1971) which allows and encourages a discovery approach to written language learning (Temple et al, 1982). The children seemed to take what they could from instruction and to apply it in a way that made sense to them. Thus, they were actively engaged in their own learning.

By the end of the year about half the children were integrating semantic, syntactic and graphophonic strategies to produce story-like compositions. They were also experimenting with the more mature strategies of using punctuation marks (p. 69) and editing procedures (p. 69). The nine children who were the most advanced by the end

included the five who were more advanced in the beginning. However, the children did not necessarily progress at the same rate. Some children seemed to develop faster than other children, and faster at some times than others, e.g. Sheryl's rapid progress (p. 64).

Sex or language background did not seem to account for the more advanced level of development. Five of the nine were boys and four were girls. Six were ESL (about the proportion of ESL children in the study).

Reversals such as the d in boat (p. 69) and confusions about word boundaries (p. 68) lingered in children's writing. Many children avoided some of these errors by retaining the more easily identified upper case forms (as in Jennifer's last story and the rewrite of The Gingerbread Man). Such sensible solutions to potential problems were additional indications of the children's active role as problem-solvers. In fact, the meaningful responses they made throughout the two years of the study indicated an intellectual approach and capacity that is seldom credited to children at this age and grade level. They were using written language to communicate from the beginning and in its use they progressed from fairly idiosyncratic representations to ones becoming closer and closer to the conventional.

CHAPTER FIVE

Two Years of Children's Reading

Just prior to each session we set out three books of the
Story Box Readers on the reading table. The children chose
one of these to read. We observed how they handled the books
including details of eye, hand and body movements. We
switched on the tape recorder at the beginning of each
session to record comments and discussion as well as the
reading.

We noted as much of the reading as we could on the
typescript (Appendix H), especially any matches of speech and
print. Following the session we listened to the tape and
made corrections and/or additions to the typescript. We also
filled in the categories of the checklists (Appendices F and
G).

This chapter reports on the children's reading within the
time intervals already used to report their writing. Again,
there are six segments of time with each segment
corresponding to approximately three months of schooling.
The observational notes, the checklists, and reading
transcripts indicated the widespread use of certain
strategies which seemed important to the children's
development as readers. These serve as category headings,
many of them similar to those already used to report on
children's writing. When the reading examples contain more
than one line they are presented with the children's and

researchers' (R) responses on the left and the corresponding
written text on the right.

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

The First Three Months: September to December

Book-handling.

A number of children were a bit puzzled by the instruction
to read. Some said, "I don't know how to read this." One
child asked, "I have to say the letters or I have to read?"
But they soon responded in some way. Even though the initial
readings were unconventional, the children still used many
conventional strategies. For example, all eighteen handled
the books in the usual manner, righting them, opening them at
the front and turning the pages from front to back. However,
they did not necessarily attend to the pages in the correct
sequence. When two pages faced each other only 6 children
consistently proceeded from the left-hand page to the
right-hand page.

Picture-reading.

The children applied their knowledge of life-like
situations to the illustrations and constructed a possible
text. Initially, they named, described or explained the
pictures, reacting to each page as a discrete unit rather
than as a part of a continuing story. They generally paid
little attention to the print. Zelko's responses to the
first two pages were fairly typical (Appendix J).

```
(1) Fish in the water
(2) And a butterfly...in the story, and eat him
(3) Frog up to the sky....
```

As he read he pointed at the appropriate parts of the illustrations; beginning on page 2 (the right hand page), moving to page 1, and then responding to page 2 again (line 3). His reading made sense and was grammatically acceptable in relation to his oral language competence (English is his second language). But he was not making any attempt to consider the features of the print.

Naming.

The children named or labelled the illustrations in their initial text inventions. When they began to pay attention to the print they also applied a naming strategy, this time naming the letters. Jennifer was at a more advanced level for she could use initial letters to identify words, such as P for "party".

Print-related strategies.

Liam showed that he too knew letter names are important in reading but his successive attempts to respond in a meaningful way encompassed a number of other strategies. The next example is from his initial reading of the book, Go, Go, Go.

L: I know that one is G. And that's the first
   name of Graham. I have Liam Graham. Liam
   Richard Graham.   Go, Go,

Go
R: Say how it goes. Say what is in your head.
L: I'm trying to think. Let me see ... what
   that fox is doing. I'll try and think what that
   fox is doing so then I'll know.
R: Tell me what's in your mind.
L: You know what all I can get in my mind is?
R: What is that?
L: Only the words.
R: What are the words?
L: Let me see.
   Can I turn the page? (pause)   I fly.
   I'm not very good at thinking.   I swim.
R: I think you are.
L: A bit good. All I can think about a cat
   and the owl in the pea green boat.
R: Let's keep going.
L: Now I should start. (Turns 3 pages)
   Hey! X Q X. (identifying print on a vat)
R: What are you thinking now?   I jump
and
L: I have no idea.   I ride.
   Now let me see what the words are.
   "Stop hopping Mama." And Mama's saying,
   "I can't stop hopping.
   We have to meet Daddy, remember?"
R: So you did have a good thought after all.
L: Only on the last page.

Liam's responses indicated that he knew he didn't have
enough knowledge to read a text as written. But they also
suggest that he does know a good deal about reading.
Throughout we see him trying to use his knowledge of print
and stories to make sense of the task. First of all he
identified the letter G and related it to his own name. When
this identification didn't help him decipher the word he
turned his attention to the illustration. He noticed a fox
and considered what its role might be in the story, thus
indicating an awareness of the connection between printed
text and the accompanying picture. But he was still
determined to use the print, although his inability to

integrate the sources of information to produce a meaningful reading was frustrating him, "I'm not very good at thinking.". The water scene in an illustration reminded him of a familiar story, The Owl and the Pussycat (who went to sea in a pea-green boat). On the last page he used his knowledge of story-like situations and the illustration to construct a text.

Five children's strategies placed them at a more advanced level of development. They were making some effort to integrate characteristics of the print into their reading. Some tracked the print as they responded and others, like Liam, made some attempt to name letters and/or words.

The Second Three Months: January to March

Picture-reading.

During this period the children became enthusiastic inventors of text. Sheryl and Stanley, two ESL children, continued to name letters for a time, but by late February they too were inventing fluently. The children progressed from reacting to each illustration separately to considering relationships between one illustration and the next. At this point their strategies were similar to the ones they used to read their own writing. They were beginning to create storylines using pictures to supply details of plot and setting. The difference lay in the source of the illustrative material which, in the case of writing, they had planned themselves.

Story-like readings.

Some children used their knowledge of story-book language to begin their reading with the familiar words, "Once upon a time". Others showed their experience with patterned stories, by repeating a refrain over several pages. David's reading provided the following lines.

