THE ACQUISITION OF READING WITHOUT FORMAL INSTRUCTION

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Declaration

I hereby declare that this thesis is my own original work,
that all assistance and sources of information have been acknowledged,
and that this work has not been presented to any other university
for the purposes of a higher degree.

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Ex Deo Gratia

So I saw that there is nothing better
for a man than to enjoy his work -
this is the gift of God.
For who can bring him to see what will happen after him?

Ecclesiastes 3 : 12 + 22

THE ACQUISITION OF READING WITHOUT FORMAL INSTRUCTION

ABSTRACT

The study aimed at describing children who learnt to read before entering school and comparing these early readers from English speaking families in KwaZulu/Natal with early readers studied in America (Durkin 1961, Torrey 1973) Scotland (Clark 1976) England (Norris and Stainthorp 1991) and California (Mahony and Mann 1992). This sample of 12 was smaller than expected from literature and consisted of 83% girls, from upper middle class families and parents with tertiary qualifications and academic backgrounds.

Identified family characteristics included a high value placed on education in general, and reading and writing activities specifically. The mothers were mature, capable persons; they were available and enjoyed interacting with the child around the child's activities. They have a parenting style that fosters emotional security and independence in the child, and facilitates exploration, similar to the findings in other studies.

The most startling difference was the number of children whose efforts were directed towards writing rather than reading. Their attitude was: "I don't read - mother reads for me. I write". During the interviews it became clear that the parents were told by pre-school or Class 1 teachers to discourage the child's first reading efforts. In order to accommodate the child's growing interest in reading, the parents read advanced material to the child. The children stopped reading, but continued to explore written language through writing.

It was found that once the early readers grasped the meaning of print, they did not progress slowly through the identified pre-reading stages, but moved directly to word identification beyond the decoding stage. When confronted with a new word, they used advanced decoding skills and seldom resorted to "sounding out" strategies. They seemed to use the syllable and not the individual sound as the smallest unit in a word.

Their approach style to reading can be characterised as imaginative and divergent, rather than realistic, but their manner of work was generally methodical rather than fluid. In this respect the early readers differ from most beginner readers as classified by Bussis, *et al*,(1985) in their study of the approach styles of early readers.

Early readers were found to exhibit a specific constellation of characteristics that aided their mastery of reading: precocious language development, and advanced verbal skills which seems to be the result of superior auditory ability, specifically tonal memory, and the ability to concentrate. Although their intelligence was above average (112 - 149 range) they were not gifted children (mean I.Q. = 125,6). The Memory Scale of the intelligence test was found to be significantly higher than the other subtests of the intelligence test, indicating superior memory in early readers.

Socially the early readers were found to be outgoing and active and were generally the leaders in the group, due to their advanced verbal ability and above average motor skills; but they were also able to amuse themselves and concentrate on their experiments and exploration activities. The characteristics of early readers in this sample is similar to those found in other studies.

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CHAPTER 1

1. INTRODUCTION

The importance of the ability to read has never been in dispute and reading and the teaching of reading are the most researched topics in Education (Spencer, 1976). Most studies in the field of teaching reading are devoted to :

- the abilities and skills children need to cope with the task of reading;
- the reason why some children have difficulties in acquiring these;
- ways to remediate these deficits; and
- matching classroom strategies with the latest theory on reading.

And yet, despite enormous advances made in the field, a number of authoritative studies report an alarming drop in verbal achievement and lowered interest in reading in the Western world. Silver, Johnson and Associates reported that the mean scores of high school students in America on the Scholastic Aptitude Test declined from 473 in 1956/7 (on a scale of 200 - 800) to 434 in 1974/5 (Declining test scores : A Conference Report, quoted in Bettelheim and Zelan, 1982, p.25). The Bullock Report on Education in Great Britain and the 1983 HSRC Report on Education in South Africa reported similar declines in reading ability and interest.

