Marie Clay’s Reading Recovery: A Critical Review

By

Jennifer M. Mowat

A Thesis Submitted to the Faculty of Graduate Studies in Partial Fulfillment of the Requirements for the Degree of

Master of Education

Faculty of Education University of Manitoba Winnipeg, Manitoba

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Chapter 1

Introduction to the Study

In recent years there has been renewed interest in regard to how young children become literate. It is apparent from a review of the literature that some children come to school lacking preschool experiences with print and that, for some, the reading and writing process is “going awry” within the first year of instruction (Adams, 1990; Clay, 1975, 1991; Taylor, 1995). Early intervention to prevent both literacy failure and negative attitudes before impediments to learning become entrenched is the premise underlying Marie Clay’s New Zealand Reading Recovery Program (1979, 1993). In her research on beginning readers, Clay (1979) found that even after only one year of instruction, high progress readers “operated on print in an integrated way in search of meaning, and read with high accuracy and high self correction” (Clay, 1993, p.9). In contrast, low progress readers operated on a narrow range of strategies - relying on memory for the language of text, and paying no attention to visual details. Low progress readers often lost track of meaning, and began to operate in an inefficient way. These inefficiencies were then practised day after day and, in a short time, risked becoming automatic. These findings led Clay to conclude that if visual, syntactic, and semantic cues were addressed within the first year of instruction, then readers could learn to operate in more appropriate ways.
The Reading Recovery Program provides short-term help that Clay’s (1979, 1993) research has shown results in accelerated progress for at-risk early readers and writers. The intervention is begun after one year of formal instruction, which begins at age five, school entry age in New Zealand. The program does not have a set of materials nor a step-by-step curriculum but instead, for effectiveness, depends on the trained teacher’s ability to: observe reading and writing behaviour, infer the child’s intentions and underlying cognitive processes, and make instructional decisions. The teacher may realize he or she needs to adjust his or her own instruction in response to the child. Instruction starts with what the child can do, based on the detailed observations of the child as a reader and writer and focusing on his or her strengths.

The purpose of this project is to conduct an integrated inquiry (Marsh, 1991) by synthesizing the research on Marie Clay’s Reading Recovery from mid-1960 to the present in order to identify questions for further study.

Substance of the Inquiry

In Chapter 2, the findings from a review of the literature on emergent literacy acquisition formulate how young children acquire early reading and writing behaviours. This emergent literacy review focuses on story book reading both interactional (Morrow, 1982, 1983, 1987) and independent (Heibert, 1981; Mason, 1980; Mason, Stewart, Dunning, 1984; Masonheimer,
Drum & Ehri, 1984; Morrow, 1982, 1983, 1987; Sulzby, 1985; Teale, 1987) and the development of early writing behaviours (Sulzby, 1982, 1985; Sulzby & Barnhart, 1986). In Chapter 3, the inquiry is centered on Clay's work (1979, 1993) with early readers and writers, and indicates how this research led to the subsequent development of the Reading Recovery program and a greater understanding of the process of early literacy acquisition for practitioners. The criticisms of a number of authorities (Barr, 1995; Nicholson, 1989; Robinson, 1989; Shanahan & Heibert, 1994; Wasik & Slavin, 1990) of Reading Recovery are also reviewed in detail in Chapter 3. In Chapter 4, the literature review examines the implementation and adaptation of Reading Recovery in other countries such as Canada, the United States, Australia, and England. The focus then shifts in Chapter 5 to compare Reading Recovery with other early intervention programs as well as to examine the implications of early intervention premises and research findings on beginning reading classroom instruction. In interpreting Marie Clay's work and comparing it with the work of others in the field of early literacy acquisition, the paper concludes in Chapter 6, with recommendations for: (1) the classroom application of Clay's work, and (2) further classroom-based research.

**Research Method**

Integrative inquiry is described by Marsh (1991) as a form of inquiry that brings together knowledge of what is known on a subject from a variety of studies and relates that understanding to particular needs in practice. In
keeping with Marsh’s view of integrative inquiry (1991), this research on Reading Recovery will:

- take all studies related to the topic, review them, organize them in ways that distinguish and contrast work on different but related questions and analyze or draw implications about what is known and what still needs to be studied. (p.274)

This paper therefore focuses on examining, reviewing and organizing all the published research and critical papers discovered in an extensive search of the literature related to Marie Clay’s Reading Recovery Program. These include current books, International Reading Association publications, journals and articles for Reading Recovery research and programming in New Zealand, United States, England, and Canada. Once reviewed and examined, they are analyzed to draw implications for practice and further research.

Marsh (1991) cites general guidelines as to how an integrative inquiry should be conducted. As a general framework, he recommends a tentative model put forth by Ward (1983) which includes four phases:

- development of a framework
- development of detail and implications
- review of literature and interaction with experts
- the building of a consensus for the synthesis of information

In relating Marsh’s model of integrative inquiry to this present research, this thesis: (1) provides background information on Reading Recovery; (2) develops implications for instructional programming; (3) reviews Marie Clay’s
research, subsequent criticism and rebuttal (Marsh's review of the literature/interaction with experts section); (4) compares Reading Recovery to other early intervention programs, and synthesizes the results in light of future programming and research recommendations. Ward's inquiry model provides a broad but helpful framework within which the topic of Reading Recovery and all of its implications can be addressed. This integrative inquiry synthesizes information not just on Marie Clay's work but, by reviewing the commentary and reports on Reading Recovery practice in other jurisdictions, suggests implications for beginning reading instruction in the classroom and also generates questions for further inquiry.

**Emergent Literacy: Underlying Themes**

The development of early reading/writing skills has long been of interest to the teachers of young children with both those children who learn with ease and those who experience obvious struggle and confusion. Understanding early literary acquisition and creating appropriate instructional techniques to aid its development in all children has been of prime interest these last few decades; much has been written, researched, and debated in this area. Reading and writing acquisition are viewed as part of the literacy culture of the child. From this broad perspective has emerged a narrower focus defined as emergent literacy that encompasses both reading and writing, centering on young children, up to approximately six years. This emergent literacy perspective assumes that children's not yet conventional literacy behaviours
precede and develop into conventional literacy. More and more is being learned about how the refinement of this developmental process occurs, as well as how children's early strategies for making sense of written language are influenced by various cognitive, developmental, and social interaction factors.

Knowledge and understanding of emergent literacy continues to unveil itself (Mason, 1980; Heibert, 1981; Morrow, 1982, 1983, 1987; Mason, Stewart, Dunning, 1984; Masonheimer, Drum, Ehri, 1984; Sulzby, 1985; Teale, 1987). However there is growing awareness of central themes that predominate - themes, such as the importance of the social context in relation to the interactional nature of development - the need for adult/child interactions to learn both immediate problem solving strategies and to provide an experiential base from which to draw at a later time; and themes, such as the development of emergent reading and writing, children having knowledges that are correct (conventional) and knowledges that are emerging towards conventionality. But beyond that, insight that the developmental arrangement of these processes appears to be either sequential or simultaneous or both and is strongly influenced by individual variations and purposes. Clay's (1975) representational stages of writing and Sulzby's (1985) emergent storybook reading behaviour sequences form the foundations or approximations of this framework. We can conclude, though, that there are three general types of experiences that help young children learn to read and write:
1. interaction with adults in speaking, listening, reading and writing;
2. independent explorations of print initially through pretend reading and scribbling and later through rereading a familiar story and composing messages with invented spelling; and
3. adult modeling of language and literacy.

This concept of emergent literacy is consistent with the theoretical principles of Vygotsky (1978). These state that children learn within social, interactive environments which are guided and mediated by an adult. This mediation leads the learner through what Vygotsky labels the "zone of proximal development" in which a child, with assistance, is able to accomplish tasks that could not be successfully completed or learned alone. This modeling helps the child internalize strategies for eventually completing such tasks independently. Thus Vygotsky (1978) contended that higher mental functions appear on the social level between people (intercognitive), and later on the individual level, inside the child (intracognitive). By employing a skill/strategy with the assistance of an adult (interindividual) the child begins to internalize the behaviour and develop it as an independent function (intraindividual). Thus the zone of proximal development is at the cutting edge of learning where, with scaffolded instruction, the child accomplishes tasks and solves problems that could not be successfully completed independently.

Early Reading/Writing Progress and Reading Recovery

Learning to read and to write is a task of great importance. For most
the process goes well, but for some children learning involves the formation of missing or weak links, and causes devious routes and unproductive literacy outcomes. Rather than allow children to flounder, thus creating a sense of failure and frustration, Clay (1982) proposes monitoring performance at the earliest stages of learning to read and write to ensure the earliest detection of difficulties. Once discovered, Clay (1982) proposes that teaching efforts to remedy difficulties be intensified and individualized in order to establish fundamental literacy skills. It is important to note that this monitoring reflects a detailed systematic observation and recording of what a child can do in the first year of instruction. In order to highlight areas of concern, such detailed, systematic observation has been organized into an assessment tool which Clay calls the Observation Survey (1993).

Early reading is a unique stage in the developmental process of becoming a reader. Clay identifies three concepts related to early reading that are no longer helpful in understanding this stage, and need to be let go. One is the concept of a reading age, that is a score derived from the administration of a standardized reading test. Clay does not believe that such information is helpful in identifying whether a child’s needed skills are present or absent. A second is the concept of reading readiness. Some educators contend that there is a need for a transition time in the first few months of schooling, in which children may be engaged in work sheet tasks that require them to discriminate between minimally different objects, letters, or sounds for the purpose of refining visual and auditory discrimination skills. In Clay’s view,
children need active involvement with print right from school entry in order to
discover how oral and written language are related. The third concept
educators need to discard is related to literacy development and involves the
practice of allowing children passive time to grow into themselves and mature
into readers rather than providing active instruction and direction to correct
inadequate learning or confusions about print. It is for these children who,
early on, develop inefficient systems of functioning or responding that Clay has
developed the early intervention program called Reading Recovery.

The design of Reading Recovery is based on the assumption that children
learn by constructing meaning through social interaction. Supportive social
contexts are built for children learning to read and write. Thus more
knowledgeable learners engage in constructive dialogues that support
learning. Gradually students take over the other process themselves and
become independent literacy learners.

Reading Recovery provides the social interaction that supports the child's
ability to work at a level at which he or she may be "half right", not having full
control but able, with the support of the adult, to problem solve and perform.
Thus Clay's program incorporates Vygotsky's (1978) notion of the "zone of
proximal development". Within this zone, interactions with knowledgeable
others is critical. The focus of the Reading Recovery intervention is on
working just beyond the child's actual development and building a system that
leads to further learning. Clay also invokes another Vygotsky (1978) principle
that learners become engaged in meaningful activities.
Recovery practice in connected text rather than participating in skill sheet activities which feature isolated instruction. Consistent with the principles of learning identified by Vygotsky (1978), Reading Recovery is intended to meet the needs of children who experience difficulty establishing effective reading and writing strategies, and who are thus at risk of not becoming independent readers and writers.

**The Reading Recovery Program**

Quality Reading Recovery provides practical, early programming to intervene and teach appropriate print processing. Reading Recovery is characterized by one to one instruction during daily 30 minute lessons in which the goal is independence, never doing for the child what he(she) can do him(herself), and on teaching the learner how to use meaning, syntax, and visual information as cues to word identification. The youngster is taken out of his(her) regular classroom for individually planned lessons. The goal is to help the child discover effective reading and writing strategies. During the lesson, the child reads several short books with natural, predictable language and composes and writes a story. Every day the child is introduced to a new, more difficult book which he(she) will be expected to read without help the following day. Intervention continues until the child has developed strategies for independent reading/writing and can function satisfactorily in the regular class. Reading Recovery is an early intervention program designed to reduce the number of children with literacy difficulties. It is a prevention program which
helps young, low-achieving children by providing daily individual teaching in addition to classroom instruction. Reading Recovery is based on the premise that all children need the opportunity to move into an effective literacy instruction program in their first year of school which proceeds at an appropriate pace and employs sensitive, well trained teachers. The term “recovery” implies a deliberate attempt to have those children who are making unsatisfactory progress: work at average levels in their classroom by the end of the program, profit from existing in-class programs, and continue to progress satisfactorily. This means that those children who have not started to use efficient literacy learning patterns can catch up and become independent learners.

Reading Recovery arises out of an extensive program of research and development carried out by Marie Clay from the University of Auckland. This research began in 1976. It was requested by teachers in order to establish and explore the range of variability of reading and writing behaviours in six year old children who were having difficulties. The initial research studied 122, six-year olds with a variety of presenting problems: poor language; inconsistent left to right directionality; difficulty hearing sounds and sequences; and an inadequate speech to print match. Follow-up studies were conducted one, and three years later. As a result of the research, a set of teaching procedures for dealing with early literacy difficulties gradually evolved. A wide range of techniques which related to theories of learning to read and write were piloted, observed, discussed, written, and modified. In 1978, field trials
were conducted in five schools. The success of these trials led to project expansion. By 1983, Reading Recovery was operating nationally in New Zealand.

Reading Recovery has, in the 1990's, become part of school programs in Australia, the United States, Canada, and England. Intervention begins with the Observational Survey which uncovers what a particular child controls and what operations and strategies he(she) could be taught next. It is on the basis of a summary of the information gained from the Observational Survey that children are identified as in need of intervention. Observation Survey results thus provide baseline information for instructional programming regarding useful problem solving strategies and the child’s strengths and weaknesses in relation to early literacy concepts.

In the initial two weeks, the teacher works with the child on what he(she) already knows in reading/writing in order to build rapport and confidence, find a readable text, build fluency, encourage writing, and gather baseline data. Clay (1993) refers to this time as “roaming around the known.” Once this period of observation has occurred, it is time to move into active instruction.

The daily lesson follows this tutorial structure:

- rereading two or more familiar books
- reading yesterday’s new book and taking a running record
- working on letter identification and /or making and breaking words
- writing a story (including hearing/recording sounds in words)
- cutting up and rearranging the story
- introducing a new book
- attempting to read the new book (Clay, 1993)
As the program progresses, both the child’s behaviour and the instructional focus continue to grow and change, although the above lesson format and sequence remains. Once a satisfactory level of independent functioning has been achieved and the child is able to work within the level of the average group in his/her class (often within fourteen weeks in New Zealand), Reading Recovery support is discontinued. Progress continues to be monitored on a follow-up basis, however.

Summary and Focus of This Study

The purpose of this study, as described in Chapter 1, is to examine, review, and organize all the research and critical papers related to Marie Clay’s Reading Recovery, and analyze them to draw implications for practice and further research.

Chapter 2 provides a theoretical, research-based view of emergent literacy thereby establishing a baseline upon which to judge the soundness of Clay’s (1979, 1993) Reading Recovery Program. Included is a discussion of themes of early literacy acquisition, such as children’s not yet conventional literacy behaviours proceeding developmentally and being refined, as well as themes such as the influence of various cognitive, developmental, and social interaction factors on early reading and writing development (Heibert, 1981; Mason, 1980; Mason, Stewart, Dunning, 1984; Masonheimer, Drum, Ehri, 1984; Morrow, 1982, 1983, 1987; Sulzby, 1985; Teale, 1987).
Chapter 3 presents Clay’s early research and views regarding reading/writing development. It will: (1) describe Clay’s gathering of information through the systemic observation of early readers/writers, (2) explain how that information forms the instructional baseline of the Reading Recovery Program, and (3) cite the Reading Recovery follow-up research and its implications. Chapter 3 also provides a critical response from other educators and researchers in areas such as research design, outcome measurements, programming components, and political and systemic issues.

Chapter 4 describes the adaptation/implementation of Reading Recovery in countries such as the United States (Ohio), Canada (Scarborough), England (Southwark), and Australia (Central Victoria).

Chapter 5 compares Reading Recovery to other early intervention programs to identify instructional components which have implications for early years classroom literacy instruction.

Finally, Chapter 6 concludes by making recommendations for early intervention programming and identifying questions for further research.

An extensive review of the literature suggests the following issues related to Reading Recovery:

- cost effectiveness, both short and long term, including the number of children who are able to receive intervention
- the reliability of early identification assessment tools in identifying at-risk children
- the appropriateness of Reading Recovery program content
- the potential to effect classroom reading instruction - teacher professional growth and teacher effectiveness
• the potential to increase literacy awareness and family involvement, and
• the timing of the intervention - Grade one to Grade two and the issue of one to one versus small group instructional support.

Definition of Terms

The Reading Recovery program. Reading Recovery is an early, short-term intervention program designed for at-risk readers. The goal of Reading Recovery is to involve the child in 12-20 weeks of daily, individual, 30 minute lessons with a trained Reading Recovery teacher. Acceleration is achieved when the child has developed a self-extending system of reading and writing strategies. A self-extending system of reading and writing is a network of effective processing strategies which inform subsequent independent literacy learning every time the child reads or writes (Clay, 1991; 1992).

At-risk reader. At-risk reader refers to a student whose prospects for success are marginal or worse (Harris & Hodges, 1995).

High progress reader. Even after only one year of instruction, the high progress reader operates on print in an integrated way in search of meaning, and reads with high accuracy and high self-correction rates. He(She) reads with attention focused on meaning. What he(she) thinks the text will say can be checked by looking for sound to letter associations (Clay, 1993).
**Low progress reader.** The low progress reader or reader at risk, tends to operate on a narrow range of strategies. He(Shes) may rely on what he(she) can invent from his memory for the language of the text but pay no attention at all to visual details. He(Shes) may disregard obvious discrepancies between his(her) responses and the words on the page (Clay, 1993).

**Phonological recoding.** Phonological recoding refers to the child's ability to apply letter-sound relations to transform printed words into pronunciations (Ehri, 1991). The reader recodes the coded graphic input as phonological or oral output (Camper, 1997).

**Roaming around the known.** Roaming around the known refers to the first two weeks of the Reading Recovery tutoring program when the activities carried out in reading and writing are designed to discover what the child already knows. These tutoring activities are based on the information gathered through the administration of the Observation Survey (Clay, 1993). This enables the teacher to observe the child's responses and use the responses as the starting focus of the instructional program (Clay, 1993).

**Speech to print match.** The speech to print match refers to the child's ability to connect spoken words as they appear in print (Gillet & Temple, 1986).
Observation Survey. The Observation Survey (Clay, 1993) refers to an assessment tool developed by Marie Clay to record, in a detailed systematic way, what a child can do in reading and writing during the first year of formal instruction (Clay, 1993).

Phonological awareness. Phonological awareness refers to the ability to reflect on and manipulate phonemes or the units of speech that distinguish one utterance from another (Tunmer, 1990).

Syntactic awareness. Syntactic awareness refers to the ability to reflect on and manipulate aspects of the internal grammatical structure of sentences (Tunmer, 1990).

Zone of proximal development (ZPD). The zone of proximal development refers to the supported interactive environment in which learning is guided and mediated by an adult. In this relationship the child accomplishes tasks and develops strategies which could not be successfully completed or learned alone (Vygotsky, 1978).

Emergent literacy. Emergent literacy is the term used to describe a child's developing concept and behaviour as print becomes meaningful. This process is influenced by cognitive and social interactional factors which begin at home before formal schooling and develop into conventional literacy at school (Teale & Sulzby, 1989).
Reading readiness. Reading readiness refers to the preliterate behaviours which were thought to be required before formal reading and writing instruction could begin. Readiness tests are given to new school entrants in order to predict school entrance competency (Clay, 1993).

Integrative inquiry. Integrative inquiry refers to a form of inquiry that brings together what is known from various, perhaps disparate studies, that may be relevant to the particular needs of practice. Its emphasis is upon integrating diverse material into a particular conceptual framework so that new perspectives or relationships are introduced (Marsh, 1991).

Regression to the mean. Regression to the mean refers to the statistical phenomenon that occurs when poor test results improve on subsequent retests (Pinnell, 1989).

Discontinued. Discontinued refers to the time when the child receiving Reading Recovery support is sufficiently independent and confident in his/her use of reading/writing strategies (according to information gathered from the Observation Survey) to discontinue the Reading Recovery program.
Chapter 2

Literature Review and Analysis of Marie Clay’s Work on Reading Recovery (1966-Present)

The purpose of the review of emergent literacy research is to identify the early strategies and processes in reading and writing development as they proceed both sequentially and simultaneously into conventional literacy. Three broad areas within emergent literacy development are investigated: the emergent storybook reading research which is interactional, the emergent storybook reading research which is independent, and emergent writing research.

A Theoretical Base of Emergent Literacy

Understanding the early processes of reading/writing development and, in doing so, developing appropriate instructional techniques to aid development in all children is a prime concern of educators. The process of reading and writing acquisition is now viewed as part of the literacy culture of the child. Children’s not yet conventional literacy behaviours are assumed to precede and develop into conventional literacy. This broadened view of literacy development, which for example recognizes “scribbling” as preliterate behaviour, contrasts sharply with earlier views that children need a “reading readiness” transition time in the first few
months of literacy instruction in which they are engaged in isolated skill
development exercises in preparation for formal instruction. The view
now is that children need active involvement with print both before school
entry and from that point on, in order to discover how oral and written
language work.

Research begun in the 1980’s and ongoing since then has found that
young children begin learning how to read and write much earlier than
school age (Heibert, 1981; Mason, 1980; Mason, Stewart & Dunning,
Sulzby, 1985; and Teale, 1987. Traditional readiness tests have not been
able to detail adequately what young children know about print.
Weinberger, Hannon, and Nutbrown (1990) identify reading and writing
behaviours in preschoolers that parents can recognize in order to
promote and support early literacy development at home. Examples of
these early reading activities include behaviours such as telling stories
about the pictures in a book, looking at books with others, listening
attentively to stories, and knowing some parts of books by heart. Early
writing preschool behaviours evident at home include choosing to use
crayons, pencils, and paper, knowing the letter which begins the child’s
own name, making marks from left to right, and making letter-like marks
and saying “I’m writing”.

Research into emergent literacy has been conducted through
intensive descriptive case studies by such educators as Heibert (1981),
Mason (1980), Mason, Stewart and Dunning (1984), Masonheimer, Drum and Ehri (1984), Morrow (1982, 1983, 1987), Sulzby (1985), and Teale (1987). The literacy acquisition process has been investigated to gain a more thorough understanding of both emergent reading and writing competence. These areas are intertwined, as are their developing concepts, behaviours, and subsequent implications. A new perspective for understanding the nature and importance of children's reading and writing development during the early years emerges from this review.