Two monkeys, they were playing, cause they wanted to	Look! Where? Over there. Two little monkeys on a chair
Three monkeys, they were playing, cause they wanted to.	Look! Where? Over there. Three little monkeys ...

The children hadn't seen the books before but nonetheless they were attempting to use the successive illustrations to produce a sensible reading. They revealed their intentions when they adapted their reading to meet changes in the pictured context. On one occasion Donald read a few pages and then decided to alter the format to fit with his preferred interpretation. The book was about pigs and houses, and the first illustration showed a house made out of bricks. He turned to the the end of the book and began reading towards the beginning. In this way he was able to retell the story of The Three Little Pigs and end with the pigs all safe in the brick house.

Book-handling.

Twelve children were now reading the pages in sequence. Some of them looked for and pointed out the page numbers.

Sometimes they corrected the page sequence, belatedly remembering to read the left-hand page first.

Time-space match.

Initially, five children had indicated some print-related strategies. Now, nine children of the twelve children were spontaneously tracking the print with their finger (as in Clay, 1979). They generally began to read with their finger at the beginning of the top line of print. Then, during the reading they would sweep their hand along the print. A few children followed the more advanced strategy of ensuring that the end of their reading and the print coincided.

Naming.

There were signs that the children had more knowledge than they were applying in their readings. For example, they could use picture context and knowledge of letter names to pick out the names of animals and other objects in the print. The following conversation elicited this strategy.

    R: "You read about a frog. Can you show me where it says frog?"
    C: "Here."
    R: "How did you know?"
    C: "Cause it starts with an F."

Liam tried to use his knowledge of letter-sound connections to temper his reading and the result was an interesting self-correction. (His asides are bracketed.)

The Cheese Store   A Monster Sandwich
1. One day Jenny and Thomas went out
      (Oh, God. Nothing starts with a J .)

2. My best is Swiss cheese.   Put some cheese on it.
      (Ah, it starts with a C - /s/wiss.)"

   In line 2 Liam connected the letter name C with the /s/ in

Swiss. This action was based on the letter name strategy

that the children used to make their first letter-sound

associations in writing. Liam and Danny were both creating

the stories they wished. When they realized that the form

did not support their stories, they both chose sensible

solutions. Danny adapted the form to suit the story he had

in mind while Liam made the more mature choice of beginning a

new storyline which was supported by the print (according to

his understanding).

   Alphabetic strategies.

   Jennifer, who was using visual and sounding-out strategies

to represent words in her writing, was also sounding out

words she did not recognize in her reading.

```
J: /f/ /e/ jump                          Feet jump.
   /f/ /e/ hop                           Feet hop.
   /f/ /e/ walk ... I mean, feet walk.   Feet walk.
   Oh! Feet jump. Feet hop.
```

In this example she made the correction from "Fee" to "Feet"

on the basis of meaning and went back and corrected the two

previous sentences as well.

   At the end of February we presented the familiar book,

Brown Bear, Brown Bear (Martin, 1970). A number of children

knew enough about the wording of the refrain that they could

echo parts of it as they read. The readings of Jennifer,

Liam and Donald differed qualitatively from the others. In

their reading of <u>Brown Bear</u> they attempted to use their prior

knowledge of the wording and the matching strategy they were

using as writers to make a fairly conventional reading.

When Liam first realized that he would be reading a

familiar book, he seemed to understand that a new strategy

was possible.

    L: "Am I supposed to just do this - just turn the page?"
    R: "No, you're supposed to read them...."
    L: "Oh!"

In the first six pages (2 or 3 lines each), we observed him

dipping in and out of the print. Liam achieved a number of

word-unit matches, some of which were word-perfect. On page

seven, he began, "What do" (pointing to Blue horse) stopped

and went back, correcting to "Blue horse", and then proceeded

to stay with the print for four more pages. As he read he

heavily emphasized the word units, reading accurately except

for one recurring phrase, "looking at me". However it was

laborious, for he said:

    L: I just turn a few pages - so it won't be so long,

right?"

After skipping four pages, he gradually read more rapidly,

adding the new strategy of using one part of the refrain a

second time to stand for the problem phrase.

L: I see a teacher,   I see a teacher
   I see a teacher   looking at me.
   Teacher, Teacher,   Teacher, teacher,
   What do you see?   What do you see?
   I see kids,   I see children
   I see kids,   looking at me.

Having dealt with his problem, he then read confidently to

the end.

The Third Three Months: April to June

Time-space match.

All the children but one were continuing to base their
reading of unfamiliar storybooks on the illustrations.
However, more and more children were also beginning to refer
to the print.

Thirteen children's strategies indicated that they were
making some sort of match between speech and print. Many of
their strategies were similar to the ones they were using to
read their own writing (p. 51).

1. They timed the reading of their messages so that it
corresponded to the length of the print.

2. They matched word units, as in,

> Zelko: I have orange socks.
> Text: My socks are red.

3. They matched word-to-letter, as in,

> Ravi: A pig fell too, a dog fell too.
> Text: A p - i - g,   a d - o - g.

4. They located content words by their first letter,
usually in response to probes (p. 74).

Story-like readings.

Most of the children continued to use the illustrations to
construct the text. However, their readings were becoming
more story-like in terms of situation, structure and
language. (Which was quite a feat when you realize that they

had not previewed the books.)   Sheryl, an ESL child, read

Silly Possum as follows.

1. The mouse jumped over the housetop
2. and then he went to ah --(What's the name of that thing?)
and then he came down the chimney and then he got dirty. All
over the house, even the...
3. then everybody came in and they saw it
4. he saw it made a mess
5. he saw it climb on the blanket
6. then he went out
7. and then they say, they say, "Hi".

Text: Silly Old Possum
      Possum down the chimney. Silly old possum.
      Possum on the chair. Silly old possum.
      Possum on the table.
      Silly old possum.
      Possum up the curtain. Silly old possum.
      Possum out the door. Silly old possum.
      Possum up the tree. Goodbye, possum.

Integration of strategies.

Jennifer was now reading the text almost as written. In

one particular book she identified 80% of the words. She

appeared to recognize most of these words at sight but she

was also successful using a sounding-out strategy. A close

look at her errors revealed five substituted words that were

semantically and syntactically acceptable and which also bore

some graphic resemblance to the printed words. In a second

attempt at sounding out she began /t/ /h/ /r/ but did not

identify a recognizable word. She omitted this word

(through) and continued the reading. Jennifer seemed to

expect her reading to produce a sensible story. At another

time she was unable to decipher the words and so, opting for

meaning, she ignored the print and fluently invented the last

few pages.

Summary

   The children's initial handling of the storybooks and
their initial reading responses indicated that they were
already on a continuum of literacy learning prior to school
entry. Generally, they were using the illustrations, their
knowledge of the world and their sense of what reading is
about to construct a possible text.