Numerous studies attempted to explain this phenomenon. The boredom of children with basic readers (Bettelheim and Zelan, 1982), the impact of television, the group teaching situation, teacher variables and the influence of various specific methods of teaching (Clark, 1976), have all been studied and causally related to the decline in interest and ability to read (Feitelson, 1988).

This research aims at studying the acquisition of reading in an environment where school-system related influences do not exist and can be excluded as variables in the study. Contrary to the usual trend in the research of reading, this study will aim at factors that determine success rather than failure.

> "We long to know the nature of the learner's interaction with the written language, yet we persistently turn away from the strategies and sources that make the successful reader successful, because they seem to exclude the teacher" (Spencer, 1976, p.1).

Successful readers, variously called "natural readers" (Huey 1908, Forester 1977), "young fluent readers" (Clark 1976, McKay and Neale 1991) or "precocious readers" (Jackson and Biemiller 1985, Norris and Stainthorp 1991), have sporadically been mentioned in the literature. Aspects studied from various perspectives include the positive attitude towards reading (Huey 1908 reprinted 1968), familial influences (Durkin 1961, Clark 1973), reading related skills (Clark 1973, Riding and Simmons 1990), superior auditory skills (Clark 1973, Lamb 1993), reading strategies (Forester 1977, Norris and Stainthorp 1990, McKay and Neale 1991), linguistic abilities (Beveridge 1989, Mahony 1992) and single subject case studies (Krippner 1963, Torrey 1973, Laminack 1990, Bissex 1980).

The present study will draw on the findings of all the above studies but concentrate on early influences and interests, their personality characteristics and typical approach styles to reading of these early readers. Such description may yield insights into the process of learning to read naturally, which may have implications for the teaching of reading.

This will be no easy task as "even the beginnings of reading present the patterning of complex behaviour and only when this is appreciated will insight be gained into the factors crucial to the reading process in early stages" warned Clay (1972).

CHAPTER 2

2. OVERVIEW OF RESEARCH INTO EARLY READING

2.1 INITIAL IDENTIFICATION OF THE PHENOMENON

Reading is probably the most researched topic in education. Most of the research, however, focuses on reading difficulties and ways and means of remediating these difficulties; very little research focuses on successful readers.

That some children learn to read before they enter school, is not a new phenomenon; most class one teachers have encountered these exceptional children. Huey (1908) described these "natural readers" who learned to read early, as children who read for reading's sake. They learned while being read to, and imitated the adult reader. They seem to have grasped the meaning of reading as an enjoyable activity at an early age and had a positive attitude towards books.

> "They grow into it as they learned to talk, with no special instruction or purposed method, and usually such readers are the best and most natural readers of all". (Huey 1908, reprinted 1968, p.330 in Forester 1977).

Huey observed that this "natural reading" method produced better results than institutionalised methods using structured materials. Unfortunately, Huey's suggestion of almost a century ago "natural reading may be the right method to teach reading", was never formally adopted or implemented in education practice. Education became more formalised, structured and programmed over the years. Only in the late 70's despite the work of early pioneers like Montesorri, Chomsky, Krashen and others, did education begin to move towards more flexible, natural teaching methods. (The preference for

structured controllable methods is, in the experience of this researcher, dictated by the demands of the education system, rather than the needs of the child. But the issue falls outside the scope of this dissertation).

The first research encountered that made a comprehensive study of children who read before grade one, was that of Durkin (1961). She studied 49 subjects in Oakland, California, concentrating on intelligence, personality and home environment. According to this study the common factors which appeared to have contributed to early reading, are the child's exposure to a variety of books, and the availability of an adult who was interested enough in the child to read to him and answer his questions on reading, thus introducing him to the meaning of reading as well as providing a model for oral reading. These initial findings on the factors contributing to early reading were substantiated in later studies.

Durkin found that among the personality characteristics these children shared, were conscientiousness, persistence, self-reliance and curiosity. They were also serious-minded, had good memories and the ability to concentrate. Intelligence was not a deciding factor but attitude, personality, exposure to reading material and being read to, seem to have been the important factors contributing to early reading. (Forester 1977 p.161).