**Interactional Storybook Research**

The first major area of research in emergent literacy focuses on the effect of exposure to literature both at home and at school prior to formal instruction in reading (Morrow, 1982, 1983, 1987). Studies have found that children exposed to literature at an early age tend to have developed sophisticated language structures (Chomsky, 1972). Children who have been exposed to storybooks: (1) expand their language base and (2) develop an enriched information base, which in turn is thought to enhance the comprehension of incoming information (Feitelson, Kita, & Goldstein, 1986). Children are thus introduced to a way of using language (literacy) that is not familiar in face to face interaction (oral), and provided with models to facilitate independent reading. Through listening to stories, young children become increasingly familiar with story
language and syntactic structures. Their attention span is increased along with their interest in learning to read.

In summary, books play a significant role in the lives of young children. The type and amount of verbal interaction between adult and child during this story book reading is a major contributing factor to literacy development. Sulzby (1985) cites storybook reading research as being either interactional (adult/child or child/child) or independent. Morrow's studies (1982, 1983) examine emergent literacy through interactional research in home and school environments. Her research also considers the process of storybook reading within the classroom and its subsequent effect on literacy development. Morrow's research is discussed in depth first.

Morrow

In 1982, Morrow conducted research based on the premise that since early literature exposure has a strong influence on success in beginning reading, books should play a significant role in the lives of children. Furthermore she believes that in school settings, the use of books can be enhanced by regularly scheduling prepared literature activities and providing an attractively designed library corner. The purpose, then, of Morrow's research was to: (1) observe and describe the physical characteristics of library corners in early childhood classrooms; and (2) describe the types of literature activities employed by teachers within these rooms. In addition, the frequency of children's voluntary use
of books was observed to determine if there was a relationship between
the frequency of use of books by children and the physical design
characteristics of library corners, as well as the frequency of use of books
by the children in relation to frequency of literature activities carried out
by teachers.

Morrow's research sample ranged over four grade levels and
consisted of 30 nursery rooms, 37 kindergartens, 32 first grade rooms,
and 34 grade two rooms - the last two being observed for physical
characteristics of library corners only. The observers were student
teachers who observed over a 10 week period at both urban and
suburban schools. Two questionnaires were used by the student
teachers to report their observations - one to describe the physical
characteristics, and the other, the teacher's use of literature in the
classroom. Both questionnaires required yes/no answers as well as
keeping a tally of the number of occurrences of literature activities
observed in a typical four week period. In addition, the student teachers
recorded the number of children choosing storybooks during free play on
4 different days in 4 different weeks. The results of the questionnaire on
the physical characteristics of library corners were averaged over all four
grade levels and suggested that:

- there was a place provided for storing children's literature in all
  nursery rooms, 97% of kindergarten rooms, 84% of first grade and
  82% of second grade rooms.
- only half of the library corners were placed in quiet areas of the
classroom.
• in most cases, library corners consisted of one simple bookshelf.
• only half of the classrooms provided seating for children in the library area.
• carpeting was provided in 80% of the nurseries, 40% of the kindergarten classrooms, 20% of the first and second grade classrooms.
• attractive features relating to children’s literature were evident in 12% of the rooms (film projectors, felt boards, posters and displays).
• an average of 2.37 children in each observed classroom used literature at any given moment during free play.

The results of the questionnaire on the teachers' use of literature only pertained to the nursery and kindergarten rooms. Teachers read, on average, 12 stories in a four week period and during the same period:

• told stories - 3x
• used flannel boards - 0.5x
• discussed stories - 6.5x
• mentioned authors - 1.7x
• asked factual questions - 4.9x
• asked questions requiring critical thinking - 2.8x
• provided for independent uninterrupted sustained silent reading (U.S.S.R.) 2.3x in 4 weeks
• used the library corner for reading stories (40% of classrooms)

(Morrow, 1982)

Correlations were made to determine if the predicted positive relationship between frequency of use of books by children and the teacher’s use of literature was observed. Results were positive in 10 of the 30 nursery and 13 of the 37 kindergarten classrooms.

The outcome of this study showed that many early childhood classrooms do not have a well designed library corner nor regularly planned literature activities. Given the physical conditions that prevailed,
it is not surprising that only 3.3 children used the library corner each day.
In general, the nursery/kindergarten rooms had superior classroom 
libraries to the first/second grade classrooms. An unexpected finding was 
that teachers did not read to children every day and that the variety of 
literature based activities was minimal. Morrow concluded that although it 
is important to realize that the relationships between library corner 
designs, and the teacher's use of literature and success in beginning 
reading were correlational rather than causal - the relationships do exist 
and should be taken into account in educating young children.

A second study conducted by Morrow (1983) described children's 
home and school environments, and kindergarten children's interest in 
literature. The purpose of the first part of this second study was to 
examine ways of assessing interest in literature that would be appropriate 
for kindergarten children. The goal of the second phase of the study was 
to describe the home and school environments and the behaviours of 
those kindergarten children identified as having either a high or low 
interest in books.

First, interest in literature was assessed in twenty-one kindergarten 
classes, both urban and suburban, through observations collected by 
student teachers in the Douglas College Early Childhood Education 
program. The following areas were assessed: use of books during free 
play, teacher evaluations of children's interest in books, time devoted to
recreational reading, and the use of books during free play after intervention.

In part two of the study, high and low interest groups were established and data collected to characterize the respective school and home environments. Once again, twenty-one kindergarten classrooms were involved - a total of 396 children. By using a scale of 1-40 with 12 being the cut off for low and 23 for high, a group of 58 low and 58 high interest children were selected. To obtain home-based data, a home environment questionnaire to be completed by parents was developed. For school, teachers: (1) filled out a diagnostic form to establish school behaviours which included information regarding social, emotional, physical, general behaviour, and language arts skill development; and (2) administered the TOBE 2 Language Test Level K to determine reading readiness. Student teachers completed a literary environment rating scale.

In the area of children's activities at home, high interest children preferred crayon and paper play activities, looked at books more frequently, watched two hours or less of television each day - a parental expectation, had a library card, and were read to daily. Low interest children liked to play outdoors, play with trucks or blocks, looked at books less, watched television more than two hours daily, were unlikely to have a library card, and were read to about once a week.
In the area of parent and family life, the parents of the high interest group were more likely to have a college education or graduate degree and compared to low interest parents read more often as a leisure time activity. Children in the high interest group were more likely to come from smaller families and had more books in the home than low interest children. There appeared to be no significant difference with working mothers, nor with parental participation in sports.

In the area of school behaviours, the high interest group scored significantly higher ratings in all areas of behaviour and achievement, especially on the reading readiness test, although there were some inconsistencies.

In the area of classroom literature environment, 81% of the high interest group came from classrooms where literature programs were rated good or excellent and where teachers stressed regularly planned literature activities with well designed library corners. Eighty-two percent of the low interest group came from classrooms where the literature environment was rated fair or poor.

It is important to note in reflecting upon these findings that school achievement and storybook interest do not necessarily go hand in hand. A child may have academic ability as measured by a standardized achievement test, but if literature is not stressed at home or at school, the child may not show an interest in books or become a voluntary reader. The converse is also true.
Morrow recommends further research in such areas as: the manner in which parents read stories to their children and the children's participation in the activity, a follow-up on the inconsistencies between high book interest and low test score achievement, and further documentation of the characteristics of good school programming.

Findings from the Morrow (1982, 1983) studies suggest that the home exerts a strong influence upon children's interest in literature from the time they are very young. Early readers and young children who demonstrate an interest in books all come from supportive literacy environments and use the public library. They demonstrated similar play interests, and they were read to frequently. It seems important to establish early co-operative efforts between home and school to create a systematic, integrated program for developing readers.

In 1987, Morrow's research focused on the effects of one-to-one story readings in a classroom setting with children from lower socioeconomic homes who in many cases had not been read to at home. The purpose of the study was to learn about children's knowledge of and interest in story meaning, print awareness, and sense of story structure based on questions and comments made during the one-to-one story readings. An effort was made at school to replicate the interactive behaviours that occur at home during story reading.

The research took place in two day care centres, where from a population of 88 four year olds, 60 were randomly selected for further
study. Of the 60, data were collected from 27 children in the experimental and 27 in the control group. Seventy-five percent of the children came from single parent homes, 40% were member of minority groups and 20% had been abused or neglected. Ten different storybooks of similar length were selected for the study. All of the books had well developed story structures with definite characters, settings, clear themes, plot episodes and resolution.

During treatment, trained research assistants met with children individually once a week - 15 minutes a day for 10 weeks. With the experimental group, the research assistants read a different story each meeting, and used three types of interactive behaviours: (1) acting as a manager by introducing the story and developing prior knowledge, (2) prompting responses, comments, or questions, and (3) supporting and informing the children's reaction to the stories. The control group worked on readiness tasks such as letter identification. Pre and post tests were administered by research assistants to both groups during the second (pre test) and tenth (post test) sessions. The tests consisted of reading a story to the children similar to that read in regular story sessions. During the testing, children were encouraged to ask questions, or comment about the story. These questions and comments were counted, and categorized into types: (1) focus on story structure, (2) focus on meaning, (3) focus on print, and (4) focus on illustrations.
The results showed a statistically significant difference between groups on the total questions score and the total comments score on the post test with the experimental group mean showing more questions asked than the control group. Statistically significant differences between the experimental and control group, with higher scores for the experimental group, were seen: (1) in the meaning area for detail, $F(2,73)=15.01, p<.001$, interpretation, $F(2,73)=6.68, p<.001$, and drawing from one’s experience, $F(2,73)=8.05, p<.001$; (2) in the story structure area, $F(2,73)=6.26, p<.001$; and (3) the responses to illustrations, $F(2,73)=16.35, p<.001$. In the area of focusing on print (book management, sounds, letters, reading words, reading sentences) there were no significant differences.

The results indicated that reading to children with their active participation was valuable for building literacy skills and that one-to-one reading provided a different type of experience than whole class reading. It was found children’s initial responses were minimal, then questioning and commenting began, and finally children began to respond to the natural points in the stories. Children showed more interest in the meaning of stories than issues about print. Although one-to-one reading appears to be unfeasible for classroom teachers, it was suggested that teaching assistants, parent volunteers or older children be trained to provide this guidance.
Storybook Reading Research

There are different schools of thought as to how print awareness in preschoolers develops, and what factors are involved. Some researchers (Mason, 1980) propose that the development of beginning reading is marked by the acquisition of concepts (letter symbols, sounds, printed words) - the what information that children need before they can learn how to read. Others suggest that the boundaries are not rigid - that beginning reading evolves naturally from pre-reading experiences in social contexts in a way that parallels the development of oral language. Whichever position is taken, it seems evident to all in the field that the acquisition of literacy is developmental in nature - whether it be sequential or simultaneous. While Mason (1980) looked for sequential development in the letter and word acquisition of preschoolers, Hiebert (1981) acknowledged the possibility of simultaneous growth. Mason, Stewart, and Dunning (1984) traced print knowledge from letters to words to storybook reading, and did so in a school setting with kindergarten classes. Masonheimer, Drum, and Ehri (1984) looked at the influence of environmental print on this developing process, and made connections with the stages identified in Hiebert's study (1981). Finally, Sulzby (1985) studied print awareness from a emergent storybook reading perspective both interactional and independent, and concluded, as did the others, that there is a developmental progression that occurs in emerging literacy.
Mason

The purpose of Mason's study (1980) was to determine how and to what extent, preschool children learn about letters and words through observing what children learned from letters or words, how they changed in what they could learn, and what kind of mistakes they made. It was hoped that a set of steps could be constructed illustrating what children do in learning to read. In this study, reading was defined as the ability to: (1) discriminate between and among letters; (2) print letters and words; and (3), read signs and labels. It was proposed that these concepts represent what was needed before children could be taught how to read. Mason thus set out to describe a developmental sequence for reading acquisition.

The subjects were 38 preschoolers who attended a university operated preschool centre. There were two treatment groups of informal reading programs. Instruction in the morning group emphasized recognizing printed words in context through child directed activities. Materials included simple stories, and colour words, number words and word picture cards. Instruction in the afternoon group focused on letters and included alphabet, spelling and initial letter - picture cards. Both types of activities were featured in free play and group activities. Listening to stories, looking at books, writing names and labeling pictures, using a book with a cassette and cooking from a recipe were common activities in both classrooms. The children were from upper and middle
income families, and all had two parents living at home. None showed any social, emotional or physical dysfunction.

The research procedure was two-fold. First a questionnaire was sent to parents at the beginning of the school year and again at the end. Second, the children were tested individually throughout the school year to measure word and letter knowledge, interest in reading, word learning ability, and recall of words previously learned. Analysis of the results focused on the data collection from: (1) the September and May questionnaires - first descriptive, second statistical; and (2) documenting the progression of children's knowledge of letters and words. Finally, that progression was validated by obtaining an ordering of children's letter and word knowledge using a new sample of children.

Summary tabulations of letter and word knowledge showed that children changed dramatically during the nine months from September to May. To illustrate, letter naming of more than 20 letters increased from 58% to 95%, and the ability to print more than 20 letters increased from 13%-82%. Other changes included a 50% increase in the ability to print in both upper and lower case forms, and a 37% increase in very often adding letters to drawings. In word recognition strategies, by the end of the year, 63% of the children were very often asking for words to be identified, 50% were very often trying to spell words, and 26% were very often trying to sound out words. In contrast, book and television use at home remained unchanged as both played a major role in the children's
lives. Preliminary analysis of these results show that while letter and word knowledge increase over time, reading support at home did not alter.

To look at this finding more closely and to establish a word reading sequence, the children were classified as non-readers or falling into one of three levels of reading. Level 1 was labeled context dependent, and consisted of children who read only signs or labels. Level 2 was referred to as visual recognition, and was made up of children who read signs, labels, and a few book words and seemed to be able to analyze words by using their respective letters. Typically, Level 2 students had mastered the letter names, could recite the alphabet, and print most letters. They also displayed an interest in spelling. Level 3 was designated as letter sound analysis. Children at this level could read both multisyllabic words and stories by themselves, and also could sound out words.

From the data, it was evident that every child had made some progress during their kindergarten year, although only half made a level change. Five children went from being non-readers to context dependent readers and 10 from context dependent to being able to read multisyllabic words and stories. In order to confirm the data and the premise of reading acquisition as progressing in a natural ordering from letter to word knowledge at the preschool level, the study questionnaire was sent to a new group of parents the following year. The results closely resembled those found in the original study.
Thus the natural hierarchy in reading acquisition that emerged included first recitation, and naming and printing letters. Then signs and labels were read, especially words that were important or conspicuous and frequently viewed. Next, recognition of nouns and function words followed as attention was directed to letter information. Multisyllabic words and abstract nouns were recognized by only a few preschool children, probably because such long words require extensive knowledge about letter sounds and letter clusters, usually acquired during formal instruction.

In reviewing these findings, it must be kept in mind that the children tested came from middle class, very traditional homes - not a representative sample. It is important also to realize that neither teacher nor parents systematically taught the children letter sounds. Rather the children's knowledge came from recognizing words on signs, learning the alphabet, and printing and naming letters.

In conclusion, Mason identified three levels in the development of word reading that help demarcate reading progress. The first level is initiated by alphabet knowledge leading the child to print letters and form words. Here printed words are identified as unique visual patterns. In the next level, spelling letters in words and noticing letter configurations becomes important. At the third level, strategies for attending to letters and their sounds are acquired, including a realization of letter to word
sound patterns and using a sounding out strategy for word recognition and spelling.

The results of Mason’s work in this study need to be viewed cautiously in the light of the non-representational sample as there was not a comparison group that did not receive formal instruction. It was also unclear as to the results of the children who were grouped in May as being in Level 3. Had these children gone through each level sequentially, or had they “just read”?

Ehri

Ehri (1980) also identified three similar developmental stages to explain how beginners function in learning to read words. Initially during the first phase, logographic, a child “reads” words by sight, using non print visual cues as aids to memory. Then at the alphabetic phase, first partial letter-sound cues are used to form associations, and later complete connections are made between spellings and the phonemic structure of words. Then, at the orthographic phase, a child has the ability to analyze words into spelling patterns instantly without phonological conversion. Ehri’s research (1980,1984,1987) clearly identifies the importance of developing phonological recoding skills if reading competence is to be developed. Ehri’s 1980 study showed that when beginners learn to read words, the particular spellings they see are stored in memory. In this study, second graders practiced reading 8 pseudowords spelled in one of two ways. For example, half of the
subjects were given the target word "biston" and half the word "bischun", both of which are pronounced identically. When students were asked to write out the words from memory, they spelled the same way as their stimulus word, and did not use phonologically equivalent letters. This finding suggests that both phonological recoding and memory for letter sound connections facilitate word recognition. Other studies have supported Ehri. Gough and Tunmer (1986) found that children who could not phonologically recode do not become good readers. This developmental phase theory of word reading has implications for early reading instruction. 

Hiebert

Hiebert's research (1981) was designed to examine the development of print awareness prior to formal schooling. Basically, Hiebert had two goals: (1) to establish a developmental pattern regarding the acquisition of a number of print related concepts and skills, such as the ability to name letters, to discriminate visually between and among letters, and become aware of print and reading purposes; and (2) to discover the interrelationships among these concepts and skills to establish whether they are sequentially or simultaneously developed.

Hiebert's subjects were 3, 4 and 5 year olds, equally distributed for a total of 60 with an equal number of both sexes. The children were from a preschool and a day care in Madison, Wisconsin. Both groups were predominately middle class with both parents present in the home.
Printed related skills, specifically visual and auditory discrimination were tested using the Prereading Skills Test (Hiebert, 1981). Letter naming was tested by asking the child to say a letter name when presented with a letter stimulus. The measure of print processing consisted of three tasks: (1) the examiner read silently and orally from a book and the child was asked to name the activity, (2) the child was shown a secret message and asked to read it, and (3) the child was shown a series of books differing in the amount of print, and asked which one could be read by someone who could read. If the subjects found a book that could be read, they were asked to identify and describe what it is that people look at when they read. The measure of print purpose consisted of the examiner telling the child five short stories about situations and asking the child print-related questions.

The examiner presented all tasks to each child in a one-to-one setting and the data were gathered on two consecutive sessions. Because it was felt that experience with some tasks might affect performance on others, the concept tasks preceded the skills test. Scoring for skills was either right or wrong, while scoring for the concept measures was based on numerical ratings.

Results indicated that a developmental element was prevalent because the knowledge of all concepts and skills increased significantly according to the age of the preschooler. Findings do suggest, though, that more growth occurred during the initial, rather than the latter half of
the preschool period. Due to the fact that a prior ranking of variables was impossible, empirical ordering of tasks into a scale was chosen to interpret data. By ranking the variables according to the percentage of subjects that passed each item, the following data resulted:

<table>
<thead>
<tr>
<th>Task</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>Processes</td>
<td>68%</td>
</tr>
<tr>
<td>Purpose</td>
<td>58%</td>
</tr>
<tr>
<td>Visual Discrimination</td>
<td>47%</td>
</tr>
<tr>
<td>Letter Naming</td>
<td>47%</td>
</tr>
<tr>
<td>Auditory Discrimination</td>
<td>45%</td>
</tr>
</tbody>
</table>

(Hiebert, 1981)

While there seemed to be a tendency for concepts to be acquired prior to skills, a large number of exceptions made such a conclusion impossible. Further analysis confirmed that there was not a sequence in the acquisition of skills and concepts.

Based on these developmental results, it can be suggested that the early part of the preschool period is a particularly active time for the acquisition of knowledge about print. The data for the study also provided insight into the interrelationships of print awareness. Although dimensions of print awareness have been treated as distinct entities, these results show that they are integrally related. Children do not seem to gain information about print in a uniform linear sequence as was concluded by Mason’s (1980) identification of three levels to demarcate early reading process, but rather in an integrated fashion from experience with print in meaningful contexts. A complete view of the
interrelationships in print awareness can only be constructed when the numerous dimensions of print awareness are traced longitudinally and simultaneously. This was done in Mason, Stewart and Dunning's research (1984) when two different approaches to kindergarten literacy instruction were contrasted.

**Mason, Stewart and Dunning**

The purpose of Mason, Stewart and Dunning's research (1984) was to trace kindergarten children's knowledge about the form of print, and to look at their comprehension strategies. The study was conducted over a period of two years with children who attended kindergarten in either a rural or city school. A total of 140 students from four kindergarten classrooms, two in each school were involved. Some tests were administered to all children, while others only to small groups. Probes were taken of children's knowledge about letters, words and story reading, and an examination made of changes in children's emergent literacy awareness. Data were also collected through individual interviews with children and through the observation of homes during the summer following the data collection.

Pine School in the rural area used a commercial letter identification instructional program followed by a basal program of teacher-directed whole group instruction of letters and sounds, until the last few months of the school year when ability grouping took place. In this school, there were few breaks for free play, story reading, art, music or field trips.
Water School in the urban area used an individualized reading approach. Teachers listened to children read simple books, and provided letter and phonics instruction where appropriate. The school had a flexible schedule based on reading, math, free play, and numerous special events.

The study compared the kindergarten children in the two schools, and described the literacy development of two of the children from each school in detail. Most children entered kindergarten knowing how to name upper case letters and how to print their names. Most could not use letters to spell words. In both schools by the end of the year many made large gains. Children in both schools made great gains in naming the signs and labeling pictures even without picture context. Few children knew common book words in September. However, by the end of the school year, 6% of the Pine children and 22% of the Water children could read ten to twelve words. Most children were aware that the print, and not the picture, carries the message but were more likely to look at the picture for information. Regarding the task of reading simple stories, in September most children labeled pictures ignoring the story, but by the end of the year, most of the children read all or part of the story. The children who were elaborators at the beginning were more likely to become readers than the picture labelers. Most children, whether they were learning to read with books or letters, believed that learning the
alphabet, reading books and having mothers help them were important ways to learn to read.

In conclusion, the study suggested that both programs had an equal influence on early print development - an average gain was made by students in both programs. Differences were seen in the case studies, though. Even though they were not involved in literacy activities in the summer, the two children from Pine School were thought to be progressing normally, not only by the parents, but also by the teachers, and the children themselves. The two from Water School, coming from a more book-orientated school and encouraged at home, were reading more during the summer. Thus the data indicated that children can begin to read in kindergarten, whether they receive book or letter and word instruction.