   Two trends were noticeable in the children's reading over
the year. The first was a development from picture-oriented
to print-related strategies. They showed their awareness of
the print by making remarks that were metalinguistic ("Let me
see the words") and metacognitive ("Hm. Let me think what
that fox is doing") in nature. Some children developed
strategies involving the naming of letters and the match
between speech and print. The use of these strategies and a
knowledge of the wording enabled three children to make a
number of word-perfect matches in a familiar story.

   The second trend involved features of composition.
Initial responses were generally a discrete naming of parts
of the illustration, page by page, with some elaborative
features. These gradually evolved to become connected,
storylike readings over the pages of a book. By the end of
the year one child was integrating these strategies to
produce a near-conventional reading.

<u>Grade One</u>

<u>The First Three Months: September to December</u>

In June, Hurst and I revised the checklist so that it reflected the children's increasing focus on print. We created categories which defined the children's tracking of print as they matched words as events in time to words as entities in space (a time-space match). We also added categories to aid with the classification of the children's increasing strategies as they began to use the print to construct the text (Appendix G).

<u>Alphabetic strategies.</u>

Jennifer was identifying the majority of the printed words in the books. The other children continued to use the illustrations to invent their reading. In the September 25th session another child, Stanley, startled us by suddenly focusing on the print at the word level and identifying 50% of the words correctly. His errors indicated that he was using a letter-name strategy to match the letters and sounds of initial consonants and choosing a reading that was appropriate to the illustrations. The following example shows how he abstracted the /k/ from the letter <u>K</u> in "knife" and related it to "cup", and the /s/ from the letter <u>C</u> and related it to "sofa".

S: The c-c-cup,   The knife.
   the s-sofa.   The chair.

Stanley tried so hard to make the print meaningful that he

hesitated, or stuttered, before many words. Because we did not interrupt the children even when they appeared to be stuck, there were some very long pauses. On one occasion Stanley spent 1 minute and 45 seconds concentrating on a single word before he identified it. By December his oral reading was fluent and easy. In fact it seemed so easy that we thought he might have heard the particular wording before.

    R: "Have you seen this book before?"
    Stanley: "No, (I) just know the words."

We did not expect such an abrupt change in strategies but this pattern of development was repeated by seven more children during these first months of Grade One. Sheryl progressed in a similar fashion. On October 23rd she invented the storyline and identified one word correctly. In the next session she read 60% of the words as printed. She also corrected herself three times when her first attempts at identification didn't make sense. Two weeks after that she identified 75% of the words correctly. The mistakes she did make caused little loss of meaning. For example, she read "stairs" for steps.

Two other children attempted to reverse the sound-to-letter strategy they were using to write, but the result was not reading as they had previously experienced it. The following quotes express their frustration and discouragement.

    Cheryl: (interrupting her reading) "How come we have to read these books everytime?"

    Ravi: "I can't sound them out."

> R: "You can't sound them out?"
> Ravi: "I just don't know how to do it like I did it in
> Kindergarten."
> R: "Are you sure that's what you did in Kindergarten?"
> Ravi: "I did it right (then). (Now) I sound them out
> but they don't sound right."

Cheryl and Ravi abandoned the sounding-out strategy after one or two attempts and, along with six other children, they continued to invent the text.

Ten children made the transition from inventing stories to identifying text during the fall term. They were the same ten who had begun to use alphabetic strategies in their writing before the end of the Kindergarten year (p. 51). The eight remaining children continued to invent the storyline. Sex or first language did not seem to be a decisive factor in these children's progress. Five of the eight were E.S.L. - about the proportion of E.S.L. children in the study as a whole. Four were girls and four were boys.

The Second Three Months: January to March

Graphophonic strategies.

The majority of the children were now making a big effort to read text word-by-word, using graphophonic cues. Sometimes the children focused so heavily on the print that they temporarily lost sight of the meaning, but their comments, hesitations, and self-corrections indicated that meaning was still the central focus. In the next example Danny read "him" for home . This error was understandable at the word level but, as Danny pointed out, it didn't make

sense. He was equally doubtful about his substitution of "chickens" for hens, this time addressing the print, but seemed satisfied when he realized it sounded alright.

D: Go him?   "Go home," said the hens.
   (That doesn't make sense.)
   said the chickens.
   (That gots to be a Z, or a S.
    I think it should be an S.
    Hey! That makes sense.)

On the next page he arrived at the solution of omitting the problem word, noting that he had maintained the meaning.

D: Go, said the ducks.   "Go home," said the ducks.

   (We don't even need that word.)

Integrating strategies.

The children seemed to be thinking on many different levels all at once. They were recognizing many words as sight units but as Ana's reading indicates, they were concerned about more than the mechanical aspects of reading.

A: Little pig	Little Pig
Go have ? (pause) said the turkey	"Go home," said the hens.
No, said little pig.	"No," said little pig.
Go/go/go here, said the turkey/ duck/ducks.	"Go home," said the ducks.
No, said little pig.	"No," said little pig.
Go here, said the cows.	"Go home," said the cows.
No, said little pig.	"No," said little pig.
Go here, said the sheeps/sheep	"Go home," said the sheep.
No, said little pig.	"No," said little pig.
Go here, said the mister.	"Go home," said the butcher.

Ana, an ESL reader, said, "Go have" for Go home , and then

unsuccessfully corrected it to "Go here" on the basis of syntax and meaning. She used the illustration to predict "turkey" for ducks , and then was prompted by the print to correct to "duck" and then "ducks". Later on in the text she read "sheeps" which agreed with the general rule regarding the plural form, but then used her knowledge of sound/letter correspondence to correct to "sheep". The word "butcher" in the last line is unlikely to have been in Ana's vocabulary and so she substituted a sensible word that fit with her experience and the total context.

The Last Three Months: April to June

By the end of the study the majority of the children were reading the Ready, Set, Go series of storybooks in a conventional manner. The fluency of their reading indicated that they were recognizing a number of function words at sight. But because the books all contained some difficult words, we were still able to monitor their strategies.

Two children successfully read this excerpt from one of the selections.

"Look out for mumble trees. They are full of bumble bees.
Look out for telephones. They are full of rattle bones.
Look out for elevators. They are full of alligators."

But, on a subsequent page, Jennifer omitted a word. She read:

"Look out for ...... They are full of witches."

When the book was finished, R asked her if she had noticed

anything. She replied, "It rhymed." When asked if that gave her any ideas, she immediately flipped the pages to the problem word and used the rhyme to reread and self-correct.

"Look out for ditches. They are full of witches." Children who have reached this point have consolidated their reading strategies so that they can refine them independently.