The most comprehensive study to date was undertaken by Clark (1976) with preschoolers in Scotland in the early 70's, observed over a 2 year period.

Her study covered the pre-reading knowledge and reading skills as well as intelligence, home influences and other interests. These thirty two young fluent readers were reading between two and six years above their chronological age upon school entry. All children read with understanding and used a variety of reading material. Their precocious language development was also evident on a variety of tasks. On intelligence tests their

strengths seemed to be in the verbal rather than the non-verbal areas. Their intelligence scores ranged from average to gifted but in the main, the group was of above average intelligence.

On the whole the young fluent readers scored higher on a test of auditory discrimination and visual-motor co-ordination, which lead to the conclusion that "it is possible for even young children to become very fluent readers in spite of an average, or below average, ability to reproduce or even remember in their correct orientation isolated designs sufficiently clearly to identify them from a range of alternatives" (Clark 1976 p.32). This finding was verified by Gattuso, Smith and Treiman (1991) in a comparison of auditory and visual modalities. He found that the ability to classify speech by common parts predicted early reading ability whereas visual classification ability did not correlate significantly with early reading ability.

As in the Durkin study, the children in the Clark study, came from heterogeneous family backgrounds, but all families valued reading and read to their children. The mothers tended to be older than normal and preferred to stay home to care for the children. These mothers found their children interesting and took time to answer their questions. Very few actually taught their children to read. It seems that all early readers had, at some stage during their preschool years, an interested adult who read to them and answered their questions.

As to personality characteristics, the early readers seemed to be self sufficient and well adjusted, and to have a sense of fun. They enjoyed the company of others but were also content to be alone. Their powers of concentration and memory were also noted. Clark concluded that their early reading may be an extension of their developing language skill, rather than their other characteristics.

> "It is important not to dismiss either their advanced language and intellectual development, or their development of reading skills and interest in reading, as the result of specific identified skills or of innate potential, but to consider the characteristics of their environment which, interacting with their potential skills, have assisted this precocious development" (Clark 1976 p.24).

Several smaller scale studies investigated individual variables which may throw light on the underlying causal factors of early reading. These causal factors that Margaret Clark so guardedly pointed out, were confirmed by various researchers. The Clark study, even though it used the crude and inaccurate Illinois Test of Psycholinguistic Abilities, pointed later researchers to possible causal factors of early reading. She isolated above average auditory discrimination; this was refined into various aspects of phonemic processing including phonological awareness, phoneme discrimination and metalinguistic awareness which were found to be related to early reading or could be used to predict good readers (Stuart-Hamilton 1986, Pratt and Brady 1988, Barron 1991, Morrow, Gibson, Strickland, Adams 1990, Palardy 1991, Beech 1992). None of these studies concentrated on early readers per se, but their findings pointed to the above mentioned factors being causally related to early reading. None of the findings were however conclusive.

Several authors cautioned against assuming a causal relationship between phonemic processing and reading ability :

> "concepts of structure in language may be as much a consequence as a cause of success in learning to read," warned (Francis 1987 p.101). Barron (1991) found a bi-directional relationship between literacy and phonological awareness whereby phonological awareness influences literacy while literacy increases phonological awareness. Gatherer (in Clark and Milne 1973) pointed out that tests of auditory discrimination

measured other factors such as memory. The concepts of auditory discrimination or phonological awareness were still too crudely specified to indicate exactly what auditory advantage early readers had over non-readers.

Attempts to refine the concept of phonological awareness brought to light that not all auditory discrimination skills seem equally important in the reading process. Tonal memory (Barwick and Valentine 1989) and pitch awareness (Lamb and Gregory 1991) seem to be significantly related to phonemic awareness.