Masonheimer, Drum, and Ehri

In 1984, Masonheimer, Drum, and Ehri conducted a study in three parts which looked at the print reading skills of preschoolers who were felt to be experts at reading signs and labels in their environment, and to determine whether these experts would notice letter alterations in familiar signs and labels. Another purpose of the study was to determine if preschoolers who could read several words would differ in letter name knowledge from those who could not. It was hypothesized that if experience with environmental signs precedes reading, then when the non-print, visual context cues are removed, the print reading skills of the
experts should not decline significantly. Also it was felt that these experts should show some word reading skills and some awareness of alterations to letters within the signs.

The function of the survey was both to select subjects (those who read at least 80% of the sign labels) and to identify environmental signs most familiar to young children. The subjects were preschoolers (106 boys and 122 girls), ranging in age from two to five years. They came from a wide variety of ethnic and socio-economic backgrounds, from two parent and single parent families, and a range of family occupations. The print to be identified consisted of 21 familiar alphabetic labels or signs (McDonalds, Stop, Pepsi). Individuals were shown the photo, and asked, “What do you see and what does it say?” Following this, each child was shown separately and in random order all fifty-two upper and lower case alphabet letters, and asked to name them. Of the 228 children, 108 were able to identify 8 out of 10 frequently read labels. In the letter naming task, two year olds identified a mean of 7.4 letters; three year olds 12.6 letters; four year olds 22.9 letters; and five year olds 31.2 letters (52 letters maximum).

The purpose of the first experiment was to assess the contribution of various cue sources (full context cues, logo cues, and colour cues) to the successful reading of environmental print. For the first experiment, 47 girls and 55 boys were selected from the initial survey group. Their ages ranged from three to five years. Ten of the labels read correctly most
often in the previous study were used - six had logos and four did not. The labels were presented on cards mixed with nine primer level words. Results showed that labels in full context were identified quite accurately with factors such as (1) colour, (2) chronological age or (3) alphabetic cues not affecting accuracy. Without context, however, identification was poor. Based on the premise that reading skill reduces children’s dependency on the use of context as a cue for reading labels, and the finding that few of these “experts” had word reading skill, the notion that reading skill evolves directly out of environmental print experiences was discounted.

The purpose of the second experiment was to assess the impact of letter alterations on subjects’ sign and label reading ability. In this experiment, the same children were called back for retesting three months later. The materials used were six labels with logos and six altered versions which were created with substitute letters printed in the same way as the other letters in the label. Each label was presented, and the child asked: what it said, and whether there was anything wrong and where. The labels were then presented again in pairs (corrected and altered) with the child being asked if the labels were the same or different. The results indicated that in identifying environmental print, readers focus on letters while prereaders ignore letters and depend on the non-print environment or context.
The results of these experiments do not provide support for the view that children move closer to acquiring reading skill after they have accumulated experience with environmental print. This was shown when the children’s ability to read labels dropped dramatically when non-print context cues were removed, and when few expert children could detect alphabetic errors even when shown. The study suggests that if children are not familiar with alphabet letter patterns within words, printed words will not enter memory as separate symbols for meaning. Not only does this study suggest the lack of a sequential relationship between reading environmental print and reading beginning words, it also points to the importance of letter mastery as a necessary condition for word learning.

Sulzby

Sulzby’s (1985) research was presented in two studies. The purpose of the first study was to investigate whether categories and subcategories exist in the classification of children’s emergent storybook reading, such as:

- attempts governed by pictures, stories not formed
- attempts governed by pictures, stories formed
- attempts governed by pictures, stories formed
- attempts governed by print (Sulzby, 1985)

In the first study, the subjects were 24 middle class suburban kindergarten children. Individual interviews were conducted in October/November and at the end of the year in April/May. Each child was asked to choose a favourite book, and to read it to the examiner.
Each session was audio recorded and transcribed. All the transcripts were content analyzed, turned into narrative descriptions, and then reclassified. The result is the categories of classification for emergent reading of favourite storybooks from the least mature re-enactments to the most independent shown in the accompanying diagram.

**Categories of Storybook Reading**

**Picture-Governed Attempts**

<table>
<thead>
<tr>
<th></th>
<th>Story not Formed</th>
<th>Story Formed</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>(labeling and commenting; following the action)</td>
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<table>
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<tr>
<th></th>
<th>Oral Language Like</th>
<th>Written Language Like</th>
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<tbody>
<tr>
<td></td>
<td>(dialogic storytelling; monologic storytelling)</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Print Not Watched</th>
<th>Print Watched</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(reading and storytelling mixed; reading similar-to-original story; reading verbatim-like story)</td>
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</table>

**Print Governed Attempts**

<table>
<thead>
<tr>
<th></th>
<th>Refusal</th>
<th>Aspectual</th>
<th>Holistic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strategies</td>
<td></td>
<td>Independent</td>
</tr>
<tr>
<td></td>
<td>Imbalanced</td>
<td></td>
<td>Reading</td>
</tr>
</tbody>
</table>

The categories are self explanatory and present ordered patterns which are thought to precede and lead up to independent reading. By comparing beginning and end of kindergarten assessments, it was hoped to establish whether consistency existed in the children's relative ordering
across assessments indicating a developmental trend. Of the 24 children, 16 increased their position, 4 remained the same, and 4 were classified lower, but only within, not across, categories.

In the second study (Sulzby, 1985), the issue of stability of reading behaviours across books, and the issue of the developmental process were addressed. The subjects were 32, two to four year olds enrolled in a privately-operated suburban day care centre who were observed reading two storybooks across the school year. Half of the subjects came from homes in which the parents' educational level was high school or lower. This half were from single parent homes, and homes with diverse backgrounds. Most subjects were considered low income. The children were interviewed individually using audio and video taped reading of two storybooks. The results indicated that there was reasonable stability across storybooks, and that subcategories were related far more frequently than would be expected by chance.

When comparing the results of these two studies, Sulzby (1985) suggests that her classification scheme appears to differentiate reading attempts across age levels. However, she points out that more time and thought need to be devoted to picture and print-governed aspects of literacy development and the relationship between them. In spite of these qualifying remarks, Sulzby's research has begun to characterize young children's early reading behaviours in a new manner. The research has uncovered developmental trends within children's holistic interactions with
storybooks during the period preceding and leading up to conventional reading. Four conclusions can be drawn:

1.) patterns were found that indicated that children progress from treating individual pages of storybooks as if they are units to treating the book as a unit, using speech that builds a story across the book's pages.

2.) the behaviours described appear to have some stability across storybooks.

3.) the behaviours appear to be developmental in that patterns differ for different age groups of children.

4.) the development that was observed in this inquiry appears to make sense in light of theoretical ideas about general development and language development in current research.

Sulzby's results also seem to confirm findings made by Masonheimer, Drum and Ehri (1984) that attending to the print itself seems to be a late developing behaviour.

**Emergent Writing Research**

Having discussed emergent reading, both interactional and independent, the focus of discussion shifts to emergent writing, in particular: (1) writing development from early preschool to formal instruction; (2) individual differences within writing development; and (3) the role of oral language in the process of writing acquisition.

In the mid 1970's, an important concept to teach beginning readers was that writing was talk written down. However, educators began to realize more and more that the structure and function of oral language were important in writing success. Oral language served as the basis for
writing research. It was also assumed that young children's writing processes were similar to those of adults and that writing involved the communication of a message which was at least partially formulated before pen touched paper.

Studies since the 1970's has redefined these ideas. Researchers now believe that writing abilities do not occur naturally, or within the child alone, but are strongly influenced by interactions within adult/child relationships. Vygotsky (1978) posited that when a young child receives help in writing from a collaborator, both could be said to inhabit the "zone of proximal development." The child must receive assistance if she/he is to succeed. With collaboration the child not only succeeds, but encounters problem solving strategies that may eventually be internalized and used later independently. Clay (1975) provided a detailed description of how early writers' scribblings become progressively more print-like. She saw in young writers a progression from composing unknown messages through the use of signs, to the formulation of intended spoken messages, and then a search for specific signs to fit those messages - the spoken message ultimately beginning to control the writing process. These hypotheses form the basis of subsequent research into emergent writing as a developmental/interactive process - a process that involves more than the child alone, and more than just being taught.
Sulzby

Sulzby (1982) described differences between the storytelling and story dictation of emergent readers and writers during their kindergarten year as they made the transition from prereading to independent reading. Four language modes were found to be important in the transition from oral to written language - conversation, storytelling, dictation, and handwritten composition.

The purpose of Sulzby’s study was to establish whether kindergarten children distinguish between telling and dictation. Questions posed included: Do the distinctions between telling and dictation include adaptations towards the related language mode, and do these adaptations differ according to the level of the child’s emergent reading abilities? Subjects were 24 kindergarten children from an upper middle class suburban school. The children came from a literate culture. Reading and writing instruction were not part of the curriculum.

Data were collected in mid-October and mid-December. Each child was taken to a quiet spot and asked to write a story in three versions - told, dictated and handwritten. The assessment was based on four sources; giving the child a dictated story, rereading the dictated story, creating a handwritten story, and rereading the handwritten story. Protocols were scored according to intonation patterns and fluency. The telling and dictating were also described holistically.
There were two major findings. First, in regard to the distinction of modes, 12 out of 21 children clearly distinguished between dictating and telling. Second, when the dictated and handwritten stories were used, two groups of students were selected for high and low comparisons. The analysis showed that children viewed as high ability adapted their dictation toward handwritten composition and those viewed as low, adapted their telling toward conversation.

Sulzby's conclusions provide evidence that some children, by kindergarten age, have learned to make distinctions between oral and written language without instruction, and can distinguish between oral and written modes, and finally, make mode adaptations in a somewhat predictable direction. These data tend to support the fact that children's storytelling and dictation ability are useful indicators of their progress along the continuum leading to reading acquisition.

The purpose of Sulzby's second (1985) study was observe children before they were reading and writing conventionally, and trace their development. Twenty-four kindergarten children from a suburban, middle class school formed the sample - the same children that had been used in earlier research (1982). Children were interviewed individually and their interactions recorded and transcribed.

The study was divided into two sections. The purpose of the first stage of data collection was to obtain children's general knowledge about written language. The purpose of the second stage was to discover
knowledges that the children demonstrated as writers and readers. In the first stage, writing samples were taken, accompanied by the child's verbal explanation about writing and reading. This phase of data collection consisted of six parts:

- writing interview
- transition from writing to reading
- reading interview
- conversation sample
- prior knowledge about real and make believe stories
- pilot interviews about the child and audiences

The task in the second stage was to write a story in order to examine children's story production and behaviours during story writing. Three basic modes of composition - telling, dictating, and writing were used in order to examine oral and written language distinctions. Data were analyzed both quantitatively and descriptively in order to gain insight into what five year olds know about reading and writing prior to formal instruction. Results regarding their writing indicated that:

1. children acquire the ability to use handwriting as a result of abstraction rather than imitation.
2. children are aware of how writing is displayed graphically on pages.
3. children know about the communicative function of writing.
4. in general, children are aware of conventional standards. They made references to doing it “their own way”.

The children’s writing attempts showed evidence of representational systems such as those found in studies by Clay (1975). Scribbling, letter-like forms, strings of well learned elements, invented spelling, and conventional spelling were evident. The dictated stories showed some
features of oral language but also an awareness of the characteristics of written language. In general, the children could be described as having knowledges that were correct by conventional standards, and knowledges that were emerging toward the conventional, along logical paths based on features of written language, both in its graphic form and its function.

Results in regard to reading showed that children were emerging in reading ability as well. In reading from their own conventional writing, children performed in conventional reading task ways. Eye movements, focus on print and intonation were evident. Findings from this study confirmed Sulzby's earlier findings that reading from favourite storybooks could be ordered developmentally (Sulzby, 1985). While reading their own stories, handwritten and dictated, children's reading attempts could also be ordered developmentally. Throughout their reading attempts, children showed numerous knowledges about literacy that eventually become integrated into successful, independent reading behaviour.

Both descriptive and quantitative analysis indicated individual variation in both writing and reading. There was also evidence of patterns of development emerging toward conventional performance. It appeared that although children differ in how they develop, they differ in logical, not random, ways. Writing and reading appeared not to be mirror images.

A clear implication from Sulzby's studies is that children know far more about literacy than is acknowledged in our schools and instructional programs, but that they know it differently than we would expect.
Although middle class children appear to be successful even with programs that are not developmentally appropriate, less advantaged children are not. These children may need more variety in programming - perhaps provided with opportunities for discovery and with the kind of instruction that middle class children receive at home. The instructional needs of young children must be more closely investigated and addressed.

Barnhart and Sulzby

Barnhart and Sulzby (1986) investigated children's emergent writing and reading development by focusing on four factors:

- differences that appear in children from two income levels
- forms of writing used when children are asked to write isolated words, and words that constitute sentences or stories
- factors that the child considers necessary in order for his/her written production to remain
- the relationship between children's cognitive development and school readiness.

Two kindergarten classes from a Chicago suburb were chosen, one from a low income group (LIG) and one from a high (HIG), each having 16 children. Each child was interviewed separately between March and May and required to complete four tasks, each of which was audio-taped. The first task was writing isolated words, familiar and unfamiliar, and words in sentences. The second task was to write a story, and reread it. The third task consisted of three Piagetian tasks - conversation of number,
seriation, and classification. The fourth task was the Metropolitan Readiness Test.

Results showed that, on most tasks, the HIG scored higher. The children from the high income group (HIG) held a concept of writing that represented a match with the adult conceptualization of writing and were better able to write and reread a story. When looking specifically at the writing forms used, keeping in mind Clay's (1975) hierarchical structure outline of conventional spelling, invented spelling, patterned or random letter strings, letter-like units, scribble and drawing, there were small differences when children were asked to write familiar words, increasing differences for more difficult words and sentences, and marked differences when asked to write a story. With more difficult words such as “caterpillar” or “between”, no subject used conventional spelling, but more children from the HIG used invented spelling than the LIG, who used letter strings. The stories between the two groups displayed a qualitative difference, with the high income group more able to reread their stories.

It is important to note that the researchers found that although a variety of writing forms were used, the nature of the writing style was not always consistent with the child's conceptualization of writing. Some children who used conventional spelling seemed only to be presenting "fixed forms" or letter strings without the use of underlying strategies. The results of the Piagetian tasks, and readiness test performance correlated with performance on the writing tasks.
The authors found that as the demands of the writing tasks increased, the forms of writing appeared less mature, more varied and group differences appeared greater. The study seemed to support the notion that although there is a developmental nature to children's early writing, this development may be quite complex. Children may simultaneously hold multiple hypotheses at various levels of written language development, allowing them to draw from these to suit the demands of the task. The differences seen in this study between children of varying income levels could have potential implications for instructional programming issues in schools - the design of instruction and the assessment of progress.

Summary of Emergent Literacy Research

Knowledge and understanding of emergent literacy continues to be revealed. However, there is a growing awareness of central themes that predominate. These themes include: the importance of social interaction to development, the developmental nature of emergent reading and writing, and the development of knowledges that are conventionally correct and knowledges that are emerging towards conventionality. The developmental arrangement of these processes appears to be either sequential or simultaneous, or both, and is strongly influenced by individual variations and purposes. Clay's (1975) representational stages of writing and Sulzby's (1985) emergent storybook reading behaviour
sequences appear to form the foundations or approximations of this framework. Because of this new information on early literacy, themes such as the need for instructional programming revisions, both in design and in assessment, predominate.

Sulzby's (1985) conclusion that young children learn to read and write not so much as a transition from oral to written language, but as a transition within oral and written language, speaks to the complexity of development. She concludes that children themselves constitute the best source for learning about the relationship between oral and written development when they are studied in the process of their own literacy development. We can conclude, though, that there are three general types of experiences that help young children learn about reading and writing:

1. interaction with adults in speaking, listening, reading and writing
2. independent explorations of print - initially through pretend reading, and scribbling, and later through rereading a familiar story or composing messages with invented spelling
3. adult modeling of language and literacy.

This being true, what happens to children who enter school without these background experiences? If, as the researchers have reiterated, there are developmental sequences to both emergent reading and writing, what happens to those children who have not been exposed to situations that would nourish that development? What happens to children who lack the models, the language exposure and interactive relationships in their
early development? The development of emergent literacy needs meaningful interaction with literate people in a social context both at school and home - a context in which literacy is esteemed as valuable.

Hurst, (1982) seems to capture principles for nurturing literacy that can be applied in classroom settings from kindergarten through the elementary years. These can be said to set the stage for optimum literacy development:

1. provide a warm social setting
2. immerse learners in a literate environment
3. accept and encourage successive approximations of literacy
4. encourage self selection of materials and topics
5. respond to intended meaning as an absolute priority
6. emphasize the process rather than the product
7. expect a developmental progression along the learning continuum
8. evaluate individually and longitudinally.

Along with these principles must come an understanding of how the reading/writing process evolves and a familiarity with teaching strategies that can foster that development. Dobson, (1986) suggests that literacy must be viewed as a joint development of reading and writing with each supporting the other and with transfer of strategies occurring in both directions. At early reading levels, writing helps improve reading by focusing attention on print.

Once confidence and skill improve, the writer/reader can move into unfamiliar storybooks and switch from the dominate use of meaning to the use of visual information and knowledge of letters and their sounds. At
higher levels, reading and book listening help improve writing. Teaching strategies that provide demonstrations and opportunities for adult/child interactions in the context of real reading and writing must also be evident. Such instructional strategies might include providing:

1. morning messages which are tied to the immediate experience of the child and offer a meaningful and functional text for modelling writing and reading.
2. daily story times for vocabulary and concept building which can be supported by discussions, story grammar instruction, and semantic mapping.
3. daily opportunities for independent reading which can develop confidence, skills and fluency. Wherever possible one to one adult/child involvement would enhance the process through interaction and feedback.
4. daily opportunity for writing.

These learning opportunities must be tied to tasks that are developmentally appropriate for the child, and contained in a content environment that is stimulating and interesting. Although literacy comes in general stages, children pass through the stages in a variety of ways and at different ages, and instruction must take this into account. All the strategies should reflect interaction with adults - speaking, listening, reading, writing, independent exploration of print and adult modelling of language and literacy - the three general types of experiences that Sulbzy (1985) identified which help children learn about literacy.

These generalizations regarding the elements that influence early reading success serve as essential components to include in developing instructional programs for beginning readers, especially those students
identified through screening tests as likely to be low-achievers. They will be re-introduced in Chapter 6 when implications for future practice and research are discussed.
Chapter 3

Marie Clay’s Early Research and Perspective on Reading / Writing Development

Evidence from emergent literacy observational studies (Heibert, 1981; Mason, 1980; Mason, Stewart, Dunning, 1984; Masonheimer, Drum, Ehri, 1984; Morrow, 1982, 1983, 1987; Sulzby, 1985; Teale, 1987) indicates that children acquire critical concepts about reading and writing from their daily experience long before they reach the age of formal schooling. They learn about stories, about the way print works, and about important sound-letter relationships through functional or authentic experience with written language. These concepts seem to “emerge” from experience, thus the term “emergent literacy” (Clay, 1979, 1991; Teale & Sulzby, 1986). Marie Clay’s research from the 1960’s through the 1990’s has provided a wealth of data and insight into how early literacy skills can be observed and assessed. Clay (1982) describes a process as complex as early reading/writing as one which presents many opportunities for missing links, weak links and devious routes to be taken. Rather than allowing children to flounder, thus creating a sense of failure and frustration, Clay proposes accurate monitoring at the earliest stages of literacy learning to ensure the earliest
detection of difficulties. Once difficulties are discovered, teaching effort must be intensified and individualized in order to establish fundamental skills (Clay, 1982). Based on years of research and writing, Clay has concluded, as have other emergent literacy researchers, that learning to read is a developmental, step by step process of skill and habit formation - not a product of hidden insights (1972).

Marie Clay's research into understanding how children learn to read began in New Zealand in the 1960's. The school system there is such that children enter school on their fifth birthday rather than at a set time of the year - September. Clay was interested in the development of children's reading and writing behaviours during the year from their fifth to sixth birthdays. In 1962, she posed the question: Can we see the process of learning to read going wrong within a few months after school entry? Clay set up a pilot study to answer that question (1963). Intrigued by her results, she began a longitudinal study to record observable reading/writing behaviours during the time from five to six and subsequently on the child's sixth, seventh and eighth birthdays. Similar research was carried out in 1968, but this time, tracking followed the literacy development of children from different language backgrounds (Samoan and Maori). Clay looked at children's use of visual clues and ability to self correct. From her data and observations she concluded that children who make good progress in reading have efficient information processing strategies. Clay then surmized that the process of learning to
read was going wrong for some children within the first months of school
instruction (1979). It became curious to her then why remedial programs
in New Zealand did not begin until age eight. However, before focusing
on what was going wrong, Clay felt it was important to understand early
reading acquisition when it worked for children. She described reading
with the following detailed definition - “a process through which language
and visual perception responses are purposefully directed in some
integrated way to the problem of extracting meaning from cues in a text, in
sequence, to yield a meaningful communication which conveys the
authors specific message” (Clay, 1979, p.6). In other words, reading is
both a message gaining and problem solving activity which increases in
power and flexibility the more it is practised.

Clay identified four specific abilities required for success in early
reading.

I. good control of oral language including words and sentence
structures, the ability to break up language into parts, and the
understanding of English sentence structures as so there can be an
anticipation of what will come next.

II. developed skills in visual perception/visual patterns ie. the ability to
decipher words, syllables, blends, letters.

III. a level of brain maturity and experience to enable coordination of what
is heard in language and what is seen in print ie. the speech to print
match.