Summary

At the end of sampling period the children had almost completed their first grade of school. Nine children were reading with ease and six children were making every effort to integrate a graphophonic strategy into their existing repertoire. The remaining three children were making a time-space match between speech and print and identifying isolated words using picture cues and initial letter names. A number of their classmates had reached this point in their development a year earlier, but the evidence suggests that these children were progressing in a similar fashion.

The children began to incorporate a graphophonic strategy rather suddenly and successfully. Such an abrupt shift of focus might seem unusual but, on reflection, their gradual acquisition of print-related strategies indicated that they had been approaching this point for a long time. In various ways they had indicated that they could match word units, and use picture cues and initial letter names to identify words. Still, these strategies did not enable them to get meaning

from the author' words. And a meaningful text seemed to be the children's first priority (see Liam's reading, p. 70; Ravi's complaint, p. 80). The finding was that the readers did not apply their knowledge of sound-letter associations until they recognized enough words to produce a meaningful reading.

The question is, how were they refining their graphophonic strategies if they were not trying them out in reading? The answer seems to lie in the development of their writing, and particularly in the reading component of that writing. The relationship will be discussed in the next chapter.

CHAPTER SIX

Connections in the Development of Writing and Reading

This chapter brings the reading and writing data together. The result is a comparison of children's strategies as readers and writers at the same points in time in order to uncover relationships in their development. The comparison includes a contrast of the children's reading strategies in two contexts: the reading of their own writing and the reading of storybooks.

In a review of emergent literacy Mason & Allen (1986) concluded that children's progress as writers and readers is continuous rather than stage-like in nature. My analysis supports this view of development and suggests that new strategies are gradually integrated into existing patterns. The result is cumulative but also features shifts of priority and focus. For example, readers initially used illustrations as a basis for their construction of text; later on they favoured the print, but picture interpretation continued to play a strategic role, supplementing and sometimes prompting their print-related strategies.

Learners must acquire certain insights about the written language system before they will be able to read and write in a conventional fashion. And some insights (or understandings) are logically prior to others. For example. children need to expect a print/speech match before the alphabetic principle will make any sense to them. However,

children come to understand the basic working of written language in various ways, depending upon their experiences.

This study sought to identify children's strategies as they approximated writing and reading behaviours over time. The following documentation focuses on these strategies and the connections between them at five levels of understanding. Each level reflects a more advanced state of print awareness in a progression toward the conventional. The understandings characteristic of each level are as follows.

Level One: That the contents of books are meaningful and can be read as such.

Level Two: That spoken text matches with the written text (time-space match).

Level Three: That the alphabetic principle is used to match speech and print, and thus produce a stable wording.

Level Four: That words appear on a page as units of print, separated by space.

Level Five: That morphemes (word, base, or affix) have a constant spelling but they can be combined to form new units of meaning.

Parallel to these insights of print awareness were developments in children's knowledge of stories - including story structure, and how stories are represented along the pages of a book. Children's compositions also revealed a developing repetoire of book-like language. The chapter attempts to relate the development of these awarenesses at each level of print awareness.

The understanding of all but five children was at the first level at the beginning of the study. The five began at level two. But I do not suggest that level one represents the beginning of literacy development. All the children's earliest responses indicated some knowledge of literacy which they could use to approximate the behavious of readers and writers.

Level One

At this level many of the children responded in a similar manner to the reading and writing tasks. Zelko, for example, followed the conventional book-handling procedures except for page sequence, often attending to the right-hand page before the left (writing, p. 47; reading, p. 74). When he came to read, he used his prior knowledge of language, book-reading and the pictured context (his drawings or the book's illustrations) to construct a possible text. In both reading situations he paid little attention to the print, but touched parts of the pictures as he referred to them.

The children's writing provided further information about their knowledge of print and strategies that relate to its use (p. 48). Zelko's letter-like and number-like symbols, for example, indicated that he knew quite a bit about letters and numbers. And this was knowledge we didn't get from his reading. The children were also more apt to comment on their use of language and their thinking during the writing sessions. Writing focused their attention on the print and

therefore, it was not surprising to find their print-related strategies developing in this area first.

The children's early and extensive use of names suggested that they already had a well-established naming strategy. Zelko named the people in his drawing, "That's me. That's my friend." when he read his own work. And he named the animals in the illustration, "Fish in the water. And a butterfly, in the story." when he read the storybook.

Although the strategies the children used in the two reading contexts were similar, the storybook reading often involved the use of more complex language structures and concepts than did the reading of their own work. A likely reason is that the quantity and the quality of the illustrations (p. 38) were motivating the children to account for more of the details. Zelko, for example. named the animals pictured in the storybook but he also added details of location ("in the water") and movement ("cat go in the house"). It was several months before he used similar constructions in the reading of his own writing.

Level Two

The children attempted to assign meaning to their representations of writing (i.e. scribble or letter-like) first in their writing and the reading of it, before they used this strategy in their responses to storybooks. Zelko, for example, was continuing to construct his messages based on his drawing but, on January 9th, he also began to use a

finger to track his written work as he spoke. He pointed to his writing as if it represented his reading, even though he had not tried to specifically match letters and words. On this same date, when reading a storybook, he continued to point at the illustrations. It was March 7th, two months later, that he adopted a similar finger-tracking strategy in relation to the print in storybooks.

When Zelko read his own writing on April 19th he indicated a unit-to-unit match between his message and printed letters (#4, p. 55). In reading that same day he finger-tracked the print of the storybook so that the beginning and end of his spoken sentence coincided with the print. In both instances he was using a strategy which matched time and space, but the unit-to-unit strategy he practised in reading his own work continued to be more sophisticated than the one he used in reading storybooks.

Liam's first reading response indicated the more advanced state of his knowledge (p. 75). He was trying to use both letter names and picture cues to read the storybook. When he found he could not integrate these two sources of information to produce a meaningful reading, then he settled on the illustrations as a guide to text invention (last line).

Liam's first writing sample contained the correct spelling of his name and other letters and numbers as well. He responded to his work with two kinds of information. The first was the message about the chalk drawings, the second drew attention to the writing itself, how he did it and what

he knew about it,

"See! I wrote on the lines."

and, pointing to an <u>l</u> ,

"Look at the funny <u>L</u> ." (p. 51).

Liam explained his message and its representation, but he still was not integrating these two aspects to produce a conventional reading. His reflections on his own thinking and language were typical of the "meta-type" remarks the children made throughout the study.

The children's reading of storybooks was becoming more book-like in nature. They tried verse-like sentence patterns (p. 78), retellings of favourite stories (p. 78) and story-like responses which extended over the pages of the storybooks (p. 83). The book-like readings also occurred in response to their own writing (p. 54). However, once the children began to print letters to represent sounds they tended to focus on spelling and other aspects of transcription, and to produce simpler compositions (p. 63).