A study was done with 18 pre-schoolers by Lamb and Gregory (1991). They measured phonemic awareness on a test where children had to judge if two spoken words began with the same sound. Pitch awareness was measured on a musical test where children judged if two notes or chords were the same. Phonemic awareness correlated significantly with the children's performance on two different reading tests; whereas intelligence, age and pitch awareness did not correlate with the children's reading ability. Lamb and Gregory (1991) conclude that not all auditory discrimination skills seem equally beneficial to the process of learning to read.

"Being able to discriminate differences in pitch is more highly associated both with reading and the ability to discriminate speech sounds than is the ability to discriminate different qualities of sounds. This conclusion supports Harris's (1947) claim that basic to the hearing of sounds in words is an awareness of pitch differences" (Lamb and Gregory 1991 p.26). They advocate carefully structured musical training as an essential component of the pre-school program. (The reader is also referred to their comprehensive review of the literature on the subject).

Not only phonological awareness but also morphological awareness were positively correlated to reading ability by Mahony and Mann (1992) in a study using riddles whose resolution was based on phonological and morphological clues.

They studied 48 second graders using riddles with a choice of two solutions. The child had to choose the funnier answer. Answers to test riddles depended on phoneme/morpheme awareness, while control riddles depended on general language ability.

Example : Where should you leave your dog if you can't take him in to the restaurant?

(a) Outside in the barking lot

(b) At home in the doghouse.

What goes "oom oom?"

(a) A cow walking backwards

(b) An old vacuum cleaner

Example of a riddle from the control group :

What do you call a rabbit with fleas?

(a) A Bugs Bunny

(b) A scratching rabbit.

Mahoney and Mann (1992) concluded from their statistical analysis that the ability to solve phoneme/morpheme riddles significantly correlates with early reading ability, while solution of the control riddles did not. While intelligence of their subjects correlated with the ability to solve riddles of both types, intelligence did not correlate with reading ability in this sample.

2.2 FAMILIAL FACTORS INFLUENCING EARLY READING

2.2.1 Family constellation

Previous studies concentrating on family background indicated that early readers come from heterogeneous families. Early readers were not uniformly the older or younger children in a family. Their parents were not uniformly qualified or professional people (Clark 1976, p.45). Some, like Torrey's John, came from lower socio-economic environments (Torrey, p.147 in Smith 1973). The one uniform characteristic of the families of early readers, seems to be the quality of the parenting. The mothers tend to be older than average and mostly stayed home with their children. The mothers were usually warm and caring persons, interested in the well being of their offspring and available to answer questions (Durkin 1966, Clark 1976). They found their children to be stimulating companions and welcomed verbal interaction with the early reader (Clark 1976, p.42).

One must keep in mind that early readers are described by Clark as "rather solitary" children who can amuse themselves and make few demands on their parents. Compared to say, hyperactive children who make many demands and get a lot of negative feedback from their parents, it would seem that early readers generate more positive feedback from their parents.

The question that seems worthwhile pursuing, is whether we have a special kind of adult who provides the right environment to stimulate early reading, or whether we have a child with a definite interest in books and special kind of personality that enables him to pursue his interest and generate the assistance he needs. The latter may well be the case as both Durkin and Clark noted that early readers seem to "ask the right questions".

2.2.2 Family interest in books.

Most early readers come from families that are interested in books and reading. Most have at least one parent who is an avid reader, most had contact with and access to the local library and all had books available at home.

Most children were read to by an adult or older sibling and for many, reading was a stimulating shared experience. This being-read-to-experience came in many forms for the early readers. For Torrey's John it was the TV commercials that pronounced the brand names and showed the work on the screen. Huey 1908 tells of a young boy who had Old Mother Hubbard read to him till he could read it, keeping his place as he went along. Forrester (1977) sites an instance of a three year old girl who listened to the record of The Wizard of Oz over and over, while following in the book, and not only recognised words from there, but also derived enough knowledge of the sound-letter relationships that she could sound out unfamiliar words without any formal instruction (Forrester 1977, p.164).