IV. sufficient motor coordination of hand and eye so that the controlled
directional movement patterns, space formats, and punctuation
needed for reading are easily established. (1993, p.10)
Thus there are four different competencies that facilitate reading acquisition. These include: the ability to use language, both for meaning making, and understanding sentence structure; to process visual patterns; and to deal with print conventions. (Clay, 1993)

Early writing development involves the ability: to listen to one’s own speech to determine the sounds and the letters that correspond in order to write; to search one’s visual memory for the appropriate letter features, forms, and patterns; and to record those letters. Further, verbal ability is required to compose messages which is based on language competency (Clay, 1993). As with reading development, the importance of a language base, knowledge of visual print patterns, and the ability to connect sound sequences to visual print is evident in early writing development. Clay describes observable sequences found in writing development:

- drawing
- tracing over a model
- copying simple sentences
- remembering words which are used often
- inventing word forms
- writing most words without help aided by knowledge of the sound symbol relationship (1979, p.124)

Early writers must pay close attention to the details of print in order to construct words letter by letter. Close attention to the details of print helps develop the child’s awareness of letter sequences and features. This in turn helps develop early reading competencies (Clay, 1975). No specific acquisition sequence has been discovered by Clay. Rather engaged time on task is the key. “A child learns about letters, words and
word groups all at one time - initially in approximate ways and later with considerable skill" (Clay, 1975, p.19). The importance of involvement in the process can not be underrated. There are many facets of written language that early writers need to understand and learn:

- to understand that print talks
- to form letters
- to build up memories of common words
- to use words to write messages
- to increase the number and range of sentences used
- to present ideas within the spelling and punctuation conventions of English. (Clay, 1975, p.11)

Combined with these abilities needed for successful early reading/writing development, Clay identifies certain classroom characteristics necessary for nurturing success. One is a teacher with a master plan, the second is keeping meticulous records of each learner's progress, and the third is reading materials that are structured sequentially according to difficulty and form part of that plan. At the early reading/writing stage, Clay emphasizes the importance of teacher modeling and guidance to establish such necessary skills as following directional rules, establishing a secure speech to print match, and hearing sounds in words. Once a firm foundation is established and the child has internalized these concepts and is beginning to apply them independently, then the gradual release of responsibility from the teacher to the child can occur. Clay stresses that teaching emphasis at this stage is on the whole sentence, not individual words. Through exposure to real text and with guided
instruction, a variety of cues for word recognition are developed, for example, using: picture cues which provide a meaningful context, repetitive sentence patterns, memory for oral language, and initial sounds. Such behaviours are characteristic of the early reading stage and give way to other behaviours once the child moves to another developmental stage. "Pointing gives way to accurate visual locating, auditory memory for text gives way to visual memory for form, word by word reading gives way to phrasing and anticipation of sentence structures and picture cues give way to semantic and linguistic cues" (Clay, 1979, p. 144). In New Zealand, once a child begins to search and check automatically for meaning and begins to error-correct independently, she/he moves from teacher directed large book instruction to reading individual books which are sequentially ordered from least to most difficult. The child understands that all reading makes sense and that reading requires a variety of coordinated strategies to unlock the message.

Thus in the early reading stage a child learns to read using simple connected text - stories. He/She must: understand and use directional patterns (left to right in word analysis as well as following lines); connect written and oral language; be aware of visual cues and must actively search and check for cues (Clay, 1979, p. 246). Initially the child relies on memory for the sentence, page or story but then must begin to use strategies for cueing on unknown words. These strategies include:
meaning (Does it make sense?)
visual (Does it look right?)
letter/sound (What can you hear?)
sentence structure (Can we say it that way?)

Clay identifies some benchmark behaviours which need to be present in the child's reading abilities prior to moving from early reading/group instruction with teacher direction to more book related formal instruction. These include mastering directional movements, producing a nearly perfect rendering of a simple caption book, matching speech to text, locating a few familiar words and expecting what is read to sound meaningful. In other words, some synchronization of the visual, directional and speech aspects of reading and some indication of self-correction must be evident. In the process, the child should master a reading vocabulary of familiar words and sound equivalents for spelling and a set of letters to record those words. When instruction and direction from the sequential nature of New Zealand's early reading/writing program works, within a year, children who make good progress acquire these processes and begin to apply them, even though tentatively and unevenly at first. When the strategies are well established and used effectively we recognize the child as an independent reader. However, for some children, inefficient systems of functioning or responding develop in this time frame. It is on this group that Marie Clay has focused her attention in
developing the early intervention program called Reading Recovery.

The Observation of Early Readers and Writers

Clay believes that the systematic observation of early readers and writers is the most acceptable way to provide information regarding how the individual learners are progressing and what instructional modifications might be needed or appropriate (Clay, 1993). Clay favours "the systematic observation of learning as opposed to systematic testing which provides only an end result - a snap shot of capabilities, rather than an understanding of the processes occurring day to day" (Clay, 1993, p. 4). To inform instruction, teachers need to observe young children's responses during literacy instruction for:

1. competencies and confusions,
2. strength and weaknesses,
3. processes and strategies used, and
4. evidence of what the child really understands (Clay, 1993)

As with children entering school, early learners benefit from their teachers' understanding of what they already know and what they need to learn in order to progress from there. Clay suggests that to become observers of the early stages of literacy learning, teachers need to give up the idea of a short single assessment test
and look more to the observation of wide ranging behaviours which are needed and necessary for progress in literacy. Through her research, Clay developed such a tool which she named the Observational Survey - in her early books it was called the Diagnostic Survey. Through the use of such a tool in her research, Clay found that even after only one year of instruction the high progress readers "operated on print in an integrated way in search of meaning and read with high accuracy and high self-correction. While focusing on meaning they cross checked by looking for sound to letter associations" (Clay, 1993, p. 9). The low progress readers operated on a narrow range of strategies relying on memory for the language of text and paying no attention to visual details. They often lost track of meaning and began to operate in an inefficient way. These inefficiencies were then practised day after day and in a short time risked becoming automatic. Thus detailed systematic observation and recording of what a child can do in the first year of instruction is helpful in highlighting areas of concern so that close and individual attention can be provided to help the child operate in more appropriate ways.

The variety of tasks in the Observation Survey are virtually the same as those found on the Diagnostic Survey (1979). Clay has restated and strengthened her reasons for doing what she
recommended years ago and has included further research to support her ideas. Some of the terms have changed from observational tasks (1979) to assessment instruments (1993); from a Diagnostic Survey (1979) to an Observation Survey (1993); and from dictation (1979) to hearing sounds in words (1993). There have also been sections added related to how to record information over time. For clarity, the discussion that follows focuses on Clay’s Observation Survey (1993). (See Appendix 1.)

Clay’s Observation Survey. This survey provides a framework “within which early reading behaviour can be explored irrespective of the method of instruction” (Clay, 1993, p. 18). It consists of tasks which include:

- taking a running record
- measuring letter name knowledge
- testing concepts about print
- administrating a word test
- obtaining a writing sample
- seeing the extent to which the child is hearing sounds in words

These tasks can be used to supplement the observations that teachers make as they work in their day to day activities with young children. Clay stresses the importance of gathering this data on all learners before the end of the first year of instruction as this information covers the areas of learning “which underpin successful progress in reading and writing” (Clay, 1993, p. 20). Because a child’s learning progresses on several fronts at the
same time with various degrees of spurts and lags, it is very important to gather information from all areas of the survey. The observations of literacy behaviours are controlled, not casual, and the child’s attempts at text reading and text writing are of prime interest in looking at “the processes by which the child monitors and corrects his/her own reading and writing behaviours” (Clay, 1993, p. 21).

**Running records.** In taking a closer look at the tasks within the Observation Survey, the Running Record of text reading is pivotal. The Running Record is similar to Goodman’s miscue analysis (Clay, 1972). As the child reads, a check is made for each correct response and errors or miscues are coded as they would be when doing an informal reading inventory, except that only a blank sheet of paper, rather than an actual copy of the text itself, is required. Miscues are later analyzed for an understanding of the cueing systems (meaning, structure, visual) that the child is or is not employing. Once teachers have confidence and practice completing a Running Record, coding a child’s reading can be done anytime, anywhere and on any text. In order to look adequately at the behaviours and strategies a child is using to process text, it is important to have each child read three levels of text difficulty to provide valuable insights into:
• how the reader orchestrates effective reading (on easier materials - 95/100% accuracy)
• how processing and problem solving can be done (on instructional level materials - 90/94% accuracy)
• how and when effective processing breaks down (on more difficult materials - 80/89% accuracy) (Clay, 1993, p. 24)

As suggested in analyzing the child's error patterns, it is important to figure out whether the child is using information from the meaning of the message, the structure of the sentence and/or the visual cues, as well as whether the child self-corrects. When self-correction is evident, even inefficiently, it reflects that the child is self-monitoring for meaning. The absence of self-corrections is a sign of difficulty. Clay also advocates compiling the information gathered from a single session Running Record on easy, instructional and hard books onto a record form that graphically depicts progress over time.

**Letter identification.** Letter Identification is another task on the Observation Survey. Using a large print alphabet with both upper and lower case letters, responses are elicited from the child to show his/her knowledge, at that point, of the letter names, their sounds, and words that begin with each sound. The value of testing letter knowledge is to guide instruction. Once baseline information is gathered, instruction should be aimed at improving
knowledge of letter names and filling in the missing gaps so that eventually the child becomes automatic and can use the letter name information as a working tool.

**Concepts about print.** Concepts about Print is a check on what the child has learned about the way we print language (Clay, 1993, p. 47). Clay has developed two booklets as pre and post interview measures. The booklets are entitled *Sand* (Clay, 1972) and *Stones* (Clay, 1979). As the examiner reads, the child is asked to help by pointing to certain features, for example, the front of the book, a letter, a word, a sentence, the direction in which to read (left to right and return) and punctuation marks. Confusion in these arbitrary conventions of written language thus become evident.

**The word test.** The Word Test provides an opportunity to sample words that the young reader recognizes at sight. Clay devised a list related to the early books from the Ready to Read series used in New Zealand. However a list of the most frequently occurring words in whatever basic books are being used for instruction will provide a satisfactory and more valid source of information. Successive administration of the word list indicates whether progressive change is occurring in the child's accumulation of a reading vocabulary. Two alternative word tests have been suggested by Clay - *The Canberra Word Test* based on
high frequency words from the Sunshine and Storybox series, and the Ohio Word Test based on the high frequency words from the Dolch Word list.

**Writing sample.** Observations of children's writing behaviour yields a great deal of information about what they understand about print and print messages, and to what features of print they are attending (Clay, 1993, p. 57). Writing behaviour is a good indicator of the child's knowledge of letters, directionality and the ability to recall the details of letter formation and letter order.

**Test of written vocabulary.** In focusing on the child's early written messages, it is important to take three successive samples and rate them for language level, message quality and directional features. Another good indicator of early understanding of written processes is Clay's, Test of Written Vocabulary. The child is asked to write down all the words she/he knows in ten minutes starting with his/her name. The child then has control to share on paper a personal list of all the words he/she has managed to learn. From this the teacher can closely observe letter formation, visual memory for early words and the processes used in dealing with the task. If this writing observation is carried out at several points of time, at entry, after 6 months, and after 1 year, for example, a cumulative record of progress based on successive samples provides a good indicator of growth. When the child can write
more than 50 words, the value of such a test diminishes (Clay, 1993). The teacher then needs to examine writing performance in more traditional spelling and writing tasks such as analyzing a story or paragraph that the child has composed.

**Hearing and recording sounds in words.** The last task on the Observation Survey is Hearing and Recording Sounds in Words. Previously this was called the Dictation Task. This measure directs the teacher’s attention to the child’s phonemic awareness and assesses the child’s ability to represent sounds (phonemes) by letters (graphemes). The teacher tells the child a sentence to be written. The child is encouraged to write what she/he can hear in the words dictated. Scores reflect success in both hearing and recording those sounds.

**Summary sheet.** The Observation Survey Summary Sheet is then used to bring together and record the information that has been gathered on what the child can do and what is partially known. The results are translated under the heading of Book Reading (running records obtained at three levels and the analysis of cues used and cues neglected). Then the strategies that the child is using: (1) on text (from the Running Record and Concepts about Print); (2) with words (from Concepts about Print, the Running Record, Writing Vocabulary, Hearing Sounds in Words and Word Tests); and (3) with letters (from Letter Identification) are
recorded - both those that are useful and those that are problematic. Using this information a summary is written which indicates what the child can and can not do in relation to text reading and text writing. This information is then useful in identifying those children who are at risk, as well as providing valuable insight into classroom instructional programming, practice and direction.

For those children who are identified as not making progress, systematic observation procedures that have been described are not enough. It is important to use that information to provide a second chance program of early intervention. Such a program is Marie Clay’s Reading Recovery.

Description of the Reading Recovery Program

Developed in New Zealand by Marie Clay, Reading Recovery provides short term help that has resulted in accelerated progress for at-risk early readers and writers. Reading Recovery is begun after one year of formal instruction. The program does not have a set of materials or a step by step curriculum, but instead depends, for its effectiveness, on the trained teacher’s ability to observe reading and writing behaviour, to infer the child’s intentions and underlying cognitive processing and to make instructional decisions including whether the teacher needs to adjust her/his
own behaviour in response to the child. Instruction starts with what the child can do based on the detailed observations of the child as a writer and reader - the Observation Survey, and focusing on strengths.

Quality Reading Recovery provides practical programming to intervene and teach the child appropriate learning patterns early on. It is characterized by one to one instruction during daily 30 minute lessons in which the focus is on independence - never doing for the child what he/she can do independently and on being taught "how to". The children are taken out of their regular classroom for individually planned lessons. The goal is to help children discover effective reading and writing strategies. During daily 30 minute lessons, a child reads several short books having natural, predictable language patterns, and composes and writes a story. Every day the child is introduced to a new more difficult book which she/he will be expected to read without help the following day. Intervention continues until the child has developed strategies for independent reading/writing and can function satisfactorily in the regular class.

Reading Recovery is an early intervention program designed to dramatically reduce the number of children with literacy difficulties. In New Zealand, it is a second chance prevention program which helps young, low achieving children by providing
daily individual teaching in addition to classroom instruction. All children need the opportunity to move into a good literacy program at their own pace with sensitive well-trained teachers in the first year of school. The term “recovery” implies a deliberate attempt to have children who are making unsatisfactory progress able to perform within average levels in their classroom by the end of their 12-20 week program, to profit from existing inclass programs and to continue to progress satisfactorily. This means that those children who have not started on efficient patterns of learning can catch up and become independent learners.

Reading Recovery arises out of an extensive program of research and development carried out by Marie Clay from the University of Auckland. This research began in 1976 and was requested by teachers who wished to explore and document the range of variability of reading and writing behaviours in six year old children who were having difficulties. The initial research studied 122 six year olds with a variety of presenting problems such as poor language, inconsistent directionality, difficulty hearing sound/sequence, and inadequacies in understanding the speech to print match. Follow-up research on these children was conducted one and three years later. A set of teaching procedures for dealing with children’s difficulties gradually evolved after a wide range of techniques were piloted, observed, discussed, written, modified
and related to theories of learning to read and write. After one year, the discontinued Reading Recovery children had accelerated and performed at levels comparable to their higher achieving peers. Follow up studies showed that discontinued Reading Recovery students, regardless of ethnicity, socioeconomic status, or linguistic background continued to progress at levels comparable to the average students.

In 1978, program field trials were run in five schools. As a result of the success of these trials, the project was enlarged and was operating nationally by 1983. Reading Recovery has, in the 1990's, become part of school programs in Australia, the United States, Canada and England.

Intervention begins with the Observation Survey which uncovers what a particular child controls and what operations and strategies he/she should be taught next. It is on the basis of this summary of information that children are identified as in need of intervention and that baseline information for programming, delineating strengths and weaknesses, as well as useful, problem strategies is established.

The program is run daily for approximately 12-20 weeks and is based on 30 minutes of one to one instruction given by a specially trained teacher. Clay feels that individual instruction is a necessity with low literacy achievers in order to get the best
results: reinforcing what is good; and quickly detecting interfering
strategy use. The principle is to instruct for a better response
before a handicapping response becomes practiced and automatic
(Clay, 1993, p. 8). Thus, although programming differs for every
child, the basic focus is on comprehending messages (in reading)
and constructing messages (in writing). Through daily instruction
with continuous text, children learn to deal with the subcomponents
of each task. In the initial two weeks the teacher works with the
child on what he/she already knows in reading/writing in order to
build rapport, develop confidence, find a readable text, build
fluency, encourage writing and gather baseline data. Clay refers to
this time as “roaming around the known” (Clay, 1993, p. 12).

Once the period of “roaming around the known” has occurred
it’s time to move into active instruction. As outline previously, the
daily lesson follows the following tutorial structure of activities:

- rereading two or more familiar books
- reading yesterday’s new book and taking a running record
- letter identification and/or word making and breaking
- writing a message (including hearing and recording sounds in words)
- cutting up the message, to be rearranged
- new book introduced
- new book attempted

(Clay, 1993, p. 14)

As the program progresses, the child’s behaviour and instructional
focus will continue to grow and change, although the lesson format
and sequence will remain as has been described. Reading and writing in the early acquisition stage yields reciprocal gains in learning about print. Children in Reading Recovery write messages everyday. Including a writing component in the lesson, forces children to attend to sound sequences, letter detail, letter order, letter sequences, and the link between oral language and print (Clay, 1993).

Clay developed twelve specific teaching procedures to use when working with children who had been at school for one year and who were unable to make satisfactory progress through classroom based instruction alone. “These procedures are arranged so that the teacher can turn to the approach she requires for a particular child with a particular problem” (Clay, 1993, p.19).

Not all procedures are appropriate for all children so the teacher must select the activities needed. Otherwise, time will be lost in completing unnecessary tasks. Clay also identified four particular problems which could be encountered and made suggestions for each. The teaching procedures and particular problems fall under the following categories (Clay, 1993, pp.19-57):

Procedures

1. Learning About Direction
   ie. learning to attend to print in ways consistent with rules of written language
2. Locating Responses
   ie. learning to attend to, focus on or point to one word after the other

3. Spatial Layout
   ie. learning to use the space on a page

4. Learning to Look at Print
   ie. attending to details in print respecting the rules of direction, the order of letters and the order of words

5. Writing Stories
   ie. in composing and writing her/his own stories the child constructs word from their parts

6. Hearing and Recording Sounds in Words
   ie. writing helps the child think about and produce sounds in words

7. Assembling Cut-Up Stories
   ie. reassembling/rereading the cut-up stories

8. Reading Books
   ie. both practicing complex behaviours on familiar texts and using strategies with support on new texts through reading/rereading books, rereading own stories, and reconstructing own stories

9. Teaching for Strategies
   ie. providing guidance when reading in order to develop monitoring and problem solving strategies using the 4 cueing systems
      - Does it make sense?
      - Does it look right?
      - What can you hear?
      - Can we say it that way?

10. Linking Sound with Letter Sequence
    ie. constructing words in writing and analyzing words in reading through modelled guided instruction of letters, sounds, clusters of letters chunks of sound
11. Taking Words Apart in Reading
ie. analyzing new words

12. Teaching for Phrasing in Fluent Reading

13. Teaching for Sequencing Problem
ie. attending to cues in print from left to right

14. Building Strong Skills which Block Learning
ie. preventing inappropriate reading and writing behaviours from occurring

15. Teaching Hard to Remember Words and Letter Name/Sounds
ie. using the child’s associations, arranging for over learning, arranging for repetition using games.

16. Children who are Finding Reading and Writing Progress Difficult
ie. appropriately addressing a child’s strengths and weaknesses as revealed in the Observation Survey, adequately focusing on writing, fostering independence.

These sixteen areas were identified in Clay’s early writing (1979) and remained in their entirety in her later book (1993) with some terminology changes and with elaboration in some areas to enhance clarity. It is important to note that there is overlap between several of the teaching procedures.

Deciding when to discontinue a child from Reading Recovery is to be made in consultation with the child’s classroom teacher. It is important and essential that the child have a set of strategies over which she/he has some control (Clay, 1993, p. 58):

- directional movement
- one to one matching
- self-monitoring
- cross checking
- use of multiple cue sources
- self-correction

Usually the child ready for discontinuing can read a book at a difficulty level similar to the average child in his/her classroom year of instruction and can write at least two sentences with minimal teacher help. This information can be confirmed by having an independent teacher give the child the Observation Survey and comparing the results to earlier testing. Monitoring the child's progress several times a month once the child is discontinued is essential. Some children will not be ready to discontinue for obvious strategy and independence-related reasons. For them, the need for continuation with new learning goals will be evident.

**Teacher Training**

The training of the Recovery teachers is essential to the implementation of a successful Reading Recovery program. Those undertaking the training are good, experienced primary teachers. The year long course begins with guidance in administrating and interpreting the Observation Summary followed by biweekly inservice sessions to train teachers in the use of Reading Recovery procedures. At the same time, and throughout the year, the teachers teach Reading Recovery children, learning on the job.

The outcomes of the course are that teachers:
1. Develop understanding of the reading process
2. Become competent in using the specific Reading Recovery teaching procedures for individual programs
3. Are able to evaluate their instruction and that of their peers.

In the year following training Reading Recovery teachers attend support sessions twice a term to discuss the main assumptions and practices of the programs and its operation in the schools. Marilyn Adams (1990) in her book *Beginning to Read: Thinking and Learning about Print* highly values both Clay's theory and subsequent practical application. Adams sums up Reading Recovery's value in the following quote.

The *Reading Recovery Program* has been methodically designed to establish and secure that whole complex of lower order skills on which reading so integrally depends. But its goal extends much further. The program is intended to help children learn to monitor their own reading; to develop the habit of rereading a word, phrase or passage when unclear; to know not only that they can discover new words and meanings but also that they can cross-check their discoveries, confirming or correcting them on their own; and to develop a strong sense of how to search deliberately and methodically for information in letter sequences, word sequences or meaning when needed. (Adams, 1990, p. 421)
**Reading Recovery Follow-up Research**

The aim of Reading Recovery is to provide a second chance, early intervention program for children who have not begun to read and write in New Zealand after one year of school instruction. In providing such children with intensive daily individualized instruction, Clay's hope was that these children would make accelerated progress so that the Reading Recovery children would leave the program with average levels of performance in writing and reading in 3-6 months. Such an expectation went against normal expectations for low achieving students. It is important to note that all children with the poorest performance at age 6 were selected for instruction, including bicultural Maori children, bilingual Pacific Island children, and children with disabilities awaiting special class placements. It was also hoped, against normal expectations, that many of the Reading Recovery children would retain average progress three years later.

Since 1976, the Reading Recovery program in New Zealand had been developed, expanded and closely studied through research conducted by Clay and her colleagues who explored its impact and effectiveness. In 1976/77 the development project was underway, followed by field trail research in 1978, and one year follow-up research in 1979. A replication study was undertaken in 1979 which was preceded by an analysis of lesson content in
1978. A 3 year follow-up study was completed in 1981, followed by national monitoring from 1984 to 1988 and finally, the subgroups study in 1991 (Clay, 1993). Reports of the Reading Recovery research and development phase, and the two follow-up studies have supported the program's effectiveness across ethnic groups, and led to its adoption in 1988 as the national early intervention program in New Zealand. Reading Recovery now reaches approximately 20% of the six year olds in New Zealand (Clay, 1993).