<u>Level Three</u>

The children gradually refined their writing strategies to incorporate more and more features of the print, finally making an alphabetic match between speech and print. Knowledge that seemed prerequisite to this event included:

1. The form of some letters and their identification by name.

2. The match between speech and print.

The children were now purposely attempting to translate speech into print. They were articulating a message as they wrote and representing its sounds as they perceived them (p. 62). Writers using such a strategy must be planning the wording as they write, or even before they write. Previously, their representations looked somewhat like writing but did not represent their ideas or any planned message. Their ideas were actually in their pictures. Now, they were putting their ideas into print and thus they needed to work on aspects of transcription.

Significant signposts to Zelko's development occurred as follows. On January 9th he made his first attempt to track the print, thus suggesting that his development had reached the second level. On February 9th he wrote ABCDE and said, (Those are) "the ABC's". For some months he explored these strategies of tracking and naming letters, but did not seem to try to represent a precise message. After ten months at this level, on November 20th of the Grade One year, he produced a message which indicated a new level of development. He printed and read:

RABO HOS

("rainbow house")

The time which elapsed between Zelko's writing of this message and his identification of the print in storybooks was four months. It was March 20th when he first attempted to read word by word, and on that occasion he read with 87% word accuracy. This abrupt change of strategy was characteristic

of the next level and will be discussed in that section. Typically, the alphabetic strategy appeared in the children's writing and their reading of that writing three to nine months before they used it to read the storybooks.

Sheryl's entry behaviour placed her at the second level. At that time she was tracking the written text, and naming the letters in storybooks (p. 77). Her first alphabetic matches appeared in her Mighty Mouse story written on May 1st. She indicated two matches initially but then reached for a pencil to represent another word (mouse). She corrected the omission with an M, and then retrieved her original wording on two successive readings (p. 58). Although her writing still looked unconventional, she was incorporating a number of conventional strategies into her repertoire. Successive examples of her work indicated her rapid progress from this point on (p. 64).

At this point Sheryl was not using her knowledge of the alphabetic principle in her reading of the storybooks. On May 1st she chose the book, Silly Old Possum. She began with an intent look at the print on the title page. "S?" she said, and paused. Then she began to invent a text which was compatible with the illustrations (p. 83). At times she tracked the print but her reading was not governed by its features. It was six months before she began to read the print. The occasion is described in the next section.

The children were using quite different strategies within the two reading contexts. When they read their own writing

they had the support of knowing the content and the wording. Thus, they only needed a minimal number of graphophonic cues to retrieve the original wording. The unfamiliar storybooks did not offer this kind of support, nor did the children have enough knowledge of the graphophonic system to be able to identify the words on their own. Thus, in that situation the children continued to invent the text.

There were two instances when the supports were available in the context of the storybook reading. The first occurred when readers used the name sound of the first consonant of a predicted word as the principal clue to locating it (Stanley, p. 85). Liam began with an invented story about Jenny but then had a problem ("Oh God, there's no J" , p. 79). He subsequently found a C to match with the /s/ in "Swiss" which figured in his revised story. Ordinarily such a strategy did not reveal the wording of an entire story.

In the second situation the children were offered the storybook, Brown Bear, Brown Bear. Because of their familiarity with this book the children had some knowledge of its content and wording. The result was that some children could now put their knowledge of the alphabetic principle to use, matching a number of spoken words and their corresponding units in print (see Liam's reading, p. 81).

Previously, longer and more elaborated stories had seemed to signal progress. But once the children began to try to match sounds and letters in writing then they were more successful if they reduced the length and complexity of their

compositions. For example, Sheryl (p. 64) maintained a similar structure and content in her compositions while she worked on aspects of transcription. Other children struggled along for sometime without making such adjustments and it took them longer to refine their strategies toward the conventional (Ravi, p. 65).

Level Four

The children gradually refined their writing strategies, making more conventional letter/sound associations, spelling more words as visual units, and representing more of the surface sounds in words (p. 64). They used dashes (p. 64), periods or other marks to separate perceived units in the writing. These marks preceded the use of spaces to demarcate work boundaries. The appearance of spacing was critical for it signalled an awareness of the word as a unit in language (Henderson & Beers, 1980) and a strategic change from representing sounds to representing words. At about the same time the children began to identify words in reading storybooks.

On May 1st Sheryl had begun matching letters and sounds in her writing (p. 58) but she did not use these connections in her reading of storybooks. Six months later, on November 6th, she suddenly introduced a new reading strategy. She followed the print word by word and identified 25 out of the 38 (66%) words in the storybook as written. She lost the meaning on two occasions only and her errors in those cases

were still syntactically appropriate. She seemed to identify many words at sight but she also sounded through an unfamiliar word. Her three self-corrections seemed to be made on the basis of picture and graphophonic cues. Two weeks later she read 85% of the words in her storybook as written.

Her writing strategies were also developing. On November 6th she first used spaces to separate words and syllables (line 3, p. 64). Two weeks later she spelled "beautiful" as a single unit (line 4). In both reading and writing her strategies were becoming quite conventional.

Once the children could identify a number of words they used semantic, syntactic, graphophonic and picture cues to predict the rest. At first their reading was a bit choppy as they carefully attempted to match each spoken and printed word. We observed them using specific picture clues, sounding through words (Jennifer, p. 83), inserting reasonable substitutions (Ana, p. 88), and even leaving out words that were expendable (Danny, p. 88). Sometimes they would leave a small portion of the text unresolved but when they did it was with a question mark in their voices. Within a short period of time the children became more and more fluent and conventional in their readings of storybooks.

Level Five

Several strategic trends were emerging across the children's reading and writing. One was a development from

sounding-out strategies to strategies involving the recognition and representation of words as units of meaning. Sheryl spelled 15 of the 21 words correctly in her story written April 16th, including representations for the morphemes "ing" and "be" (p. 70). Punctuation marks were also appearing in some children's writing, but not necessarily in the conventional places (p. 69). Only a few months before Stanley had been working to make letter-sound associations (p. 85), now his fluent reading and confident remarks ("I just know the words.", p. 86) indicate control over print.

The children's increasing control over the transcription aspect of writing enabled them to shift the focus of their attention to aspects of composition. Their writing included more conventions of storybooks including the language, structure and retellings of favorite stories (p. 69). Some children reversed the previous order of drawing, then writing. They began to write first and then to illustrate their written story.

The children's fluent reading enabled them to concentrate on comprehension and they seldom lost sight of the meaning (p. 88). Whereas they had previously looked to their drawings or the book illustrations for clues to the meaning, now they looked to the print and the context of the story as written. The children used meaning and syntax as cues for prediction and one child used the rhyme scheme to identify an unknown word (p. 89).