It would seem that the being-read-to-experience occurs in the life of all early readers in some or other form and may form the basis on which they discover the meaning of print. Hearing and seeing the words in an interesting or pleasurable environment could be the catalyst to their understanding of print as representing speech.

All early readers are reported to read for meaning, and seem to be more concerned with the message than the grammar or spelling of the words themselves. "They approach written language as naturally and easily as oral language and in the process they learn to read for pleasure and meaning" (Forrester 1977, p.164).

2.2.3 Early Reading tuition.

Apart from reading to the early readers and answering their questions, few parents did any systematic teaching of reading. Most parents were reported to be quite surprised when discovering the extent of their offspring's reading ability (Clark 1976, p.49). Several actually tried to discourage the child, and one parent in the Clark study reported adverse comments of neighbours.

Tuition by elder siblings was studied by Norris and Stainthorp (1991). From 400 families, they located eight in which the eldest child tutored the second or third child. Six of the eight sibling tutors were able to read before entering school but all of them seem to have been systematically taught by their parents to read, and thus fall outside the description of an early reader. The learners, too, could read before entering school.

The tutors however did not teach their siblings with the methods by which they were taught. The tutors tended to expose the learners to books while playing "school" and reading to them. Thus reading became an enjoyable experience with a loved older sibling.

These families shared many characteristics with the families of early readers described in other studies : mother was at home and was a warm caring person. Reading and books were valued in all the homes.

The learners whose introduction to reading began by age 3, share many personality characteristics with early readers described in other studies. The learners were read to and had a bookish environment. They seemed to ask the right questions about reading and utilised every opportunity to be taught. They were competitive, eager to learn and dedicated. They had good memories and were able to concentrate for long periods. This particular group of early readers of Norris and Stainthorpe (1991) however, have one

characteristic not found in other early readers : they had an older sibling who read early and whom they admired and wished to imitate.

This poses the interesting question whether early reading could be induced with an appropriate environment, social pressure or sibling rivalry, or whether an early reader will read at an early age regardless, utilising whatever resources are available, including siblings?

2.3 CHARACTERISTICS OF EARLY READERS

2.3.1 Personality

Various studies on early readers have isolated personality characteristics that seem to influence early reading. Durkin found that among the characteristics the early readers shared were conscientiousness, persistence, self-reliance and curiosity. They were also serious-minded, had good memories and the ability to concentrate. (Forrester 1977, p 161).

According to Clark the early readers in her study "clearly .... had some personal characteristics which did differentiate them from their siblings" (Clark 1976 p 54). She mentions their memory for precise detail, better concentration, and the ability to amuse themselves. Although they tended to be particularly sensitive and easily anxious as toddlers, they are described as well adjusted when they started school. They were very self-sufficient, and made decisions for themselves.

John, Torrey's (1973) subject, was described as "something of a loner". He had good relationships with adults and older children, but not with his peers. He was competitive, self-reliant and like to show off. He also had above average concentration.

The early readers studied by Norris and Stainthorp (1991) were described as followers rather than leaders. Although they enjoyed social contact they were individualistic, independent and self-motivated. They were eager to learn, quick to grasp and interested.

Across the various studies a picture of the early reader emerges :
the early reader is a child sensitive to and interested in his environment. He is curious, persistent and will struggle with a problem till he finds the answer for himself. These characteristics are enhanced by their good concentration and memory skills. They are competitive and self-motivated and take pride in their achievements. Their above average command of language enables them to interact efficiently with peers and adults and allows them to manipulate their environment to the extent that they can obtain the information or assistance they need to satisfy their curiosity.

2.3.2 Intelligence

Although early reading is generally thought to be associated with superior intelligence (Cassidy and Vukelich 1980 p 578) not all intellectually gifted children read early. Terman (1925) found, in his extensive genetic study of giftedness, that about 50% of his subjects read before starting school, and only 20% of his subjects read before age 5. Several other studies (Kasdon 1958, Strong 1954) reported similar findings, while Cassidy and Vukelich (1980) found that only 17-23% of the gifted in their school district read early.