The aim of the initial development project (1976, 1977) was to record how teachers worked with children having difficulty learning to read in a one-to-one situation. The children had just completed their first year of literacy instruction. A detailed observation and record keeping of the children's reading behaviour and the teacher's responses was maintained. In the first year, one teacher was involved and in the second year, six teachers participated (some of whom were reading advisors and university students). Each of the six teachers taught two children individually and met as a group once every two weeks to: observe each other using a one way screen, and discuss and challenge procedures and pacing. As a result, "a large number of techniques were piloted, observed, discussed, related to theory, analyzed, written up, modified and in some cases discarded" (Clay, 1993, p. 61).
The resulting techniques were carefully graded into sequences, and the process of refinement continued over the next three years. Each child's program differed depending on his/her reading level and areas of strength and weakness. The results of the development project pointed to five phases that were investigated in the next stage of the project. These were:

1. **organization** - the need for more intensive programming than twice weekly.
2. **teaching** - the need for a consolidation of the teaching procedures to provide better guidance for teachers.
3. **efficient choices** - the need to choose only those procedures that were of benefit to a particular child.
4. **conceptualizing the goal** - the need to understand that the goal is to develop a set of behaviours which help the child process text independently - a self-extending system.
5. **transfer or generalization** - the need to assure that the discontinuing of children from tutoring results in ongoing progress in the classroom. (Clay, 1976, 1977)

Given this focus, the next step, called the field trial research, in 1978, was to demonstrate that the Recovery procedures worked and that children made progress. Clay felt it was necessary to demonstrate that such an early intervention program could work in different school settings, and that progress results could justify one-to-one teaching.
Five suburban schools were chosen for this phase of the project, each with a different population and geographic location.

Each school chose an experienced primary teacher to be released for Reading Recovery training. Two hundred and ninety-one children were tested around their sixth birthday using The Observation Survey. These children were selected because they scored the lowest in text reading in the school. Of the 291 children, 122 were given special assistance. The children received individual daily teaching based on their learning needs as outlined in the Observation Survey and the structured set of activities outlined in the Reading Recovery tutorial plan. Teacher training was ongoing, based on observations of the children as well as demonstrations of new procedures and discussions. Record keeping was detailed for each child and included:

- an Observation Survey Summary Sheet Report
- a Lesson Record for each session
- one Running Record of text reading for each session
- a graph to record Book Level progress

(Clay, 1993, p. 64)

Although encouraged, parental contact was minimal. Children were discontinued when their Reading Recovery teacher judged that they were able to work with success in their classroom and when an independent examiner readministered the Observation Survey.
At the end of the year, all of the 291 children were retested by two independent examiners using Book Level and Reading Vocabulary as two measures of general reading progress, in combination with the Observation Survey tests - concepts about print, letter identification, writing vocabulary and dictation test. It was interesting to note that there were no data collected on the child's independence or skill level in connected writing. Comparison was then made between three groups - the Control Group, those in class and not selected for tutoring, the Discontinued Group, those who had been tutored for 10 -15 weeks then went back to class, and the Not Discontinued Group, those who required further Reading Recovery programs. Clay found statistically significant increases in all areas for all three groups from initial to final testing in all areas. "The pupils who received individual tutoring made gains which equaled or exceeded the gains scores made by their classmates" (Clay, 1993, p. 67). Of the 282 children, the Reading Recovery program was unsuitable for 7 children because of other factors, such as ESL and children needing possible special class placement.

One year later, in follow-up research, the progress of these 282 children was reassessed. Findings that compare initial, final, and follow-up testing indicated that the discontinued group made significantly better progress than the control group.
A replication study (1979) involved newly-trained Reading Recovery teachers in forty-eight schools. The teachers allotted less time to Reading Recovery per week as well as per day - lesson time was reduced from 40 minutes to 30 minutes and as a result, fewer but more challenging children were targeted. The research question was "Could the results of the field trial research be replicated in a large number of schools?" The 48 schools in the study which had teachers in training in 1979 were listed alphabetically, and divided into 3 groups (B,C,D) providing 3 replication samples. The progress of these groups was also compared with the research findings of 1978 (Group A). Using the same assessment tools of the field trial study, Clay found the results in 1979 replicated the 1978 findings, although lower entry scores necessitated longer individual tutoring time.

To answer the questions of policy makers and researchers as to whether the Reading Recovery program could be delivered as designed, in 1981 the New Zealand Department of Education approved a research grant for the analysis of Reading Recovery field trials records from the (1978) study in order to evaluate the program. Of the 122 discontinued and not discontinued children, 68 records were selected for analysis to ascertain whether programming differed for different ethnic groups (Maori, Pacific Island, and European). Analysis revealed that there were minimal
differences. However, differences between what was recommended and what occurred during instruction were great. Instructional variances included: not providing lessons daily, and not carrying out message writing in every lesson. Criteria used to evaluate the efficiency of the program related to the average number of lessons per group (22-25), the number of books read per lesson (2-2.5), new books introduced per lesson (1.12-1.23), and measure of text difficulty (mean accuracy level of 94-96%). These findings all fell within the Recovery program recommendations.

In 1981, the three year follow-up research questions included:

- Were the Reading Recovery program children from the 1978 study continuing to progress with the average group in their classes?

- Was the Reading Recovery program suitable for Maori children?

The children chosen were the 68 Moari, Pacific Island and European children studied in the 1978 analysis of lesson content study. Results were extracted from previous studies to report on initial discontinuing (1978) and one year follow-up testing (1979). Tests used at this three year level included the Burt Word Reading Vocabulary Test, the Schonell R1, and the Peters Word Spelling Test. No text reading was assessed. Assessment was given by
independent, trained examiners. Some of the children studied were 8 and 9 years old, and thus according to New Zealand placement procedures, not all were at the same academic class level. However, all the European and Pacific Island groups were within appropriate age bands for class placement and although the Maori children had levels that were lower, their scores were satisfactory for class levels.

It is interesting to note that connected reading strategies' use and comprehension of text were not analyzed, nor was the child's competency in the writing process - both mechanics and message. Clay's view of early reading/writing is one which advocates for a strong strategy/self extending base for successful later progress, and yet this did not appear to be considered at the three year mark.

In a Reading Recovery Subgroups Study (1991), the issue of predicting future progress from Observation Survey scores, either high or low, or from a student's mid-Reading Recovery program level (after ten weeks), was examined. Results indicated that predictions of outcome status were likely to be wrong in a significant number of cases if the Observation Survey and book level after 10 months were used as predictors. A full program of instruction was deemed the best practical indicator of future success.
In overview, Reading Recovery in New Zealand went through three years of development (1976-1979), four years of research trials (1980-1984), and four years of national monitoring before the Department of Education adopted a policy to expand the program to a national level (1988). The overall goal for early learners within the New Zealand education system was first to deliver good literacy instruction in the classroom, and second, to provide an intensive supplementary program delivered by trained classroom teachers for low-achieving children. The number of school children helped by Reading Recovery will depend on the resources an education system is prepared to allocate, the quality of staff training, the effectiveness of program implementation, and the success of professionals in explaining benefits both for learners and the educational system (Clay, 1987).

A national evaluation of the Reading Recovery program in New Zealand was released by (Glynn, Ballard, Behtune, Crookes, and Smith 1989). This was a longitudinal study that examined the effects of Reading Recovery on a representative sample of 42 target children in ten schools. Each target child was paired with a comparison child at the same school who was approximately the same age and who scored at the same lower end of the distribution of scores from the Observation Survey, but for whom a place in Reading Recovery was not available. The primary dependent
variables used in the study were reading book level and performance on an oral cloze task. For both the target and comparison children, these measures were assessed when the target children were discontinued and again at the end of the year and each term of the following year. The results of the study showed that although the target children achieved greater gains in reading book level at discontinuation, the positive effect had disappeared a year after the target children had left the program. It was concluded that "the net gain which is attributed to Reading Recovery appears to be quite modest by a year or so after discontinuation" (Glynn et al., 1989, pp. 83-84).

Critiques

Roth Clay's and Glynn's evaluations of Reading Recovery have come under criticism from a number of educators and researchers. A major concern has involved the lack of emphasis on metalinguistic abilities, both within the Reading Recovery programming structure and subsequent assessment procedures. Tunmer (1990) has identified the importance of certain metalinguistic skills in the development of early reading and spelling skills - namely phonemic awareness or the ability to reflect on and manipulate phonemes, phonological recoding or the ability to translate letter(s) clusters into phonemes, and syntactic awareness or the ability to reflect on grammatical/ semantical
features of sentences. In order to read unfamiliar words, beginning readers need syntactic awareness skills to use sentence clues, and phonological awareness skills to use graphophonemic clues. In order to write unfamiliar words, beginning readers need phonological awareness skills to use and manipulate correspondences between graphemes and phonemes.

Some metalinguistic skills are addressed in the Reading Recovery program, for example, phonological awareness is addressed through the use of the Elkonin (1973) technique in spelling (sound boxes) and daily interactive writing. Syntactic awareness is developed through rearranging cut-up sentences, through modeling the decoding strategy - "can we say it that way?", and through the use of oral cloze procedures. The extensiveness of this focus is questioned however, as is the systematic teaching of skills, and the monitoring of this skill development. A further drawback in the Reading Recovery evaluations, is that neither phonological awareness nor phonological recoding, nor syntactic awareness skills have been assessed independently.

It seems likely that children who enter Reading Recovery are particularly deficient in metalinguistic skills, and phonological recoding ability. The ability to reflect on sentence structures (ie. syntactic awareness) in combination with emerging phonological recoding skills is essential for acquiring the grapheme - phoneme
correspondences needed for word recognition skills. This would suggest the need for intensive, and systematic instruction in metalinguistic skills in order to derive maximum benefit from Reading Recovery. Tunmer (1990) suggests that the intensive, one to one program of instruction that children receive in Reading Recovery temporarily increases the rate of reading development, but has little or no effect on the development of those reading related skills that are essential for lasting progress: phonological awareness; phonological recoding; and syntactic awareness. Nicholson (1989) summarizes that the overall mix of Reading Recovery activities may not devote sufficient attention to word level skills.

Iversen and Tunmer’s (1993) research investigated whether the Reading Recovery program was more effective if systematic instruction in phonological recoding skills was incorporated into the program. First grade at risk readers were divided into 3 matched groups of 32 children each: a modified Reading Recovery group; a standard Reading Recovery group; and standard intervention group. The children in the modified Reading Recovery group received explicit code instruction involving phonograms. Phonograms are the common elements in word families (for example, the letter sequence ‘ight’ in light, fight, and might). Results were obtained upon discontinuation through the
administration of the Observation Survey, the Dolch Word List, and three phonological processing measures. The three phonological processing measures that were administered to the children were: (1) the Yopp-Singer (1988) phoneme segmentation test; (2) the Bruce (1964) phoneme deletion test; and (3) a pseudoword decoding task in which the child was asked to name single syllable synthetic words. The results indicated the although both Reading Recovery groups achieved levels of reading performance required for discontinuation of the program, the modified Reading Recovery group reached these levels much more quickly. The results further indicated that the children in the Reading Recovery groups performed much better on all measures than did the children in the standard intervention group, although it is important to remember that the latter was group and not one-to-one intervention. In comparing the Reading Recovery group children to those children in the classroom control group, results indicated that the Reading Recovery children did significantly better, especially on phonological awareness measures. Results confirmed that the children selected for Reading Recovery were particularly deficient in phonological processing skills, and that their progress in the program was strongly related to the development of these skills.

Findings further indicated systematic instruction in phonological reading skills was more effective that the incidental
instruction that would normally arise in the context of reading connected text. This view is contrary to Clay's (1985, 1991) argument that the incidental word analysis instruction and writing activities in the Reading Recovery program are sufficient to develop knowledge of the alphabetic code. Despite this criticism, the study outcomes demonstrated that Reading Recovery can be a highly effective intervention program, and that one-to-one instruction has been shown to be much more effective than either classroom, or small group instruction.

Despite the extensiveness of Clay's short term and longitudinal research, her results have also come under criticism because of concerns related to the empirical design of her research. One such major weakness is Clay’s failure to assign children randomly - half to the experimental and half to the control groups. This random assignment is needed to control for the error factor as many children who scored poorly on reading tests even after one year of instruction may turn out to be good readers. In the Reading Recovery research (1979), Clay's experimental group consisted of all the children who scored poorly on the Diagnostic Survey and thus her control group was not a matched group of poor readers but rather a more able group of readers and writers from the classroom (more able according to the Diagnostic Survey). Nicholson (1989) concludes that because of this, many
Reading Recovery children may have made progress even without intervention. This design flaw made Clay's initial research data (1979) unclear. It is surmised that the performance of the Reading Recovery group could be “due to error in the initial selection of children for intensive intervention” (Nicholson, 1979, p. 95). Clay responded that “Reading Recovery could not be compared to a competing program as none existed” (Clay, 1991, p. 60). For Clay, two comparative options existed, either that the control group be drawn from children unable to be given the program (which was deemed unethical after the first year's success) or from other children in the same age group in the classroom, which allowed for comparison with the age cohort in their school. Clay concluded that her unconventional research design was the only option. This was in line with the aim of the program, which attempts to bring children to average levels of achievement. Not using random assignment also helped deal with the issue that each school has varying ‘average’ levels.

Criticism has also been articulated concerning Clay’s evaluative measures particularly because the measures used to ascertain children’s progress in Reading Recovery are closely related to what the Reading Recovery children are being taught, for example, the Diagnostic Survey sub tests and the running record of the text reading level. This means that children tutored in Reading
Recovery are more familiar with the assessment measures than the children in control groups (Wasik & Slavin 1990, p.187). A further criticism is that no information is provided about the students' progress on other tests to ascertain whether reading skills generalize (Center, Whedall, Freeman, Outhred, and McNaught, 1995). Clay (1997) counters this criticism by suggesting that standardized tests are inappropriate to use with beginning readers.

It also appears that there is bias in favour of skills taught in Reading Recovery most likely at the lowest levels of text reading - using clues, story patterns, and concepts of print (Wasik & Slavin, 1993). Research has indicated that the average increase in text level for a set time frame is greater for lower level texts that higher level texts (Glynn et al., 1989). Thus it can be assumed that children who begin at a lower level in the developmental continuum will make greater gains in text level than children who start higher up. In Marie Clay's unconventional design, the control and experimental groups were reading at different places along a developmental continuum, thereby making a linear comparison inappropriate.

Other methodological concerns which have been raised relate to Clay's experimental group, which contained only those students who had been successfully discontinued from Reading Recovery. Approximately 30% of the children for whom Reading
Recovery had not been found to be appropriate (those repeating and those already identified for special education) and who were either removed or not successfully discontinued from the program were excluded. Thus there is a strong possibility of inflating the reported effectiveness of the Reading Recovery program by excluding the very lowest achievers (Center et al., 1995; Iverson & Tunmer, 1993; Wasik & Slavin, 1993;).

In order to answer these criticisms, it has been suggested that standardized and criterion-referenced tests which focus on reading accuracy, comprehension and metalinguistic skills, should be used along with Clay's own tests, both at discontinuation and in follow-up studies (Center et al., 1995). It is felt that this information would look at the causal and reciprocal role of metalinguistic knowledge and answer concerns that book level measures, which are strongly used as a means of ascertaining growth in Clay's research, are not entirely reliable (Robinson, 1989).

The issue of 'false positive' is raised as a general concern underlying Clay's New Zealand data. Many students who were predicted early on to fail in reading actually do quite well, even without intervention, due to factors such as maturation or the accumulative effects of instruction. Because Clay's research does not begin until one year after instruction, this 'false positive' problem is probably reduced, but likely not overcome. Many
children might have done well without the intervention (Shanahan, 1987). Criticism also has been made regarding the use of ‘t tests’ to compare experimental and control groups as this method of data analysis can produce false positives (Nicholson, 1989). Although Clay acknowledges such a concern in one study, she repeatedly makes comparisons of gain scores by using multiple independent ‘t tests’. This statistical treatment is felt to be inappropriate (Shanahan, 1987). It has been suggested that the documented progress of students who participated in the Reading Recovery program could be due solely to regression to the mean.

The adoption of Reading Recovery in schools and school systems has been criticized as giving the appearance of school reform by solving the literacy crisis, while in fact the status quo structure of schooling, which produces so much failure in the first place, remains intact. Reading Recovery in schools and school divisions does not necessarily signal a change in better serving the educational needs represented today (Dudley-Marling, 1994). The inclusion of Reading Recovery can be used to prevent meaningful school reform by protecting schools against claims that school practices are unfair, and that school curricula favours white, middle class students. Thus the social and economic inequities in schools and in the larger society are perpetuated by placing the responsibility for school failure within the student, or student group,
and not challenging the systemic, racial, cultural and linguistic biases which plague many students (Dudley-Marling, 1994). Robinson (1989) supports the view that Reading Recovery reflects a conservative model of educational and organizational change that only minimally threatens the existing system. By precluding the examination of the school's responsibility for the origin of reading failure, the adoption of Reading Recovery prevents an opportunity for the system, both home and school, to learn about the implications of some of its own practices.

Cost effectiveness in another concern that has been raised as Reading Recovery is considered to be an expensive individualized tutoring program, particularly in school divisions with a high proportion of entrants coming from literacy and language disadvantaged early environments. Dyer and Binkley (1995) compare the cost effectiveness of Reading Recovery retention, and special education support based on teacher salary estimates. According to their estimates, there is a cost of $2063.00 in teacher salary to provide the Reading Recovery program to one child, an annual cost of $5208.00 to retain a child in grade one and $9906.00 over six years to provide one child with special education support. According to their estimates, Reading Recovery is a cost effective intervention.
Clay, herself, supports the long term economic feasibility of Reading Recovery. “The program should be economical in the long term because it does not merely provide for children with special needs, but it reduces their numbers. As fewer children with severe reading retardation are found in the upper primary school, release of resources should cover costs of the early intervention and the program requiring more specialist help” (Clay, 1987. p.55).

However, there is no way of estimating the outcomes that might result from spending these dollars on other ways in the instructional program, nor is it possible to sort out, in any valid way, the comparative benefits of the effects of Reading Recovery on a small number of students versus the likely effects of less costly interventions on larger numbers of students.

Despite these concerns and criticisms, the positive results of Clay’s findings and subsequent national implementation, has focused attention and interest on the Reading Recovery program in other countries. The program has been implemented in Australia, the United States, England and Canada.
Chapter 4

Adaptation/Implementation of Reading Recovery in Other Countries

Reading Recovery’s successful national implementation in New Zealand in 1983 prompted international focus and interest. Educational programs which are designed for particular settings and cultures are generally not transplanted easily to other educational systems. However, despite this, one year later in 1984, two international moves involving Reading Recovery occurred - one to Central Victoria in Australia and the other to Columbus, Ohio in the United States. In Australia, the Reading Recovery program was introduced into fourteen schools using the expertise of two tutors trained in New Zealand, and under the watchful eye of an administrator and local committee of educators. In Ohio, Reading Recovery was introduced through a collaborative venture by Ohio State University, two research foundations, and the Columbus City schools. Teacher leader training and tutor training were conducted using staff headed by New Zealand’s Marie Clay for the first 6 months, with the goal being a two year trial in 6 schools. Both implementations were closely followed through first year trial research in Australia, (Wheelers, 1986) and in Ohio, (Huck & Pinnell, 1983). The educational systems differ greatly in Australia and the United States, as do each in comparison
to New Zealand. In order for Reading Recovery to be effectively implemented in either locale, Clay ascertained that change would be needed in four areas:

1. Behavioural change on the part of the teachers
2. Child behaviour change achieved by teaching
3. Organizational changes in schools achieved by teachers and administrators
4. Social/political changes in funding by the controlling authorities (Clay, 1987, p.36).

Based on these assumptions and related adaptations, Clay initially monitored the successful implementation of Reading Recovery into the United States but was not involved with Reading Recovery's implementation into Australia.

Clay realized that if Reading Recovery were to be successfully implemented outside of New Zealand, the program needed to be cohesive, both internally (theory, training, program design, and evaluation) and with the host system (cost effective, workable, and seen to be successful). Thus close attention was paid to the quality control of programming as it was adapted to educational systems with different approaches to initial reading instruction (a Ginn basal series in Ohio and many local programs in Central Victoria). Particular attention was also paid to the university level training program of Reading Recovery tutors
and teachers, and to providing the most current New Zealand based research data to inform educators and administrators.

The Ohio Experience

Schooling in New Zealand differs in important ways from that in the United States. In New Zealand, initial reading and writing instruction is based on graded natural language texts. In Ohio, reading and writing instruction is based on a Ginn basal reading series. Reading achievement and the amount of reading done in school has been reported to be higher in New Zealand than in the United States (Guthrie, 1981). New Zealand has a centralized school system in contrast to a highly decentralized system in the United States. The timing of school entry and the implementation of reading instruction also differs considerably between the two countries. In New Zealand, children are enrolled in programs by age four, and have completed a year of literacy instruction by age six. In the United States, active literacy instruction does not usually begin until age six of first grade. These inherent systemic differences required the adaptation and modification of the New Zealand Reading Recovery program as it was implemented into Ohio schools (Shanahan & Barr, 1995).

With Ohio children beginning literacy instruction in first grade and then being identified for early intervention by mid year, the United States Reading Recovery teachers tended to work with students who knew
considerably less about reading and writing than their New Zealand counterparts. This practice of intervening early in grade one brought the criticism that many children identified for Reading Recovery in the United States may not have needed special support. This timing of the intervention also precipitated substantial program change in the number of lessons needed to achieve success. In Clay’s 1978 field trial research in New Zealand (1985), she reported an average of 28 lessons. The Ohio State University pilot program (1984-1985) began with 30 lessons, but this increased to 60 in the following year. The lengthened duration of Reading Recovery intervention might also have been due to homes that were less supportive to literacy, and/or to a marked difference between intervention and classroom based philosophy. Whatever the reason(s), the ramifications for cost effectiveness are obvious. The adaptation of Reading Recovery in Ohio not only began program intervention in mid grade one or earlier, it also confined the intervention to the grade one level. That meant that those Reading Recovery children who had not been successfully discontinued, due to absences or late entry, simply ended instruction arbitrarily at the end of the first year, rather than continuing to receive instruction into grade two (or the second year as was done in New Zealand). Another characteristic of the adaptation of the Reading Recovery program to the United States was its illusionary approach. Children were not excluded from instruction “for any reasons - intelligence, ethnic membership, language achievements, school history,
physical handicaps or learning disabilities" (Glynn, Crooks, Bethune, Ballard, & Smith, 1989).