CHAPTER SEVEN

Findings and Discussion

The findings highlight the mutually-supportive and complementary nature of the development of children's reading and writing. But they also reveal certain differences in the way strategies develop across the two tasks. The ensuing discussion will focus on two major findings. One is that the children tried out and refined their print-related strategies in their own writing and the reading of that writing, and only later applied their strategies to the print in storybooks. A second, and in contrast, is that the children's reading responses to the storybooks were richer and more complex than their reading of their own writing, which suggests that their story-telling (i.e. composition) strategies were developing in this context first.

Print-related Strategies

The children showed that they knew something about the roles of writers and readers from the beginning. But the two roles have different requirements, and these requirements make it necessary for learners to attend to different aspects of written language. For example, when they wrote they produced script-like and/or print-like representations. The need to represent writing directed their attention to the print, including the selection of letter forms (p. 52), the organization of a page (p. 48) and other mechanical details

involved in transcription. Although Kindergarten teachers generally present these details in the context of reading instruction the children used them first in their writing. This finding seems to support Ferreiro's (1986) contention that children actively participate in their own learning by seeking out and paying attention to information that is purposeful to them.

When children construct their own written representations, they are controlling the print. They are making decisions about form as well as content, and these decisions precede the writing and accompany it. The children who participated in this study often tried to explain their thinking, and their explanations often involved the use of metalinguistic and metacognitive terms. Such comments happened earlier and were more numerous in the writing context, again suggesting that children work out the mechanical aspects of the written language system, including its vocabulary, in that situation.

As writers, the children were faced with the problem of deciding what kind of representations to make and how to make them. And once they had solved the problem in some way (i.e., they had written something) they were generally willing, and often eager, to explain their solutions. Even before they put the alphabetic principle into practice, the children indicated that they were experimenting with strategies that relate speech and print. Such strategies appeared first in the context of their own writing (p. 55) and later in reading (p. 82). The children seemed to

initiate and work out new reading strategies in response to
their own writing which they then applied to the print in
storybooks.

The children used the alphabetic principle to write, and
to read their own writing, three to nine months before they
tried to decode the print of unfamiliar storybooks (p. 101).
Their first representations involved the letter-name strategy
described by Read (1971) applied to the initial sounds in
words and set down in a letter string (p. 62). This
phonetically-based strategy was very functional in the
children's early writing for it allowed them to represent any
words they wanted. They gradually represented more and more
of the perceived sounds until they were accounting for most
of the surface sounds in the words they used. The sequence
of development was consistent with that reported by Gentry
(1982), Read (1971) and Temple et al. (1982).

The children were using the contextual support of a known
meaning and wording when they read their own writing (p. 62).
Somewhat similar supports were present when the children read
such familiar storybooks as <u>Brown Bear, Brown Bear</u> (p. 81).
In this case the children's prior knowledge of story and
language provided a scaffolding (Ninio & Bruner, 1978) for
the use of strategies that had not yet matured, thus enabling
them to succeed in a way that might otherwise be beyond them
(Vygotsky, 1978). Some researchers have elaborated on the
benefits that repeated readings have for children's growth as
readers (Doake, 1979; Holdaway, 1979).

All at once the children incorporated a graphophonic strategy into their existing repertoire for reading unfamiliar storybooks, and they were usually successful enough to produce a meaningful reading. Once they began to integrate the strategy they continued to do so, and with increasing facility (p. 101). They seemed to move from a strategy of text construction directly to the integration of graphic and contextual cues with little indication of an intervening stage in which readers focus on decoding strategies (Stage One: Chall, 1979; Biemiller, 1970). Two children did try to convert letters to sounds, but when the result didn't sound like reading they returned to their previous strategies of meaningful invention of text (p. 86).

How can we account for the sudden change in the children's reading strategies? First, we must acknowledge the considerable experience they had had already, deciphering their own written texts. They were writing almost daily in their classrooms (p. 36) and this meant that they were also reading their own work. They read it to themselves and also to their teachers (as documented in Dobson, 1986). Over time their spellings were becoming more complete in terms of phonetic representation and thus there were an increasing number of phonetic cues they could use when they read. They were becoming practised readers in the context of their own writing. All at once they seemed to realize that they could use their strategies in another context. They applied them to the print in the storybooks and found they could make

sense of the story as written (p. 88). Kendall, Lajeunesse, Chmilar, L. Shapson & S. Shapson (1987) found a similar transfer of strategies when they investigated the ability of English-speaking children who were enrolled in French immersion programs and learning to read texts written in French, to read English texts.

The strategic change in the children's reading of storybooks coincided with more complete spellings, visual approximations and conventional spacing of words in their writing (p. 101). It seemed that their reading of conventional print directed their attention to its form which, in turn, influenced their writing. Although their print-related strategies had developed initially in the context of their writing, the direction of influence now seemed to alter in favour of storybook reading. By the end of Grade One (which was also the end of the study) the most advanced group of children were reading text as written, and that text was usually more complex in language and content than their own writing.

Composing Strategies

The second major finding involved the children's development of composing strategies in their reading. This finding seems to go against conventional wisdom which associates composition with writing. But in the context of this study the children were asked to respond to storybooks before they had developed conventional print strategies.

This circumstance seemed to direct their attention to the illustrations which they used to construct a plausible text. As readers of storybooks their control lay in text invention and their strategies developed in this area first.

The children's initial problem was to figure out the illustrations. At first they reacted to each picture as a discrete unit, naming or labelling the pictured objects (p. 75). But they soon began to try and relate one picture to the next and eventually they came to construct stories which extended across the pages of the storybooks (p. 78). The successive pictures in the books seemed to encourage this trend but the children were not above changing the order of the pages to fit with their own idea of an appropriate story (Danny, p. 78). In the writing sessions the children did not attempt stories which continued from page to page until they reached an advanced level in their ability to transcribe (p. 68).

It seemed that the children's experiences of storybook reading, including the daily shared reading in the classrooms, had provided a model for story construction (p. 37). But they not only had a general idea of how stories go, they also knew about particular structures (pp. 57; 78) and particular stories. These stories were retold in early reading sessions (Danny, p. 78) and appeared later in the year as rewritten texts (p. 69).

While children's print awareness was separable into levels of understanding with fairly clear descriptors available,

their use of composing strategies was not. There was progress from labeling and naming to continuous text, from story-telling in response to a single page at a time to stories which extend across the pages of a book, and to an increasing use of book-like language. But the change was gradual and varied with children's responses to the subject matter, their experience, and their preferences. Therefore, progress could only be noted as trends and a connection with levels of print awareness was not clearly delineated.