Durkin (1966) and Clark (1976) on the other hand, found that not all early readers are intellectually gifted. Later research (Lamb and Gregory 1993, Mahoney and Mann, 1992) has indicated that precocious verbal ability, auditory discrimination ability and several aspects of memory (including tonal memory) seem to be more important than intelligence in producing early reading.

The question whether the provision of reading instruction for intellectually gifted children would induce early reading, was researched by Cassidy and Vukelich (1980). They identified two groups of pre-schoolers with superior intellectual ability (Mean I.Q of group 157) and subjected them to an instructional program that included phonics teaching and reading activities.

They found that the most significant gains were made by children who were already reading before the program started. Children who had failed to acquire significant reading before the program, for the most part, did not make significant gains in reading during the program. They concluded :

> "A very surprising finding of this study is that young children, even though they seem to possess the measurable readiness skills and have high intelligence, do not necessarily learn to read quickly even when given instruction. Perhaps they need to perceive reading as a functional skill. They need to feel that they can gain information or enjoyment from reading. Until they come to this realisation, the reading process offers little challenge to their rapidly growing and expanding intellects". (p.582).

They concluded that early reading can not be induced in intellectually gifted children. It would seem that high intelligence is not a pre-requisite of early reading. Although most early readers studied and have above average intelligence, few were intellectually gifted.

2.3.3 Auditory and Visual Perceptual Skills.

"Visual perception refers to the process of organising and interpreting visual sensory stimuli" (Kavale 1982, p 42) and these skills seem to be an important correlate of reading ability.

Visual Perception includes a variety of skills

- Visual discrimination refers to the ability to distinguish dominant features in different shapes
- Visual closure in the ability to recognise a complete figure from fragmented stimuli
- Figure ground discrimination : the ability to recognise a figure embedded in irrelevant background stimuli
- Visual association : the ability to conceptually relate visually presented stimuli
- Visual spatial relationships : the ability to perceive the position of an object in space
- Visual motor integration : the ability to integrate vision with fine motor movements
- Visual-auditory integration : the ability to integrate visually presented stimuli with auditory stimuli.
- Visual memory : the ability to recall the features of a stimulus or sequence of visually presented stimuli.

The reader is referred to the extensive study of Kavale (1982), a meta-analysis of the relationship between visual perceptual skills and reading achievement in which he integrated the results of 161 studies. His most important finding was that "intelligence appears to be a determinant of both visual perception and reading ability. When I.Q was partialled out, the magnitude of the relationship between visual perception and reading ability decreased" (Kavale 1982 p 49). Visual Memory, Visual Discrimination and Visual Motor integration were found to be the best predictors of reading ability ,if intelligence is not taken into account.

Of the more popular tests available to educational psychologists only the Bender Visual-Motor Gestalt Test (1946) correlated significantly with reading achievement. Of the Frostig Developmental Test of Visual Perception, only

the Form Constancy subtest exhibited a significant relationship with reading achievement. The Illinois Test of Psycholinguistic Abilities (1968), has only one useful subtest, the Visual Sequential Memory, correlating significantly with reading achievement (Kavale 1982 p 50).

These findings are in line with the ITPA results produced by Margaret Clark with her group of young fluent readers. Of the visual tests, only the Visual Sequential Memory subtest indicated a slight discrimination ability. On the whole she found "disappointingly little discrimination based on sub-test analysis" (Clark 1976 p 25).