In the United States, implementation of the Reading Recovery program also brought about changes in teacher training particularly with the amount of "behind the glass instruction" (Clay, 1987). These sessions were held every other week in New Zealand, but every week in the American programs. Clay (1987) explains the change as not reflective of the quality of teachers, but rather the incongruence between classroom basal reader procedures, and Reading Recovery intervention procedures.

Ohio's pilot study of Reading Recovery began in 1984 under the guidance of Marie Clay, Barbara Watson, and a professor from Ohio State University (Pinnell, 1989). The project involved 21 teachers, 7 of whom were trained as teacher leaders. First grade teachers were put in a classroom sharing arrangement that allowed each teacher to spend one half day working with individual children in Reading Recovery lessons. Based on October (Observation Survey and text reading) and December testing (Observation survey, text reading, and teacher input), the lowest performing children (109) from 14 classrooms in six urban schools were assigned in January to either Reading Recovery (n=55) or a comparison group (n=54). Based on a May evaluation using the Observation Survey and the Stanford Achievement Test, the Reading Recovery children outperformed the comparison group and compared favourably to the grade
one students. An analysis of the pilot study was based on descriptive rather than inferential statistical data. Concerns focused on the early timing of the intervention and questioned whether or not the Reading Recovery children had been truly “at risk”.

Subjects from the pilot year were followed during their second and third grade. This total group of children included both discontinued children and children who were not considered to have completed the program, all of which received no special attention during that time. On all measures of evaluation, (Observation Survey, and subtests of the California Test of Basic Skills), Reading Recovery children scored higher than the comparison children.

In 1985-1986, Reading Recovery teachers in training who had been taught by teacher leaders trained by Clay and Watson, selected 110 of the lowest achieving grade one students in late September. They were randomly selected for Reading Recovery or another intervention which appeared to follow basal reader lessons focusing on drill and practice, and delivered daily within the classroom by a trained teaching assistant (Pinnell, Fried & Estice, 1991). Reading Recovery students received an average of 67 daily individualized lessons, and of the children receiving at least 60 lessons, 73% were successfully discontinued.

Using Clay’s Observation Survey, results at the end of the year demonstrated that Reading Recovery children out-performed the comparison group and achieved an average grade one level on all
measures. Follow-up through longitudinal study continued for two years with text reading levels assessed at the end of the second and third year (Pinnell et al., 1998). Results showed that the Reading Recovery group out performed the comparison group in both years on graded level texts (levels 9-12=early Grade 1; levels 13-15=mid Grade 1; levels 16-20=end of Grade 1). An analysis of the results showed that the difference in text reading level between the two groups was minimal.

<table>
<thead>
<tr>
<th>Year</th>
<th>Reading Recovery Group</th>
<th>Comparison Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 1987</td>
<td>Reading Recovery Group</td>
<td>+14.39</td>
</tr>
<tr>
<td></td>
<td>Comparison Group</td>
<td>+11.23</td>
</tr>
<tr>
<td>May 1988</td>
<td>Reading Recovery Group</td>
<td>+19.70</td>
</tr>
<tr>
<td></td>
<td>Comparison Group</td>
<td>+16.71</td>
</tr>
</tbody>
</table>

The Reading Recovery group also scored higher on all measures of the Observation Survey than did comparison children. Reading Recovery has been implemented at twenty-two sites in Ohio. Of the 1370 children who received a complete Reading Recovery program, 81.8% were successfully discontinued. Thus results remained consistent. The majority of Reading Recovery students make accelerated progress and achieve reading levels within the average range for their school or district (Clay, 1993).

Ongoing research, then, has proven that Reading Recovery leads to literacy learning. However, in analyzing the Ohio results, Shanahan and Barr (1995) questioned whether the gain evident, when comparing Reading Recovery students with average students, was due only to
Reading Recovery or perhaps due also to regular classroom instruction, out of school experiences, or maturation (p.969).

The design of the Ohio based research tried to minimize methodological problems evident in the New Zealand data - particularly with randomization and regression to the mean. In comparing Reading Recovery students with other low-achieving students, the problem of regression to the mean became minimal as it posed an equal influence on the performances of the two groups. In Ohio’s Reading Recovery projects, with Huck and Pinnell’s study (1986), classes were assigned either to Reading Recovery or to a control group. In the Pinnell, Huck and Deford study (1986), the lowest performing 20% of first grade children were identified and assigned to either Reading Recovery or an alternative compensatory program.

The results of longitudinal studies (Pinnell et al., 1988) using both successfully and non-successfully discontinued students indicated that following the first year of intervention, children randomly assigned to the Reading Recovery program scored significantly higher than the control group on all Clay measures. However, the unsuccessfully discontinued students, who represented 27% of the Reading Recovery students, performed slightly lower than the control group on all Clay’s measures. Despite daily one-to-one intervention, approximately 30% of the original group of low-progress Reading Recovery students had failed to benefit from the program.
Second, third, and fourth grade follow-up studies provided inconclusive results (Pinnell et al., 1988). The data from book level measures presented in raw unit differences, favoured the Reading Recovery group over the control group in first and second year follow-up. However, when the data was converted to take effect size into account, there was a progressive diminution until differences were negligible by the end of the second year (Wasik & Slavin, 1993).

In 1994, a methodologically stringent study of the long term effectiveness of the Reading Recovery Program was completed by the Ohio group of investigators (Pinnell et al., 1996). Low progress students were randomly assigned to either Reading Recovery, three other early intervention literacy programs, or to the control group. The data were collected in a way that limited the influence of regression to the mean (Shanahan & Barr, 1994, p.972). Results indicated that after seventy days in the program, students in the traditional Reading Recovery program outperformed students in the other three programs on Clay’s measures of book level and dictation, and the standardized tests of the Woodcock Reading Test, and Gates-MacGinitie Reading Tests. After three months, post tests using the Gates-MacGinitie 2 failed to reveal any significant differences between groups in the area of comprehension. Reading Recovery was the only treatment for which the effects on the text reading assignment were still evident the October of the following year. A follow-up assessment after twelve months indicated that the traditional
Reading Recovery group maintained significant gains on book level and small to moderate gains on dictation. No standardized tests of reading achievement were used at this follow-up assessment.

Doubt has been cast upon the reliability of book level measures. Robinson (1989) has reported concerns related to improved book level success when familiarity with the material is a factor. Concerns have also been raised as to the validity of long term effects as measured by book level alone.

Another recent United States study of the long term effectiveness of the Reading Recovery program used random assignment, control groups, standardized tests, and a longitudinal design (Center, Whedall, Freeman, Outhred, & McNaught, 1995). The results indicated significant and meaningful gains made by Reading Recovery children. However, results were somewhat inflated due to the lack of inclusion in evaluation statistics of low success Reading Recovery students, and due to regression to the mean.

The Ohio research evaluation strove to irradicate problems evident in the New Zealand research: (1) the empirical design (failure to assign children randomly - one half to the experimental and the other half to the control, and failure to include the non successfully discontinued students in the experimental group data); (2) evaluative measures (lack of standardized and criterion referenced assessment); and (3) the issue of
false positives. In 1984/1985, in the Ohio research a control group design was used, and a comparison of Reading Recovery with an alternative one to one program was conducted in 1985-1986. Randomization was used in recent studies undertaken in the United States. The inclusion of the data of non successfully discontinued students was eliminated in early research (Pinnell, Short, Lyons, & Young, 1986), but evident in later studies (Pinnell et al., 1988). The issue of evaluative measures was addressed in including standardized test results as well as Clay's measures at year end completion of the Reading Recovery program (discontinuation) but this inclusion did not carry on in the one-year follow-up evaluation (October of grade two) (Pinnell et al., 1994). The issue of false positives remained as many low performing children were assigned to Reading Recovery intervention early in their first year of literacy instruction. Given time and combined classroom/home influences, these students might not have needed the intensity of a Reading Recovery program (Shanahan & Barr, 1995).

Despite these concerns, Reading Recovery has become popular across the United States. The Reading Recovery Program has been implemented in over 40 states in just over eight years (Shanahan & Barr, 1995).
The Australian Implementation

The same year the Ohio Reading Recovery implementation began (1984), implementation was also occurring in Central Victoria, Australia but under quite different circumstances. Rather than being guided by Marie Clay and staff from New Zealand, with administrative and university support, the initial Australian Reading Recovery Program reflected factors that could easily have been proven to be deficits. The very fact that the program's development had come from New Zealand was not necessarily advantageous. Other issues that affected implementation included: (1) lack of official sanction by the state; (2) lack of uniform beginning literacy programs with no system-wide checks on progress (proving difficult to ascertain where the 'average' child might be); and (3) teachers trained for Reading Recovery but lacking experience in teaching beginning readers and writers. Despite initial difficulties, the first year program survived, and discontinued approximately 78% (94 out of 119 children). An enthusiasm for the program at the school level, and strong local administrative support were undoubtedly influential factors.

Reading Recovery in Australia not only survived its first year, but continued to grow and thrive. Two studies focusing on the stability of effects of Reading Recovery have been conducted in Australia - one in 1989 by Rowe, and a second in 1995 by Center, Whedall, Freeman, Outhred & McNaught.
As part of the 100 Schools Project in three Victoria educational regions, Rowe (1989) examined the progress of 147 Reading Recovery students from the end of Year One (n=124) to Year Five (n=24). Findings concluded that the Reading Recovery group's advantage was maintained in Year Five which indicated the development of independent reading strategies in the Reading Recovery students. However, the original comparison group was not randomly selected. Thus error in selection, and regression to the mean effects may have biased the results (Shanahan & Barr, 1995). Criticism voiced by Center, Wheldall and Freeman (1992) suggest the possibility of 25%-30% of the initial Reading Recovery group being withdrawn due to poor progress, and transferred to the comparison group.

In the second Australian study (Center et al., 1995) students from ten schools were randomly assigned to Reading Recovery and control groups, and of those, six schools were involved in the analysis of data (four schools were excluded due to lack of comparability). Three groups were studied: (1) Group One, the Reading Recovery group, was made up of low-progress students; (2) Group Two, the control group, consisted of low-progress students who had not yet entered Reading Recovery but who were receiving support in reading that was typically available; and (3) Group Three, a comparison group, that was made up of low-progress students from five matched comparison schools in which Reading
Recovery was not taking place. While regular classroom instruction was controlled to a considerable extent for the experimental and control groups, this was not the case in the comparison schools, and thus became a limitation in the study. Children were tested just prior to commencement of the Reading Recovery Program (pretest), about 15 weeks into the program (post test), 15 weeks after the post test, and 12 months after the post test. Clay's Observation Survey was administered in addition to 6 standardized and criterion-referenced tests that included: the Neale Analysis of Reading Ability - Revised (1988); Passage Reading Test; Waddington Diagnostic Spelling Test (1988); Phonemic Awareness Test; Syntactic Awareness (Cloze) Test; and Word Attack Skills Test.

Results showed that at the end of the program (15 weeks) and at the maintenance testing (15 weeks after the end of the program), the text reading of the Reading Recovery students exceeded that of the control group. However, the Reading Recovery group did not outperform the control students on some tests of metalinguistic skills such as phonological recoding and syntactic awareness. Gains were also reported using standardized testing (Neale Analysis of Reading Accuracy and a Passage Reading Test). Reported effect sizes for these two measures were 1.8 and 1.4 respectively at the post test and 1.3 and 1.1 at the maintenance test. It was found that learning gains in text reading level occurred mainly during intervention and less so thereafter. However, two to three years after program implementation, the spill over
effects of Reading Recovery were not in evidence and organizational changes had not taken place at the systemic level (Center et al., 1995).

The methodological criticisms that had been raised regarding earlier studies of Reading Recovery in terms of randomization and the exclusive use of Clay’s own tests to measure reading progress, did not apply in this study. Thus from an empirical viewpoint, these research results support Reading Recovery as a successful early intervention program. However, the need to develop instructional programs with a strong emphasis on phonological awareness, phonological recoding and syntactic awareness, is re-emphasized as a necessary enhancement to both effective and cost effective early intervention programming.

Reading Recovery in England

Following the successful implementation in the 1980’s of Reading Recovery in both Central Victoria, Australia and Columbus, Ohio, the Educational Authority in England in the 1990’s looked to Reading Recovery as a solution to their concern related to reading standards in their country. Many journalists and politicians at that time believed that the reading levels of Britain’s seven year old children were in decline. However, in 1991, the Standard Assessment Tasks, a set of criterion referenced tests based on expectations of the National Curriculum,
confirmed that most seven year old children in the country were learning to read effectively and meeting national standards. What the results did reveal, however, was a decline in the level of word recognition and literal meaning skills among seven year old children in low socio-economic areas.

In response to these findings, in 1992, the British government made a financial commitment to a three year program of Reading Recovery, by partially funding its implementation in several London boroughs, as well as in other inner city areas in Great Britain. Prior to this, in 1990, Reading Recovery had been piloted in several schools in Surrey.

In October, 1992, a Reading Recovery three year project began in Southwark, the inner city borough of London. Twenty-one children began from 5 schools with 6 children entering during the course of the year. Fifteen (71%) of the original 21 children were discontinued from the program with the majority (66%) leaving toward the end of the school year. Six children (28%) had not made significant progress by the end of the year and were referred to a specialist for further assistance. Three of these were bilingual and at the early stages of learning English (Williams, 1993).

The teacher training, and tutorial implementation followed the stringent guidelines outlined by Marie Clay in her original New Zealand
program. The London Institute of Education coordinated the training of Reading Recovery tutors and teachers through training sessions set up by the New Zealand trainers.

A number of broad based objectives were outlined to provide a framework of focus for Southwark and for possible Reading Recovery projects in other parts of England. These were to:

- provide information to schools and the Authority on the implications of undertaking Reading Recovery in an inner city context.

- consider to what extent the teaching approaches and guidelines of Reading Recovery integrate with the whole school policies in schools in Southwark.

- determine the possible effectiveness of Reading Recovery as a means of raising reading standards in Southwark schools.

- examine the organizational issues involved in implementing the Reading Recovery program in Southwark schools.

(Williams, 1993. p.2)

Evaluation at the end of year one was encouraging in the short term, despite the fact that the Reading Recovery teachers were disappointed that only 71% of the children were successfully discontinued. However, the issue of English as a second language children had been an influencing factor, and one that required more consideration as to whether or at what stage in learning English, these
children would benefit from the Reading Recovery Program. Long term evaluation was indicated as essential to follow the subsequent progress of the discontinued children in order to establish long term gains. It was also felt that whole school development in understanding reading as a process had been significant, as had parental awareness. Both areas were to be focused on for development in Year Two and Three.

Reading Recovery in Canada

The implementation of the Reading Recovery in Eastern Canada was initiated through a three year pilot project (1988-1991) in Scarborough, Ontario. In the late 1980's concerns over early literacy development within their area schools prompted Fergus Reid, an elementary school principal, and Paul Addie, an Area Superintendent of the Scarborough School District, to investigate the Reading Recovery Program at Ohio State University and to begin implementation in 1989 in the Southern and Eastern parts of Scarborough. In that pilot year, seven Reading Recovery teachers were trained. In the second year eleven teachers were either trained or in training, and by year three, the number of Reading Recovery teachers had grown to twenty-six with three teacher leaders to assist with their training.
In 1990/1991, 110 grade one children were considered program children and either received at least sixty Reading Recovery lessons or were successfully discontinued prior to the sixty lesson mark. Fifty-four other children had more limited Reading Recovery programming provided to them.

A research project was undertaken to gather data and information from the Scarborough Reading Recovery site, in order to identify specific strengths, and to work to improve areas of concern (English & Sayer, 1991). Results indicated that of the 110 Reading Recovery Program children, 98 (89%) were successfully discontinued. Comparisons were made in September and May of grade one on the progress of discontinued and Reading Recovery program children, using three measures of the Observation Survey (Writing Vocabulary, Dictation, and Text Reading). This data was then compared to the random sample at the site that constituted the average band. End of year results indicated that of the discontinued Reading Recovery children, 93% achieved scores equal to or exceeding the average band for writing vocabulary, 94% for dictation, and 98% for text reading level measures. The range of end of year reading level scores for discontinued children was from level 16-24 (Grade 1 to mid Grade 2). This progress was attained with an average of seventy lessons. The progress of the not discontinued Reading Recovery children (11-12%) was considerably slower after an average of eighty-five
lessons. With some of these children, attendance was a factor while other children required special programming. However, despite accelerated growth, it was reported that the Reading Recovery teachers were satisfied that the goal of early identification and intervention had been attained. Teachers in training, primary classroom teachers, administrators, and parents were positive and supportive of the Reading Recovery program and based on their responses to individual surveys, responded that Reading Recovery was a beneficial and valuable early intervention program and should be expanded. Due to the success of the three year Scarborough project, two other Toronto area jurisdictions, North York and York, began sending teachers for Reading Recovery training at the Scarborough site.

Summary

Despite having four different national educational philosophies, and varying approaches to early literacy instruction and programming, Columbus, Central Victoria, London and Scarborough all established successful Reading Recovery programming within their schools. The Reading Recovery system of teacher training, monitoring and program control, as strictly outlined by Marie Clay has been implemented internationally in response to a common concern of early literacy
acquisition. The changes that Clay (1987, p.36) had outlined as necessary in other countries were evident:

1. behaviour change on the part of the teachers
2. child behaviour change achieved by teaching
3. organizational changes in schools achieved by teachers and administrators
4. social/political changes in funding by controlling authorities

Clay believes that “an innovation likely to survive will be one that is cohesive both internally (in terms of theory, training, program design, evaluation) and with the host system (it must be workable, contributing, cost effective and a winner with the stakeholders)” (1987, p.36).

Clay also believes that it is essential to intervene at the beginning of reading instruction before the child experiences failure (Clay, 1991, 1992, 1993; Pikulski, 1994; Pinnell et al., 1990;). She recommends Reading Recovery as the first step in that intervention. Research supports early intervention rather than late remediation (Adams, 1990; Pinnell et al., 1994; Wasik & Slavin, 1993). Despite the positive results that have been attained through Reading Recovery programming in New Zealand, Australia, the United States, England and Canada, the question arises as to whether other early intervention programs could provide the same success. Chapter 5 will address this issue in a comparison of Reading Recovery to other early intervention
programs, both one to one and small group, and the implications that all early intervention programming has on classroom instruction.
Chapter 5

A Comparison of Reading Recovery to Other Early Intervention Programs

Research throughout the world has consistently established the success of Reading Recovery as an early intervention program. The major drawback of Reading Recovery is cost, as providing one-to-one intervention in schools where the majority of grade ones and twos are at risk can be prohibitive. For schools with unlimited financial resources, and fewer at risk beginning readers, the tutorial approach of Reading Recovery is feasible. For schools with high risk populations, particularly inner city schools, it is important to explore the possibilities of early intervention in the small group and/or with modifications in classroom instruction. The success of other programs, both tutorial and small group, provides a framework from which to judge the effectiveness of Reading Recovery.

Research demonstrates that successful early intervention programming must include the teaching of effective self-monitoring strategies with daily opportunities to write independently and read familiar books (Adams, 1990; Clay, 1993; Pikulski, 1994). Research further supports that the best results are achieved when early intervention programs have a balance between the strategic reading of the whole,
meaningful texts, and writing for authentic purposes (Adams, 1990; Clay, 1991, 1993; Pikulski, 1994; Pinnell et al., 1993). Reading Recovery demonstrates these characteristics, as do other successful early intervention programs. In comparing Reading Recovery to other programming, the effectiveness of a variety of early intervention formats can be examined.

One-to-One Early Intervention Programs

Comparative tutorial studies selected by Slavin and Wasik (1993) set a high standard by which to judge the relative effectiveness of Reading Recovery. Slavin investigated five grade one tutorials (1) Reading Recovery; (2) The Prevention of Learning Disabilities; (3) The Wallach Tutoring Program; (4) the Programmed Tutorial Reading format; and (5) Success for All, involving tutorial support combined with classroom intervention.

Success for All has been administered by inner city teachers in Baltimore, Maryland as a support for primary children, particularly the lowest-achieving children from grade one and two. The daily, twenty minute tutorial focuses on learning to read by reading (metacognitive strategies) and is closely integrated with and supportive of the classroom literacy program. The preschool and kindergarten programs are involved, as are family support services.
The Prevention of Learning Disabilities is a program found in New
York, Ohio and California. It is administered by certified teachers for
thirty minutes 3 to 5 times a week, to give tutorial support to the lowest
first and second grade students. The content of the program focuses on
directed activities to teach the perceptual and spatial skills involved in
reading, although no emphasis on reading connected text is made, nor is
there a connection to classroom curriculum.

The Wallace Tutoring Program found in inner-city Chicago and
rural North Carolina, is administered by paraprofessionals to the lowest
achieving students in first grade. The program runs all year for 30
minutes daily and has an emphasis on the systematic mastery of phonetic
skills. There is no focus on reading connected text nor is there
integration with classroom instruction.

The Programmed Tutorial Reading Format is a program for inner
city children that has been administered in Indiana and North Carolina. It
is also administered daily for 30 minutes and by paraprofessionals to the
lowest achieving students in the first grade. Lessons are highly detailed
and prescribed with a focus on sight word development, comprehension,
and word analysis. A partial integration with classroom instruction does
occur.

Wasik and Slavin (1993) reviewed the research on the
effectiveness of these four established tutorial programs and Reading
Recovery to identify: (1) how large the effect of tutoring is; (2) to what
degree the effects of tutoring are maintained over time; and (3) which specific tutoring programs and practices produce the largest gains in student reading achievement. The five tutorial programs vary widely in curriculum, in integration with classroom instruction, and in the use of certified versus paraprofessional tutors. All five programs have assessment tools based on their program content. Thus research based results reflect not a cross comparison but an internal analysis.