The trend to more complex composition in writing was delayed when children initiated an alphabetic strategy. At this point they reduced the length and complexity of their compositions, seeming to concentrate on aspects of transcription (p. 64). However, the storybook illustrations continued to stimulate more detailed descriptions and explanations and this additional content required more complex language structures. Therefore, it seems important that children be encouraged to continue their inventive responses to storybooks, even though they demonstrate knowledge of the alphabetic strategy in the context of their own writing and in response to familiar texts. The trend to more complex composition occurred in children's writing, but at a later level of development (p. 68).

The major findings can be summarized in this way: children explore the mechanics of written language in their writing and their reading of that writing and only later apply their knowledge in reading storybooks, but their compositions are

more complex and book-like in their initial responses to
storybooks. In other words children work at specific aspects
of written language in the context of one task, and the
strategies they develop then became available for use in the
other. Thus, writing and reading support each other with a
transfer of strategies occurring in both directions.

Additional Findings and Limitations

This investigation into connections between writing and
reading development was based on a particular theory of
language learning. The documentation in chapters four and
five indicates that children were making a good deal of
progress. But I cannot claim that that progress was
necessarily greater or faster than it would have been under
other conditions, because I did not attempt to test
performance and/or compare scores.

Certain principles (Appendix A) guided adult/child
interactions within the sampling environment and these
principles were also accepted by classroom teachers. An
environment based on these principles was expected to nurture
learners' development by encouraging them to try out ideas
and to explain their thinking. However, classroom practices
were not observed and therefore no direct claims are made
about teaching/learning relationships. What I do suggest is
that children pick up environmental information that makes
sense to them and try it out in their writing and reading.

Children entered the study with varying levels of

understanding. For example, five children revealed an initial control over print-related strategies which placed them at a second level of development (p. 95). The group included two girls and three boys, all five years of age. Three spoke English as a second language and all three were from different cultural backgrounds. Therefore, sex, age, first language or cultural background did not seem to account for their initial advantage.

It seems likely that these children had had more numerous and intense preschool experiences with literacy events than the other children. We did not verify this possibility in discussion with parents but we conducted some student interviews one and one-half years later. We asked Liam about his pre-school experience with storybooks, and he replied,

"My mother read thousands and thousands and thousands of books to me - every night. Now I can read everything, even the encyclopaedia."

The benefit of this experience for Liam's growth as a reader/writer was clear in his initial reading response (p. 75) and his progress throughout the two years as a reader (pp. 79, 81) and as a writer (pp. 51, 58). His comment emphasizes a link between literacy practices in the home and later success in school similar to that reported in Wells (1986).

The children's rate of progress through the levels varied; for example, the interval at level three was three to nine months (p. 97). And there did not seem to be specific

indications of how to predict, or how to speed up children's progress through the levels. Some children seemed more willing to take the risk of trying out new strategies (see the changes in Sheryl's writing, pp. 58, 64), and this attribute seemed to give them an advantage over those who didn't always put what they knew to the test (Naiman, Frohlich, Stern & Todesko, 1978). Harste et al. (1984) are among those researchers who have described the significance of risk-taking in literacy learning. However, it should also be noted that those five children who began at a higher level were among those achieving at a more advanced level at the end (as in Biemiller, 1970; Mason, 1980).

Conclusion

Researchers who take a developmental view of children's literacy learning can accept each piece of children's work at its own level. They realize that learning occurs through successive refinements and do not expect correct representations at the start. They can look beyond the children's representations to infer strategies and understanding, and assess and evaluate progress. They can also use the children's work to reflect on the appropriateness and effectiveness of their teaching practices.

This study took a particular stance in regard to sampling and analyzing children's knowledge of literacy and its growth. Its source was, in the main, studies of emergent literacy (e.g., Teale & Sulzby, 1986) which looked at preschool knowledge and development. The results indicate that such an approach is also appropriate for examining the development of younger primary school children, for they seem to follow a similar pattern.

The findings support the hypothesis that reading and writing are mutually supportive and connected at each step to the learners' functional knowledge of the written language system and how it works. The patterns of growth indicate the appropriateness of an integrated model of writing and reading instruction which focuses on aspects of content and form.

The findings also provide a basis for speculations about how the exercise of one aspect affects or influences progress in the other.

The research took place as a regular part of the school program and as such was accepted by the children. Thus, the research has the advantage of being carried out within the normal context of a school routine with its central features of teacher-pupil and pupil-pupil relationships intact (Barr, 1986). Although it was mainly observational in tone we, as teacher-researchers, carefully preserved a nurturing environment according to Hurst's (1985) principles. And while we did not attempt to link classroom instruction and strategies in use, we expected that this environment which was also a base for classroom practices was having an effect on the children's growth.

The subjects represented a cross-section of pupils attending an inner-city school, including a number of children learning English as a second language. Thus, their home and community environment was not likely a prime factor in their achievement. At the same time, the progress these children made should be accomplished at least as easily by others in more favoured circumstances. While there were instances when the differences in the children's backgrounds seemed to affect their responses, overall it was the similarities that were striking, and, therefore, the focus of this report.

Throughout, the children showed a willingness and desire

to communicate in written language. They indicated their awareness of the functional aspects of reading and writing prior to their adoption of conventional form (Halliday, 1975). All the signs indicated that their decisions were deliberate and intellectual in nature, although they may not have been conscious of all the ramifications. The routine remained the same over the two years, but even so, the children retained their enthusiasm and remained eager to participate and to explain their participation. In fact, as Snow (1983) suggested, the regularity of the routine itself may have been a factor for growth.

The investigation showed that children can engage in written language from an early age and through its use can learn about its features. Their reading and writing contained a series of revelations about the content of their world, the level of their intellectual activity, and how they were bringing their knowledge and their intelligence to bear on the task of learning a written language. While they began at different levels, developed at varying rates, and responded in various ways, they progressed in a similar fashion. Taken together, the children's reading and writing convey a cohesive and complementary picture of literacy development.

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APPENDIX A

Principles which Nurture Literacy

1. Provide a warm social setting.

2. Immerse learners in a literate environment.

3. Accept and encourage successive approximations of literacy.

4. Expect self-selection of materials and of topics.

5. Respond to intended meaning as the absolute priority.

6. Emphasize the process rather than the product.

7. Expect hypothesis-testing and self-correction.

8. Expect a developmental progression along the learning continuum.

9. Evaluate individually and longitudinally (Hurst, 1985).

APPENDIX B

AN EVOLVING MODEL OF THE CONTINUUM OF EMERGENT LITERACY

Oral to Book Language	Emergent Reading		Emergent Writing
	Direction and Position	Cues Used to Predict and Correct	
relating events telling stories			scribble
talking to print		own experiences, own dialect	shapes
book-like talking		own experiences, some story-like schema, some book-like phrases	linearity, symbol-like
picture-controlled	page-matching	more book-like phrases, picture cues	random letters
fluent partially remembered sentences		some book-like sentences, pictures	unstable direction, prints own name
partially memorized fluent sentences	line-matching	more story schema, book-like sentences, pictures, short lines of print	single letters - knows must be specific
slower, book language	locating familiar words	story schema, book language, pictures, trying to segment into words	semi-syllabic, letter-name strategy, no vowels
intervals of staying with the print and of fluency	finger-pointing	focus on word-space-word matching may skip unfamiliar words (no response)	direction controlled, approximating vowels, some sight words
staccato, book-like	voice-pointing	less semantic/syntactic, focus on words and 1st letters for self-correction	Writing
		Reading	
light stress on words, learning independently		more prediction of semantic/syntactic, checking re words, 1st and last letters, learning independently	learning independently, fine phonetic discriminations - own perceptions
			correct unmarked vowels
phrasing-fluency returning		graphic successfully subordinated to semantic/syntactic predictions, starting to use letter clusters	some vowel markers
		balanced integration of all cue systems in appropriate materials	some inflectional patterns
			some derivational patterns