Clark did conclude that visual perceptual skills were not an area of strength in this group of early readers. They did perform outstandingly, however, on the Memory for Digits test, a test of short term memory, Grammatic Closure tests, which involves awareness of grammatical rules and Auditory Association tests which involves association of auditory stimuli and vocabulary. Gattuso *et al,* (1991) confirmed in a comparison of auditory and visual modalities, that the ability to classify speech by common parts predicted reading ability, but visual classification ability did not. The superior auditory ability of early readers has been attested to in many studies notably Gregory and Lamb (1993) who found that musical ability correlated with reading ability and Barwick *et al,* (1989) who related tonal memory to reading. Gregory and Lamb (1993) found that children with good pitch discrimination also did well on phonic awareness tests and showed good reading performance. They postulated that good pitch discrimination is essential in the process of extracting and encoding phonemic information and quote Godfrey (1981) and Liberman (1967) who demonstrated that pitch change is "probably the most important carrier of linguistic information in the speech signal" (p 434).

The ability to discern phonemes in speech was found to predict later reading success (Shapiro, Nix and Foster 1990, Dreher and Zenge 1990, Stuart-

Hamilton 1986, Pratt and Brady 1988), notably

- rapid letter naming, (Felton 1992)
- ability to isolate language segments (letters, words, sentences) (Morrow *et al,* 1990)
- phonemic awareness (Stuart-Hamilton 1986)
- auditory conceptualisation (Felton 1992)
- beginning sound discrimination in five year olds (Felton 1992, Beech 1992)
- awareness of initial and final phonemes in six year olds (Beech 1992)
- understanding of the terms used in reading instruction (Morrow *et al,* 1990) and
- understanding of reading as a meaning gathering process (Morrow *et al,* 1990).

It would seem then that children who read early have an advanced ability to discern the phonemes that make up words. Phonemes also carry the information about the grammatical clues of the language; it seems to follow that if the child is more aware of phonemes he will grasp the structure of spoken language quicker. The advanced linguistic ability of good readers had often been noted in the literature. But the question remains, how does the young early reader make the connection between the phonetic structure of this spoken language (even if he has a better grasp of it than his peers) and other written forms of the language? This seems to be the central question in solving the enigma of early readers.

It is beyond the scope of this study to enter into the whole phonics debate, the areas of auditory and visual perception and their concomitant alphabet, phonic and word attack methods.

The central question however, remains, and the study will attempt to determine how young readers derive meaning from print.

From the aforementioned research several conclusions concerning early readers can be drawn. Early readers seem to have above average auditory discrimination ability which assists precocious language development. Of the auditory discrimination skills known, pitch awareness was isolated as highly associated with reading ability. It would seem that early readers grasp the complexities of language (aided by above average auditory skills) and then make the connection between spoken language and written language at a younger age than their peers.

2.4 EARLY READING ACQUISITION

2.4.1 Definition of Reading

Huey wrote in 1908 "and so to completely analyze what we do when we read would almost be the acme of a psychologist's achievements for it would be to describe very many of the most intricate workings of the human mind, as well as to unravel the tangled story of the most remarkable specific performance that civilisation has learned in all its long history". Since Huey the knowledge of reading gained through research has moved through various stages.

Clay (1979) "defines reading as a message-gaining, problem-solving activity, which increases in power and flexibility the more it is practised. My definition states that within the directional constraints of the printer's code, 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, conveying the author's specific message" (p 6).

In this study reading refers to any attempt to convey the meaning of print in speech with some accuracy. Quasi-reading in this study refers to any attempt

by a child to render written language in speech. Accuracy was not taken into account. Quasi-writing refers to any attempt to render speech into print, where as writing would require that the child attempt to use letters that have some semblance to the actual orthographic structure of the word. For an attempt to qualify as reading or writing, complete accuracy was not expected, as the children in the study were preschoolers.

Until the seventies, the emphasis seems to have been on the skills needed for the task of reading. Once the individual skills had been identified, defined and researched, the emphasis shifted to how children orchestrated the individual skills to derive meaning from text.

Previously, reading was viewed as a task that involved decoding symbols into sounds/words with the emphasis on decoding skills. Smith (1973), Reid (1973) and others alerted teachers and researchers to the fact that only a small part of the information necessary for reading comprehension comes from the printed page.