In analyzing the statistical data for each program, three were found to have positive but limited effects. These were the Prevention of Learning Disabilities, the Wallace Tutoring Program, and the Programmed Tutorial Reading Format. Reading Recovery's short and long term effects are well documented as are concerns related to the methodological structure. For example, the Reading Recovery sample excludes children repeating grade one and special education students. Long term statistical results of Reading Recovery indicate that by the end of grade three, 27% of the original Reading Recovery group (the unsuccessfully discontinued) were functioning below classmates in reading level (Pinnell et al., 1991). The results of Success For All indicate powerful effects for the combination of one-to-one intervention, a structured reading program, and family support services. Despite some methodological limitations, statistical results indicated that the lowest achievers in grade one, two and three scored higher in reading level than the control group by the end of each year. This resulted in reduced
numbers of students needing special education supports. Success For All thus provided benefits not just for the lowest achieving primary students, but for all primary students.

The one-to-one tutoring of low-achieving primary grade students does show potential as an effective instructional innovation. Despite the differences evident in the five tutoring programs, some patterns were evident. First, programs with the most comprehensive models of reading, and therefore the most complete instructional interventions, appear to have larger impacts than programs that address only a few components of reading process. Second, it is not enough that the program simply use tutors. The content of the reading program in addition to the form of instructional delivery may be important variables. Third, programs using certified teachers as tutors appeared to obtain substantially larger impacts than those using paraprofessionals (Slavin & Wasik, 1993, p.196).

One-to-one tutoring of primary grade students is effective, but is it effective enough to justify its considerable cost? Could an expanded group of one to two, or one to three or more, be as effective? Understanding how at-risk children learn to read in a tutoring situation would contribute to an understanding of how at-risk children learn in general. Clarifying a theory of reading would add to a fundamental understanding of why the components included in a particular program make it successful.
Early Intervention Programs: One to One Compared to Small Group

Pinnell et al. (1994) investigated Reading Recovery's effectiveness by comparing it to three other instructional models: (1) Reading Success; (2) Direct Instruction Skills Plan (DISP); and (3) Reading-Writing Group. In doing so, a direct comparison of tutorial programming was made to establish effectiveness. A direct comparison study was not possible in the Wasik and Slavin tutorial reviews (1993). The success of the Reading Recovery program adapted for small group instruction (Dorn & Allen, 1996) was also investigated.

Reading Success is a one-to-one program that used the Reading Recovery format and materials but whose teachers received a shortened two week training program prior to the school year. In DISP, experienced teachers are encouraged to develop their own direct tutorial instruction in specific reading skills. In the Reading-Writing Group, previously trained Reading Recovery teachers adapted the Reading Recovery model for small group instruction. The three tutorial programs met with at-risk children during the first half of grade one for 30 minutes of daily instruction. The small group program, the Reading-Writing Group met for daily 30 minutes of instruction and continued for the duration of the year.

Student's learning was assessed in October, February, and May of the first grade and October of the second grade. Pretest data (October, grade one), consisted of the Mason Early Reading Test, Dictation Task 1,
and a text reading level assessment. In February, data were gathered using text reading level, Dictation Task 2, the Gates-MacGinitie and Woodcock Reading Mastery. In May of grade one, the Gates-MacGinitie was re-administered, and in the fall of grade two, text reading level and Dictation Task 3 were administered to determine sustained impact. Although initial results varied, by October of grade two, “the effects that had been obtained had diminished for all groups except for the Reading Recovery students, whose gains remained statistically significant on text reading” (Shanahan & Barr, 1995, p. 976). “Reading Recovery was the only group for which the mean treatment effect was significant on all four measures (Dictation 2, text reading level, Gates-MacGinitie, and Woodcock)” (Pinnell et al., 1994, p.32).

This study demonstrated that it is not the tutorial aspect of Reading Recovery, nor the materials or lesson formats that account solely for its effectiveness. The Reading Success program did not sustain the same effectiveness because the professional development program and support for teachers were not comparable to that offered to Reading Recovery teachers. Learning and retention of skills, and reading levels were substantially higher given the one-to-one format (Reading Recovery) than in small groups (Reading-Writing Groups). This outcome was true even though group instruction lasted for an entire year, in contrast to half a year for Reading Recovery. However, in terms of sustained effects as measured in the Fall of grade two, the RWG appears to be the second
best treatment in the study. This points to the potential impact of Reading Recovery training on the teachers’ instructional approach.

Pinnell’s study (1994) attempted to investigate and examine which program characteristics contributed to positive results. The success of the three approaches using a Reading Recovery instructional framework (RR, RS, RWG) provides evidence to support Reading Recovery effectiveness, but indicates that this instructional framework is insufficient in itself. The professional development training afforded Reading Recovery teachers is a significant factor. The Reading Success training model lacked the behind the glass demonstration and discussion component, as well as the continuous inservice support offered to Reading Recovery teachers. Results of Pinnell’s study (1994) also indicated that one-to-one instruction affords more benefits than that offered in small groups. Small group instruction, although using the same theoretical base as Reading Recovery, must be technically different from Reading Recovery (Pinnell et al., 1994). In comparing the results of Reading Recovery and Reading Success, it is clear that another factor made a difference - the intensity and effectiveness of the teaching within the reading/writing framework.

Dorn and Allen (1996) describe a successful Reading Recovery/Early Literacy program which by the third year provided support in 28 Arkansas public schools, through a two level intervention model. Their program allows the Reading Recovery teacher to deliver Reading
Recovery to the neediest low achieving grade ones, while providing small group support to children who qualify for Reading Recovery, but for whom there is no space available. Thus the training, knowledge, and expertise of the Reading Recovery teacher is utilized and the issue of cost effectiveness is addressed.

This early intervention project was piloted in 1991/92 in four Arkansas Reading Recovery schools where Reading Recovery programs were already in operation. It grew out of educators' concerns about the high number of low achieving children in Reading Recovery schools, and the issue that a high number of children needed Reading Recovery programming but were unable to be accommodated in the program in the first part of grade one.

By the end of the pilot year, data from the study indicated that schools using the Reading Recovery/Early Literacy program were able to serve and successfully discontinue greater numbers of low achieving first grade children than were schools without the small group component. In 1991/92, 12 Arkansas schools elected to use the Reading Recovery/Early Literacy program, and it was further developed and researched. By the third year, 1992/93, based on positive results from the previous years, twenty-eight schools adopted Reading Recovery/Early Literacy programs. By the end of Year Three, nearly 400 children had participated in small group instruction with a total of 34 Reading Recovery/Early Literacy teachers.
The Early Literacy groups (5 students each) met for 45 minutes daily with a trained Reading Recovery teacher. The format included a variety of reading and writing activities. Activities using children's names were used to develop awareness of structure, functions and relationships in writing such as upper and lower case letters, concept of letter and word, letter similarities and differences, length of word and concept of first and last. Shared reading of ABC charts or books provided children with a picture/sound cue to relate to each letter. The teacher related the daily reading and writing to the chart and children could use the chart as a reference.

Familiar reading was accomplished through the use of easy predictable texts, charts, group generated stories and other writing in the classrooms. One child each day was selected to read a book on a one-to-one basis that had been previously introduced to the group. Two or three teaching points were made to develop the child's problem-solving ability to unlock unknown words. Shared reading of Big Books, chart stories, poetry, and teacher-produced materials, focused the children on how to make predictions, to develop fluent reading and problem-solve with group support.

The teachers read selections of literature which provided children with vocabulary, and a world knowledge that would be beyond their independent reading levels. Word analysis activities based on words from familiar connected text provided opportunities for children to use
problem-solving strategies. For these activities, teachers used materials such as magnetic boards, sentence strips, word cards, and word walls. Interactive writing (Button, Johnson & Furgerson, 1996) was provided to help children acquire early literacy behaviours necessary for successful reading. Such early literacy behaviours include directionality; one to one matching, concept of a letter and a word, phonological awareness and developing a bank of automatic high frequency words.

Shared writing focused on producing a meaningful story through dialogues between the teacher and children. The teacher compiled the finished product into a Big Book which was illustrated by the children and used for familiar rereadings. Opportunities were also provided through journal writing for independent writing. During journal writing, the teacher worked individually with the child. This was followed by a teacher response to each child's writing and a fast teaching point to each child.

Cut-up sentence activities were used once a week on a one-to-one basis. The teacher cut up the message and the child reconstructed it. This provided practice in visual searching and using syntactic awareness. A new book, selected for the following day's focus child, was introduced to the group at the end of the lesson. Specific questions were selected to the focus child and that child read certain pages or the whole book independently. This was followed by a group reading.

The data from the study were analyzed on 231 children from 9 schools. The important findings included:
The combination of individual tutoring and small-group instruction enabled each Reading Recovery teacher to serve an average of 21 low-achieving children during the academic year.

Of a total of 231 children served, 138 (60 percent) received one-to-one instruction in Reading Recovery at some point during their first grade.

Of the total number of 93 children who received small-group instruction, 28 (30 percent) reached average levels of reading performance without requiring Reading Recovery services.

Of the 43 children who received small-group instruction and then went on to Reading Recovery, 24 (56 percent) were successfully discontinued at an average of only 25 lessons in Reading Recovery, as compared with an average of 65 lessons of discontinued Reading Recovery-only children. Thus, the time these children needed to be discontinued from Reading Recovery was cut by more than 60 percent.

Among the remaining 19 Reading Recovery children with prior small-group instruction, notable gains were made in all areas of reading, writing and dictation tasks when compared with a state random sample of first grade children.

(Dorn & Allen, 1996, p.58)

The findings from this study support the notion that Reading Recovery is the most effective program for the lowest achieving first grade children (Pinnell et al., 1991). “The proportion of children discontinued from the small group literacy program could not equal the high discontinuing rate of children from the Reading Recovery program.” (Dorn & Allen, 1996, p.59). However, the purpose of the small group instruction was to provide support for children unable to receive Reading Recovery at a crucial time in their reading/writing development. The findings
indicate that the Early Literacy program enabled Reading Recovery teachers to provide timely support to a larger number of children.

Pikulski (1994) reviewed five effective, early intervention programs for preventing reading failure in at-risk learners. Research now supports the notion that failure in learning to read is preventable in all but a very small portion of children (Clay, 1985; Heibert, Colt, Catto & Gury, 1992; Heibert & Taylor, 1994; Taylor, Frye, Short & Shearer, 1992; Pinnell, 1989). In his review, Pikulski found very little evidence that interventions after grade two were effective and that interventions after grade three were largely ineffective (Kennedy, Birman & Demaline, 1986). Intervention programs to prevent reading problems are actually cost effective in comparison to the costs of remediation, retention and costly special education programs (Pikulski, 1994). From the perspective of eliminating humiliation and frustration, the human savings are incalculable.

Success for All, the Winston-Salem Project, the Boulder Project, the Early Intervention in Reading Project, and Reading Recovery are the five programs reviewed by Pikulski (1994). All five programs focused on grade one students identified as being at-risk for learning to read and provided data that seemed to support program effectiveness.
Success for All

Success for All described earlier (research findings of Wasik & Slavin, 1993), is a total school program for kindergarten to grade three and was implemented in very low socioeconomic, inner-city schools in Maryland and Pennsylvania. This program focus involved both classroom instruction and supplemental support. The heterogeneous classrooms were grouped by reading level for 1½ hours per day of reading instruction in groups of 15 to 20 children. The difference between Success for All and regular programs was that direct instruction was complimented by 20 minutes of one-to-one tutoring, given by the child’s classroom teacher, for those who required it. The tutoring of the at-risk children used the same strategies and skills emphasized in the whole group reading activity. An early language and literacy focus began in nursery and kindergarten programs in the Success for All schools.

The Winston-Salem Project

The Winston-Salem Project of North Carolina (Pikulski, 1994) involved the grade one classes of two schools. One school was middle class and the other was in a low socioeconomic district. The heterogeneous classrooms were taught for 30 minutes in each of the following blocks: basal block; writing block; working with words block; and the self-selecting reading block. The basal block used a variety of materials which included paperbacks, an anthology of children’s literature, and teaching suggestions from a new basal series. The writing block
included independent student writing and mini-lessons of 5 to 10 minutes. The working with words block focused on learning to read and spell words, using manipulatives to make words and word wall activities. The self-selected reading block included reading books related to a variety of themes. The program provided teacher continuity by having the same teacher follow the grade one class into grade two. Three hours and fifteen minutes each day were devoted to related reading activities, and at the school with the greatest number of at-risk learners, an additional 45 minutes of small group instruction was provided.

Early Intervention in Reading

Several schools in Minnesota implemented the Early Intervention in Reading (EIR) program (Taylor, Short, Shearer & Frye, 1995) in middle and low socioeconomic districts. In this program, the classroom teacher provided an additional 20 minutes of daily reading instruction to the 5 to 7 lowest achieving students. The focus was on repeated readings of picture books or child generated summaries of these books, and word activities that emphasized the development of phonemic awareness, phonemic recoding skills and other word recognition skills. In addition, individuals or pairs reread summaries with the teachers, paraprofessionals or school volunteers.

The Boulder Project

The Boulder Project was implemented in two Colorado schools. Teachers worked with a group of three children for 30 minutes a day and
a paraprofessional worked concurrently with another group of three children using lessons planned by the teacher. In mid-year the groups were switched. The instructional activities included repeated readings of predictable books, teaching word identification skills by analogy or word pattern and writing words from the word pattern activity during independent writing.

**Reading Recovery**

As described earlier, Reading Recovery (Clay, 1993) is an individually designed program for the lowest achieving grade one students. The program is delivered for 30 minutes daily by a trained Reading Recovery teacher. The daily tutorial format includes: rereading familiar books; taking a running record of a book introduced the previous day; working on words and letters; having students write as independently as possible; cutting up and reconstructing sentences which go home for practice; and introducing the underlying concepts, language and specific vocabulary associated with a new book and reading it.

**Summary**

These five programs vary considerably in their coordination with classroom based reading instruction. Both Reading Recovery and the Boulder Project are supplemental programs delivered outside the classroom and neither addresses the complex issue of how to improve poor classroom reading instruction. Although EIR is delivered by the
classroom teacher within the classroom, there appears to be little attempt made to coordinate classroom activities with EIR activities. The Winston-Salem Project and Success for All provide classroom instructional changes at several grade levels. Success for All has preschool and full day kindergarten components, clearly outlined reading instruction, small reading groups and grouping across grades one to three based on reading level. The Winston-Salem Project involves teaching that is organized into 30 minute blocks for all students (at-risk or not), and 45 minutes of teaching added to the schools with the highest number of at-risk students. A high quality classroom literacy program is the first step to an effective early intervention program (Clay, 1993). Pikulski (1994) suggests that if this were so, the positive effects of these five programs would be enhanced.

Reading Recovery is exclusively one-to-one tutoring while Success for All and EIR combine some individual instruction as part of their instructional program. However, small group instruction is the main form of instruction in EIR, Success for All, and the Boulder and Winston-Salem Projects. As has been examined earlier, the Wasik and Slavin’s (1993) tutorial review study found individual tutoring to be most effective mode of instruction. With both the Boulder Project and EIR showing success with some at-risk students in small group settings, the small group setting perhaps combined with one-to-one intervention as in the Reading
Recovery/Early Literacy group (Dorn & Allen, 1993) needs further consideration.

In all five programs, Pikulski (1994) stresses that at-risk students need additional instructional time in reading and writing above and beyond regular classroom instruction. However, although essential, it is the instructional strategies emphasized within that framework that makes the difference. A variety of texts are used in all five programs. Most are predictable natural texts with non-controlled vocabulary and some include teacher-child generated texts. Traditional workbooks and isolated skills practice are not used.

In all of the programs an emphasis is placed on direct instruction and guided practice of word identification skills to promote reading independence. Research has proven that, at the early levels, a balance between reading connected text, and systematic word identification instruction produced the best results (Adams, 1990; Clay, 1993). The most frequently used teaching activity is the repeated reading of connected text. The number of repetitions vary from program to program and most instruction during repeated reading focuses on the development of independent word recognition strategies and word identification strategies that have been identified as a major concern for at-risk children.

All five programs incorporate focused instruction on letters and words. Deliberate instruction in phonemic awareness is included in EIR,
Reading Recovery, and Success for All, while Success for All and EIR also focus instruction on the blending of sounds into words. Working with word patterns (in, pin, tin) is evident in the Winston-Salem and Boulder projects. Although approaches to word recognition vary, the systematic instruction in word recognition is evident in all five programs.

Writing is predominant in all five programs and is geared to reinforcing word recognition. Writing letters, words, and sentences helps to focus the child’s attention on the visual discrimination cues inherent in print which is necessary when learning to read. With EIR, Reading Recovery and the Boulder Project, the writing activities are short - a few words, a sentence, or a few sentences. Consistent, ongoing assessment is a necessary feature of successful early intervention programs, and was included in all five programs reviewed. Writing products provide feedback for instructional planning. In Reading Recovery, running records are taken daily, in EIR every third day and in the Boulder Project, oral checks are made weekly. In Success for All, formal reading evaluation occurs every eight weeks. In the Winston-Salem Project, observations provided assessment-based information.

Support from the home is a strong component in all five programs with the children taking materials home to read to parents and others. Although the amount of home reading varies, home reading support is a consistent, daily element in all projects. Each program uses experienced teachers, and in two programs, paraprofessionals provide added support.
The length and intensity of teacher training varies, with Reading Recovery providing the most intensive training and support.

Success for All, the Winston-Salem Project, the Boulder Project, Early Intervention in Reading, and Reading Recovery all share, to a certain degree, characteristics that have been identified in emergent literacy research as best practices in beginning reading and writing instruction. Despite differences in program structure, involvement with classroom instruction and home support, all of the programs reviewed demonstrate success to various degrees in accommodating their unique school populations. However, statistically, both for short and long term effects, Reading Recovery is the most powerful early intervention program (Clay, 1993; Dorn & Allen, 1996; Pinnell et al., 1994; Wasik & Slavin, 1993). Reading Recovery adapted to the group setting, as in the Reading /Writing Group (Pinnell et al., 1994), and the Reading Recovery/Early literacy Program (Dorn & Allen, 1996) has also demonstrated initial success.

**Successful Early Intervention Programs**

What is the key to Reading Recovery’s success in demonstrating consistently strong effects over the long term in a number of countries with such diverse early literacy programming? The tutorial format is certainly a factor (Wasik & Slavin, 1993) as are skilled and motivated teachers who are supported by ongoing professional development. Such
teachers are cited as a crucial link in the ongoing process of
observational interpretation and instructional planning (Pinnell et al.,
1994; Shanahan & Barr, 1995; Wasik & Slavin, 1993).

Spiegel (1995) cites numerous components in the Reading
Recovery format that lead to successful intervention and outcomes in
beginning reading and writing instruction. These include:

- intervention that takes place early
- reading instruction based on reading connected text
- reading materials at the child’s instructional level
- more instructional reading time for at-risk beginners
- intervention that provides an opportunity to learn with shared
goals between the teacher and child
- the teaching of strategies and how to transfer strategies to new
  situations
- writing as an integral component
- a phonemic awareness component
- intervention that compliments and supports the classroom
  reading program
- direct instruction
- individualized instruction
- monitoring and reinforcement of the child’s attempts to
  construct meaning from text
- the use of skilled, experienced teachers
- opportunity for accelerated progress

Little research and publications exist to support change in the
Reading Recovery program. Iversen and Tunmer (1993) and Center and
colleagues (1993) advocate that an expansion of the phonological
awareness component is necessary in order to enhance Reading
Recovery’s effectiveness, and in particular, more explicit and systematic
instruction in phonological recoding. However, this is in clear contrast to
Clay’s less explicit emphasis on developing phonological awareness by
having the child informally listen to the sounds in words that he/she wants to write, and learning about sound/letter relationships from writing (Clay, 1988).

The theoretical principles of the Reading Recovery Program can inform instructional practices for all beginning readers and writers - both those in small groups and in the classroom. These theoretical principles include:

1. observing children as they engage in reading and writing events
2. using children's known concepts as a basis for teaching unknown concepts
3. employing a variety of real books and writing experiences to help children learn how to read
4. accelerating children's literacy processes by providing balanced opportunities for independent and assisted learning on meaningful tasks
5. focusing instructional interactions at a strategic problem-solving level, in contrast to acquiring items of knowledge.

(Dorn & Allen, 1996, p.50)

In combination with general principles that form an instructional framework and perspective for beginning literacy instruction, there are prominent elements with the Reading Recovery tutorials that are readily identified as characteristics of successful beginning reading instruction (Hiebert, 1994). One of the strongest elements is phonemic awareness, for without it, exposure to print does little to foster the development of spelling-sound knowledge, that is the interrelatedness of sounds and visual patterns in words (Adams, 1990; Iverson & Tunmer, 1993; Juel, 1991; Juel et al., 1986). Other elements identified by Hiebert (1994) include: deliberate instruction; high expectations with goal setting and
reviewing, repeated reading of text; and experimenting with letter-sound correspondences through writing.

Pikulski's (1994) evaluation of five early intervention programs describes recommendations for successful early years literacy instruction. These include:

- coordinated high quality instruction in both the classroom and early intervention program
- more time devoted to reading for at-risk children
- individual and/or small group instruction
- early intervention (grade one)
- use of simple, predictable texts
- repeated reading of familiar text to develop fluency and confidence
- focus on words, word patterns, phonemic awareness, and phonics
- a daily writing component to focus the child's attention on the features and details of letters and words
- ongoing assessment to monitor progress and inform instruction
- daily home reading
- quality teacher training, both initial and ongoing

Reading Recovery is consistent with all of these recommendations, although its coordination with quality classroom instruction is site-specific, rather than program related.

The Implications of Reading Recovery on Classroom Instruction

Researchers have explored the impact of Reading Recovery on early years classroom instruction. Pinnell (1986) examined whether the classroom instruction of teachers trained in Reading Recovery differed from that of their colleagues. A comparison was made between the learning of Reading Recovery children who were taught in the classroom
by Reading Recovery teachers with that of Reading Recovery children taught in the classroom by teachers who were not Reading Recovery trained. No significant differences in learning outcomes were found.

Center and colleagues (1995) explored the issue of whether early reading instruction in schools with the Reading Recovery Program was more effective than in schools without a Reading Recovery Program. Results indicated that there was no evidence of a spill over effect to regular classes from the Reading Recovery Program. In general, within the research literature, children's learning is rarely viewed as the joint product of the Reading Recovery tutorial and classroom instruction. To date, however, no study has systematically documented teacher's classroom instruction and instruction in Reading Recovery in order to assess transfer effects and the relative contributions of each.