APPENDIX C

An Evolving Model of the Continuum of Emergent Literacy
(Writing Section)

Precommunicative
        scribble
        shapes
        linearity
        symbol-like
        random letters
        unstable direction
        prints own name

Semi-phonetic
        single letters - knows must be specific
        direction controlled
        complete message represented
        semi-syllabic, letter-name strategy
        short vowels not represented

Phonetic
        aproximating short vowels
        sight words appearing
        most surface sounds represented as perceived

Transitional
        beginning to represent vowels conventionally
        beginning of inflectional patterns (ing, etc.)
        increasing use of visual patterns

Correct
        vowel markers
        inflectional patterns
        derivational patterns (Dobson, 1983, Table II).

RECORD OF WRITING GROWTH   Name _____

Date _____

Writing Process
 - no writing
 - direction
 - scribble
 - symbols
 - letters - capitals
 -    - small
 - numbers
 - diff. print from drawing
 - relates message while writing
 - composes aloud while writing
 - rereads in process

Source of Message
 - no message
 - uses illustration only
 - illusr. & print unrelated
 - uses illustr. but Id's print
 - uses print

Quality of Message
 - labels
 - fragmented
 - speech-like descrip. of illustr.
 - elaboration of illustr.
 - gramm. acceptable
 - semant. acceptable

Matching Oral to Written Language
 - oral to illustr. only
 - dips into print
 - begins & ends w. print
 - word to a symbol unit
 - word to specific letter
 - word to word
 - reads with finger
 - adjusts or corrects

Comments upon:
 - letters
 - words
 - punctuation

RECORD OF WRITING GROWTH

Name

Date

PRODUCTION:
 cursive-like
 letters (1) - capital
 - small
 asks/looks for help
 name
 a/v copy - try
 - /
 relates message
 any single l. for word
 alphabetic appears

ALPHABETIC
 specific single l. to w.
 sounding aloud
 spelling aloud
 rereads in process
 begin. & final l's
 most consonants
 long vowels
 segments - groupings
 - syllables
 - single words
 short vowel rep.
 # of approx. st. w's - try
 - /
 most surface sounds rep'd
TRANSITIONAL
 short vowels consistent
 inflected patterns (ed, ing)
 # of vowel markers
 self-corr. - (G, Se, Sy)

COMPOSITION
 labels
 journals
 story
REREADS - match oral to writ.
 finds initial match - try
 - /
 - part
 relocates - /
 - fail
 rereads
 self-corr. - G, Se, Sy - /
 - fail
 improves product - G, Se, Sy
 edits during reading - G, Se, Sy

RECORD OF READING GROWTH

NAME _____

Book _____
Date _____

Book Handling _____
- open _____
- directon - front to back _____
- pages in sequence _____
- path of print _____
self-correct - try _____
_____ - / _____
pointing - eye _____
_____ - finger _____
_____ - voice _____

Source of message _____
_ clues from: illustr. only _____
_____ illustr. but Id. print _____
_____ illustr. & print _____

Quality of language _____
_ fragmented _____
_ labelling - illustr. _____
_____ - print _____
_ description of illustr. _____
_ elaboration - illustr. _____
_____ - story _____
_ accept. - graphophonic _____
_____ - grammatic _____
_____ - semantic _____
_ self-correct - try _____
_____ - / _____

Matching oral to writ. language _____
_ oral to illustr. only _____
_ comments on print _____
_ ends with print _____
_ word/syllable to letter (1) _____
_ word(w)/syll. to word unit _____
_ dips in and out of print _____
_ word-matching (w. to w. units) _____
_ miscues - patterns, sounds to 1's _____
_ self-correct - try _____
_____ - / _____

RECORD OF READING GROWTH   Name _____

                              Book _____
                              Date _____

BOOK HANDLING
    Open
    Direction of pages
    Pages in sequence
    Left to rt. page seq.
    Path of print
    Lines top to bot.
TRACKING
    Picture
    Sweep w. finger (f)
    Word by word – f.
    Fluent w. f.
    Word by word – voice
    Fluency
    Self-corr. – try
                – /
MATCHING ORAL TO PRINT
    Oral to illustr. only
    Semantic (Se)
        self-corr. – try
                  – /
    Syntactic (Sy)
        self-corr. – try
                  – /
TIME/SPACE
    Begins w. print
    Ends w. print
    Matching words as units
    Attn. to 1st letters – O.
    Single word (W) Id. – O
                      – S
        self-corr. – try
                  – /
ALPHABETIC
    Sounds aloud
    Asks for a word

CUE SYSTEMS
    Dominant cue(s) W,G,Se,Sy
    Disconfirm cue G,Se,Sy
    Self-corr. – G,Se,Sy – try
                  – /
    Corrects (Q)

APPENDIX H

GET READY A-2 -- <u>Go, Go, Go</u>   Name_____
                                          Date_____

GO, GO, GO

I FLY

I SWIM

I CLIMB

I HOP

I RUN

I CREEP

I JUMP, AND I RIDE.

APPENDIX I

GET READY A-2 -- <u>TWO LITTLE DOGS</u>   Name_____
                                                 Date_____

TWO LITTLE DOGS

LOOK! THE DOORS OPEN. THAT'S GOOD.

LOOK! THE GATE'S OPEN. THAT'S GOOD.

THE TWO LITTLE DOGS RAN AFTER A CAT.

THEY RAN AFTER A BIRD.

THEY RAN AFTER A MOUSE.

THEY RAN AFTER A RABBIT.

THEY STOPPED.

"A BIG, BIG DOG!" THEY SAID.

"WE WON'T RUN AFTER HIM."

AND THEY DIDN'T.

HE RAN AFTER THEM

ALL THE WAY HOME.

LOOK! THE GATE'S OPEN. THAT'S GOOD.

LOOK! THE DOOR'S OPEN. THAT'S GOOD.