Pikulski's first recommendation for increasing the probability of success in early intervention programs is the importance of coordinating excellent instruction in both the classroom literacy program and the early literacy program. The Reading Recovery Program does not provide a framework to coordinate these two. The success of training and ongoing professional development for the Reading Recovery teachers is well documented and researched. That ongoing professional development and consistency of support, if available to teachers, could be the vehicle to promote teacher development and change within the classroom.
Clay (1993) identifies a high quality classroom literacy program as critical to the success of the Reading Recovery. Such a quality program at the early years level would support the development of reading and writing by including the following instructional strategies that include many of the components identified in the review of factors that enhance literacy development found in Chapter 2:

- reading aloud to children to enhance their information base, background knowledge and understanding of language

- discussing a story before, during, and after reading, encouraging children to make predictions and inferences, helping them construct meaning, and the relating of the story to their own experiences

- sharing and repeating readings of Big Books, charts with songs and rhymes and providing opportunities of independent explorations

- providing opportunities for guided reading in a group situation to model important strategies

- scribing children's sentences and stories through shared writing and thereby demonstrating writing strategies

- providing opportunities to see how words work in relating sound to symbol through phonemic awareness, phonemic recoding activities such as activities which focus on rhyme, initial letter substitution, and blending sounds

- providing opportunities to see how sentences work through interactive writing

- writing independently on a daily basis, to practice and experiment with sound/symbol and sentence formation

- supporting a strong, daily home reading program

- providing developmentally appropriate literacy activities in classroom centres.
The learning environment of a successful early years classroom should immerse the child in meaningful reading and writing activities, with systematic instruction in phonemic awareness, phonological recoding, and syntactic awareness. Deliberate instruction and guided practice are necessary within the child's "zone of proximal development." Coordination of classroom programming and early intervention programming are crucial through continuous assessment so that the child receives effective instruction to access what he/she knows and to develop new competencies.

The Inner City Dilemma - An Adapted Early Intervention in Reading Model

Background

Despite the effectiveness of Reading Recovery as an early intervention program in many schools and countries, the dilemma of serving schools with low-income, disadvantaged populations remains. The cost of providing sufficient Reading Recovery teachers in inner city schools is prohibitive for most school divisions. Even if cost is not a factor, there are issues that have become apparent in inner city schools that have implemented Reading Recovery. First, it has been found that the levels of attainment and discontinuation rates may not be as high in low-income schools where many students' prior experiences with literacy have been limited. Second, a pull-out program where individual teachers
work with a handful of first-grade students is unlikely to influence rapidly or substantially classroom instruction in low-income schools, where changes in classroom instruction, especially in the middle grades may be needed. Finally, the profiles of low-income schools where many students speak first languages other than English may never be affected sufficiently (Hiebert, 1994, p.23).

An alternate route to Reading Recovery in inner city schools is to apply the principles and theoretical foundations of Reading Recovery to student-teacher contexts other than one-to-one intervention in order to establish and maintain comprehensive, effective early years literacy instructional approaches. Both group intervention and classroom instruction must be involved. Recent research on the application of the Reading Recovery Program format to group situations has demonstrated that such instruction must be technically different from the Reading Recovery tutorial if it is going to serve the needs of the group (Dorn & Allen, 1996; Pinnell et al., 1994).

As a Reading Clinician in two inner city schools, I face the early intervention issue as part of my support to the schools. Over the past few years it became apparent that many grade one children were coming to school not having had sufficient literacy or language experiences at home. As a result, these children had difficulty learning effectively in whole class literacy instruction. By grade two, many of these children were not reading or writing independently. In assessing the situation in
order to plan for support, it became apparent that approximately one half of the grade one students and one third of the grade two students were at-risk. The two school populations were similar in size - approximately forty in grade one and grade two. Thus an early intervention program was needed for approximately twenty students in grade one and fourteen in grade two.

Reading Recovery is an established early intervention program within my school division, although not a program that each school “must” have. Because of the school-based management policy, early intervention programming within a school is at the direction and discretion of the particular school. Reading Recovery teacher training is available to schools who request it. However, each school must provide staffing for it from within their school staff complement. Staff, solely for Reading Recovery, are not provided through extra divisional staffing. That being the case, each of my schools was looking at providing support to approximately thirty four at-risk grade ones and twos. If Reading Recovery were considered, more than four full time support staff would be needed to provide early intervention programming in each school. Both schools have considerable numbers of learning and emotional needs in children throughout their populations (one has a junior high component). It was not felt to be feasible financially or educationally to support two grades at the expense of the needs of the rest of the school.
Thus, although Reading Recovery was the first choice of early intervention programmers in both schools, it was not financially feasible. Instead, the decision was made to explore small group possibilities. The goal was to build an early intervention program with strong links to classroom instruction and home support, based on the best practices of teaching-learning strategies that research has identified in Reading Recovery and other successful early intervention programming.

**Barbara Taylor's EIR Model**

An extensive research and literature review was undertaken, and Barbara Taylor's Early Intervention in Reading (EIR) model which is an adaptation of Marie Clay's Reading Recovery Program that provides small group rather than one-to-one instruction, was decided upon as a base for developing an early intervention group structure. A special feature of EIR was that it had been developed for use with inner city children. It was therefore believed that EIR would accommodate the needs of these particular inner city schools. With EIR, more needy children could be accommodated than could be reached with Reading Recovery.

EIR (Taylor, Short, Shearer & Fryer, 1995) described earlier in this chapter in Pikulski's (1994) review of five early intervention programs, has been in operation over the last decade in a number of middle and low socioeconomic schools in Minnesota (Taylor et al., 1992; 1994; 1995). It is a supplemental program for grade one children that is provided by their
classroom teacher. Approximately five to seven of the lowest achieving students are identified early in the grade one year. The classroom teacher provides an additional twenty minutes of reading and writing instruction daily in the classroom through a three day format. The intervention format focuses on: (1) the initial reading and discussing of a literature book, (2) daily rereading of a short story summary of that book, (3) guided modeling of word attack strategies (both context and phonics) in connected text, (4) sound box spelling of selected story words to build the children’s phonemic awareness and phonics knowledge, (5) teacher directed interactive writing of a sentence (or more) in response to the story, (6) rereading of the current summaries and past story summaries with a paraprofessional (one-to-one for an additional 5 minutes every day), (7) sharing the story summaries for home reading, and (8) monitoring progress and informing instruction through daily observational assessment and running records (on the third day).

The theoretical principles of Reading Recovery which Clay (1994) identified as needing to inform instructional practices for all beginning readers (one-to-one, small group, and classroom) are evident in the EIR program. Hiebert’s (1994) characteristics of beginning reading instruction are components of EIR. They include: systematic instruction and opportunities to develop phonemic awareness skills, deliberate instruction, high expectations with goal setting and reviewing, repeated reading of familiar text, and experimenting with letter-sound
correspondences through writing. Speigel's (1995) components of Reading Recovery that lead to successful intervention and outcomes in beginning reading and writing are also evident in the EIR model. Of the eleven characteristics of successful early years literacy instruction outlined by Pikulski (1994), the EIR program encompasses ten. Only initial, ongoing quality teacher training is not addressed in a formal structured manner. However, the coordination of early intervention instruction and classroom literacy programming is a given, as the classroom teacher is providing instruction to both groups.

**An Adapted EIR Model**

In adapting Barbara's Taylor's EIR model to meet the needs of my particular schools, it became evident that the instruction given by the classroom teacher would not be feasible. Firstly, there was a concern about the number of children in each class needing support. Secondly, there was a concern about the unsettled and inattentive behaviours of many of the children who lacked sufficient language proficiency, were ESL students or presented with Fetal Alcohol Syndrome characteristics. As a result, a school based decision was made to create a systems intervention model. Daily from 9:25-10:00 A.M., the grade twos received literacy support in four different locations using four levels of instruction, of which three were an EIR format. Similarly from 10:00-10:35 A.M., the grade ones received literacy support, using again four levels of
instruction, of which three were EIR format. Two support teachers, myself as reading clinician, and the classroom teachers were involved in delivering instruction and each offered instruction in different locations. The EIR groups averaged six children each and were grouped homogeneously. The small numbers and quiet locales allowed opportunities to provide early literacy instruction, modeling of appropriate behaviour, and developing attending and focusing skills.

The group intervention format was extended from three to five days usually Monday to Friday. This gave the children more rereading time using familiar text, and allowed for a greater variety of phonemic awareness activities. The adapted action plan is as follows:

**EIR Action Plan - Emergent /Early Levels**

**Day 1**
- Read the storybook
- Discuss vocabulary/ story elements
- Read the chart to them (retelling summary)
- Reread as a group
- Making Word Activities
  - Using 4 or 5 special chart words focusing on one vowel sound, word families and pattern either on chalkboard using sound boxes or using magnetic letters
  - Give each child an individual booklet of retelling summary and begin illustrations

**Day 2**
- Reread chart summary as a group
  - track point
  - model S.P.L.A.S.H. (See Appendix 2)
- Reread chart with individual helpers
- Mini lessons - compound words, ed/ing endings
Guided spelling of special words from Day 1
(at the back of the booklet using sound boxes)
Continue illustrations
Child reads one-to-one with teacher

Day 3
Reread chart as a group/ in sections with individual
continue to model strategies as needed
mini lessons such - compound words,
contractions
Sentence rebuilding activities
Guided written response
1 or 2 sentences initially building to 3
sentences BME
interactive as a group teaching capitals,
punctuation, hearing sounds in words
at back of the booklets
Illustrations in booklet
Child reads one-to-one to CT/ peer

Day 4
Reread chart as a group/with individual
Sentence rebuilding activities
Guided written response, continue from Day 3
Illustrations in booklet
Child read one-to-one

Day 5
Reread chart summary with individual helpers
Complete illustrations in booklet
Reread for stickers/CT signs in the back of booklet
Take the booklet home, to share and read with extra
copies kept at school for rereading practice.

The instructional strategies discussed earlier in describing Barbara
Taylor's EIR format are all included in the 5 Day Action Plan. Extensions
and additions to the strategies include added engaged time on task for
rereading connected text, word building activities (Cunningham, 1991),
mini lessons focusing on word or sentence level conventions, and
sentence rebuilding activities. In addition to the daily 35 minute group
intervention, each child rereads the current story summary plus several
favourite summaries to a paraprofessional, on a one-to-one basis. Once completed, the story summaries are sent home, to be shared and then signed, and returned to school for rereading practice. Coordination with the classroom instruction is based on daily informal sharing and observations, and the compiling of running records. Assessment is based on anecdotal notes, and running records for each student every five days.

EIR Action Plan - Preemergent/Emergent Level

The grade ones, particularly in the Fall term, were not far enough along developmentally in the reading and writing process to be involved in the instructional activities as outlined in the 5 Day Action Plan. As a result, a separate action plan was developed to address their learning needs within the five day format. It is as follows:

Day 1  Read the storybook
       Discuss storybook/story elements
       Read the chart to them (retelling summary)
       Reread as a group
Sound/Symbol focus on:
   1. ABC in sequence (visual and auditory)
   2. Out of Order (Can you find)
   3. One letter name/sound per week
      on class chart
      in individual pictionary
Give each child an individual booklet of the retelling summary
Illustrate and reread page one
Read the ABC book

Day 2  Warm up read (each day a helper picks an old story chart)
       Reread new chart as a group/ in sections
       Look for patterns and mark track points
Model strategies
Build high frequency word games

Sound/Symbol
1. Repeat ABC in sequence from Day 1
2. Repeat Out of Order from Day 2
3. Review letter of week chart and add letters
Illustrate and reread page two of booklet
Read ABC book

Day 3
Warm up read (old chart)
Reread new chart as a group, in teams, one-to-one
Sentence remaking (word level focus)
pages 1 and 2
Language Experience Writing
using story pattern
each child dictates his/her own version to be put on class chart
Illustrate and reread page 3 of booklet
Read ABC book and play alphabet line game

Day 4
Warm up read (old chart)
Read new chart as a group, in teams, one-to-one
Sentence remaking
pages 3 and 4
Language Experience Writing
Reread chart from Day 3 writing
each child copies own sentence into back of their booklet
Illustrate and reread page 4 of the booklet
Read ABC book or play alphabet line game

Day 5
Reread new chart independently as a group and individually
Play high frequency word games, for example,
Can you find me____
Cloze
Sentence remaking of page 5
Complete illustrations of page 5
Reread complete booklet
Write comment on the back of booklet/sticker
Take home, to be shared, signed, and returned to school

The EIR Project is now entering its third year in one school and fourth in the other. The format will continue very much as it has been
described, particularly at the program content level. However, a focus for next year will be strengthening the connection and coordination of instruction between small group intervention and classroom programming through involving classroom teachers in informal inservice training and weekly planning/sharing sessions, and strengthening the awareness and involvement of parents.

The dilemma of early intervention is not exclusive to the inner city as the cost effectiveness of Reading Recovery is an issue for many schools. At the request of the school division, statistics collection has begun in both schools, to ascertain the effectiveness of this group intervention format. This is being done using Clay’s (1993) Observation Survey. Initial information was gathered in May 1998, at the Kindergarten and Grade One levels.

Our EIR model will be expanded this Fall into several schools within our division, particularly in the geographic area surrounding the schools that presently have EIR programming. Thus, if children move in their crucial first two years of literacy instruction, there will be literacy intervention programming available in their new school. In the future, it is hoped that all seven elementary schools within the geographic area will offer EIR programming.
Summary

Research demonstrates that successful early intervention programming must include the teaching of effective self-monitoring strategies with daily opportunities to write independently and read familiar books (Adams, 1990; Clay, 1993; Pikulski, 1994). Research further supports that the best results are achieved when early intervention programs have a balance between the strategic reading of whole, meaningful texts, and writing for authentic purposes (Adams, 1990; Clay, 1991, 1993; Pikulski, 1994; Pinnell et al., 1993). Reading Recovery demonstrates these characteristics and so does our adapted EIR model. Running records, anecdotal observations, and classroom teacher feedback have provided positive information as to EIR's short term effectiveness. The ongoing statistics collection may confirm this information and provide data on long term effects.

Our EIR format is a cost effective small group intervention program. It has demonstrated that many low-achievers at the first and second grade levels, at risk of experiencing reading difficulties can instead experience success and develop independence as beginning readers and writers.
Chapter 6

Implications for Practice and Future Research

As stated in Chapter 1, the purpose of this study was to examine, review and organize all the research related to Marie Clay’s Reading Recovery, in order to draw implications for practice and future research. Marie Clay’s research from the 1960’s through the 1990’s has provided a wealth of data, and insight into emergent literacy development. She and other researchers have focused our attention on the fact that young children acquire critical concepts about reading and writing from their daily experience with print long before they come to school. Clay and other emergent literacy researchers have concluded that learning to read and write is a developmental, step by step process of skill and habit formation - not a product of hidden insights (1972).

The instructional implications arising from early literacy reading research are numerous. Both the work of Mason (1980) and Ehri (1980) illuminate the possibility of a natural ordering of letter and word knowledge in a child’s development of word reading. Further research undertaken by Ehri (1980) and Masonheimer, Drum, and Ehri (1984) has emphasized the importance of letter mastery and phonological recoding skills if reading competence is to be developed. It was found that children
not familiar with alphabetic letter patterns within words have difficulty remembering printed words. Hiebert's (1981) research expanded the concept of the developmental nature of word reading skills beyond sequential to be integrated in nature. Thus, the programming implications that arise include the need not only for an alphabetic focus, but also phonological awareness and phonological recoding activities (e.g. rhyme, deletion, and addition of sounds in words, sound box spelling, and making word activities) within the context of connected text (guided model of word attack strategies and interactive writing).

The literacy research on beginning writing supports the understanding that writing is a developmental, interactive process (Clay, 1985). Sulzby (1985) concludes that children know far more about early writing than is acknowledged in our instructional programs, but that they know it differently. Sulzby and Barnhart (1986) suggest that young children simultaneously hold multiple hypotheses at various levels of written language development.

The development of both early reading and early writing behaviours is strongly influenced by the adult/child relationship (Vygotsky, 1978). There are three general types of experiences that help young children learn about reading and writing (Sulzby, 1985). The first is interaction with adults in speaking, listening, reading, and writing. Second is the independent explorations of print both in reading and writing, and third is the adult modeling of language and literacy. Those
children who enter school having had minimal experiences in these areas are at a distinct disadvantage. They are missing the foundation necessary to fully participate in, and benefit from early literacy instruction. For them, early intervention is the vehicle to build that foundation before the gap becomes overwhelming. Research has indicated that Reading Recovery is the most successful early intervention program.

The design of Reading Recovery is based on the assumption that children learn by constructing meaningful reading and writing activities through social interaction. That social interaction supports the child's ability to work at a level at which he/she may be 'half right' and be able, with the support of an adult, to problem solve and perform. Thus Reading Recovery incorporates Vygotsky's (1978) notion of the 'Zone of Proximal Development'. Consistent with the principles of learning identified by Vygotsky (1978), Reading Recovery is intended to meet the needs of children who experience difficulty establishing effective reading and writing strategies and who are thus at risk of not becoming independent readers and writers.

The Reading Recovery research provides answers for a number of issues. It points to Reading Recovery's cost effectiveness in the long term (Dyer & Binkley, 1995). The concern regarding the number of children who are able to receive intervention is more of an issue in schools with high at-risk primary populations. For these school populations, a combination of Reading Recovery and small group
programming as seen in the Reading Recovery/Early Intervention Group (Dorn & Allen, 1996) might be more appropriate, or an adaptation of the Reading Recovery format for small group intervention, as has been developed in the modified EIR format. The program content of the Reading Recovery tutorial format reflects best practices for early literacy instruction (Pikulski, 1994), however research has suggested that more explicit code instruction would be appropriate for consideration (Iversen & Tunmer, 1993). The importance of close coordination/consultation with both classroom instruction and home connection are essential. The training, insight, and expertise of the Reading Recovery teachers needs to be consistently shared with classroom teachers through a structured communication framework. Finally, the issue of the timing of intervention - whether after one year of instruction as in New Zealand’s Reading Recovery program or early in the first year of instruction, as in Ohio’s Reading Recovery program, needs to reflect the nature of the entering school population that the program is serving.

There are many implications for practice and future research that arise out of this Reading Recovery research review. Questions needing answers include the following. What are the most effective ways to teach a struggling beginning reader and writer? Should the emphasis on program content be expanded or refocused to include a more systematic approach to teaching phonological awareness, phonological recoding, and syntactic awareness skills? How can Reading Recovery’s
instructional strategies best impact on classroom teachers' professional development and effectiveness? How can the home connection be strengthened so that a long term commitment to literacy development is established? How can Reading Recovery be adapted to a small group format to address the high numbers of at-risk beginners evident in many inner city school populations?

That Reading Recovery has proven to be a successful early intervention program both in terms of its results of student learning and its adaptability to many countries. It has also become a significant force in shaping the way we view early literacy development. Despite its success, it would be wrong to accept Reading Recovery as the only appropriate intervention for at-risk beginners. The need for local experimentation and innovation is necessary to identify context appropriate approaches for unique school populations.
References


Reading Recovery. (1988, February). The Ohio State University College of Education. 2, 23-34.


# APPENDIX A

## OBSERVATION SURVEY SUMMARY SHEET

Recommended for survey checks after one year of instruction

<table>
<thead>
<tr>
<th>Name:</th>
<th>Date:</th>
<th>D. of B.</th>
<th>Age: yrs mths</th>
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<th>Recorder:</th>
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### Text Titles

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<th>Running words</th>
<th>Error rate</th>
<th>Accuracy</th>
<th>Self-correction rate</th>
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<td>2. Instructional</td>
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<td>3. Hard</td>
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### Directional movement

**Analysis of Errors and Self-corrections**

Cues used or neglected [Meaning (M) Structure or Syntax (S) Visual (V)]

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Cross-checking on cues (Note that this behaviour changes over time)

**LETTER IDENTIFICATION**

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<th>STONES</th>
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**WORD TEST (CLAY)**

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**OTHER READING TEST**

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<th>WRITING VOCABULARY</th>
<th>HEARING SOUNDS IN WORDS (DICTATION)</th>
<th>STORY</th>
<th>SPELLING</th>
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|                  |                     |                                     |       |          |
RUNNING RECORD SHEET

Name: ______________________ Date: _______ D. of B.: _______ Age: ___ yrs ___ mths

School: ______________________ Recorder: ______________________

Text Titles | Running words Error | Error rate | Accuracy | Self-correction rate
---|---|---|---|---
1. Easy | | | | 1:___
2. Instructional | | | | 1:___
3. Hard | | | | 1:___

Directional movement

Analysis of Errors and Self-corrections
Information used or neglected [Meaning (M) Structure or Syntax (S) Visual (V)]

Easy __________________________________________________________

Instructional _______________________________________________________

Hard ____________________________________________________________

Cross-checking on information (Note that this behaviour changes over time)

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CONCEPTS ABOUT PRINT SCORE SHEET

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<td>8. Bottom of picture</td>
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<td>9. Begin 'The' (Sand) or 'I' (Stones) bottom line, top or turn book</td>
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<td>18. Meaning of quotation marks</td>
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WRITING VOCABULARY OBSERVATION SHEET

Date: ________________

Name: ____________________  Age: ____________

Recorder: ____________________  Date of Birth: ____________

TEST SCORE: ______  STANINE GROUP: ______

(Fold heading under before child uses sheet)

COMMENT
HEARING AND RECORDING SOUNDS IN WORDS (DICTATION TASK)
OBSERVATION SHEET

Name: ________________________ Age: ________________________
Recorder: ________________________ Date of Birth: ____________

Date: ________________________ TEST SCORE: ______________
STANINE GROUP: ___________

(Fold heading under before child uses sheet)

COMMENT
**LETTER IDENTIFICATION SCORE SHEET**

Name: ____________________________  Age: __________

Recorder: ________________________  Date of Birth: __________

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Confusions:__________________________

Letters Unknown:_____________________

Comment:___________________________

**Recording:**

- A Alphabet response: tick (check)
- S Letter sound response: tick (check)
- Word Record the word the child gives
- IR Incorrect response: Record what the child says

**TOTALS**

**TOTAL SCORE**  

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**Date:** __________  

**TEST SCORE:** __________/54  

**STANINE GROUP:**  

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Useful strategies on text:

Problem strategies on text:

Useful strategies with words:

Problem strategies with words:

Useful strategies with letters:

Problem strategies with letters:

SUMMARY:

SIGNATURE: __________________________
S.kip the word

Predict. What word makes sense here?

Look for parts you know.

Ask. Is it like a word I already know?

Say the parts and blend them together.

Help! (ask someone)