Smith sees the act of reading as the perception of distinctive features in text. The child perceives words by a few distinctive characteristics. These he organises in memory in mental feature lists which enables him to assign meaning to a specific configuration of features of a word. When a child has to read a word, and he can recognise it as a configuration in his feature list, he can identify it, and thus go immediately from form to meaning.

If the word is unfamiliar, the child falls back on his intermediate word attack skills like sounding it, finding known parts of the word, guessing or predicting the meaning of the word from the context.

Fluent reading involves scanning the surface structure of a sentence to grasp the underlying relationships of meaning in the context of the sentence, without

resorting to the intermediate skills. Research evidence for reading being more than decoding skills, came from many and varied sources including Chomsky (1968) who pointed out that there are over 200 sound-letter correspondences in the English language: just too many to keep in mind when reading (Gatherer in Clark and Milne Eds. 1973).

When reading, the reader processes three kinds of information simultaneously:

- grapho-phonic information (that is the letters that make up the spelling of the word, and the letter-sound correspondences that make up the pronunciation)
- syntactic information (the sentence construction and its rules)
- semantic information (the meaning; inter alia, literal, figurative, ironic, symbolic) (Goodman in Smith 1973 p 158).

To orchestrate all the skills and all the background knowledge needed in fluent reading, the reader must make use of guessing, postulated Goodman in his classic article - Reading : A psycholinguistic Guessing Game,

> "efficient reading does not result from precise perception and identification of all elements, but from skill in selecting the fewest, most productive cues necessary to produce guesses which are right first time. The ability to anticipate that which has not been seen, of course, is vital in reading, just as the ability to anticipate that which has not yet been heard, is vital in listening" (Goodman 1967 p 126).

Later research focused more on the knowledge the child brings to the reading situation as well as on the metacognitive skills he uses to bring this knowledge to bear on the task of deriving meaning from text.

Various researchers (Feitelson 1988, Bussis *et al,* 1985, Clark 1976) came to the conclusion that even beginning readers use the advanced metacognitive skills of efficient readers, albeit in a less refined form. Even beginning readers just did not read single words - they read for meaning (Smith 1973).

2.4.2 Metacognitive knowledge about reading

"Metacognitive knowledge may be considered as an individual's knowledge about various aspects of thinking. This metacognitive knowledge may then in turn determine appropriate strategies for solving problems" (Moore 1982 p 120).

It would then include inter alia, a child's own perceptions of his information storage and retrieval (metamemory) or planning, summarising and evaluating strategies (metacomprehension). Metacognitive research seems to focus on these two aspects:

- firstly, the identification of knowledge the child has concerning the cognitive task; and
- secondly, the way in which he uses this knowledge; the regulation and monitoring of the process (for a review of the literature see Moore 1982).

Numerous studies have been conducted concerning metacognition of reading covering both areas. The studies to identify the child's knowledge about reading, utilise mainly interviewing as a research paradigm, and focus on the child's awareness of the functions and features of written language. The term linguistic awareness is often used to denote the knowledge about language, that a child possesses. These studies surveyed the child's knowledge of technical terminology of reading and writing; his understanding of the reading task, his comprehension of the purpose and value of reading, his knowledge of the conventions of print (eg reading from left to right on a page) to name but a few (Clark 1973, Downing 1969, Reid 1966, Tovey 1976, Moore 1982).

Research findings concerning the metacognitive knowledge of young children about reading, include :

- Metacognitive knowledge about reading increases as the child is exposed to reading; a small child has only a very vague concept of the

task of reading before he is exposed to books and reading.

- A small child is unable to verbalise his metacognitive strategies even as he is employing these strategies to solve a task. Reid stated : "On numerous occasions children were observed on the one hand to be confusing themselves by what they said (eg by the statement that 'words are made up of words') and on the other hand to be arriving at sudden new discoveries about how they did in fact make progress in reading as when the child realised - and was able to say in some way - that he had avoided an error by seeing the relative position of the letters in a word" (Reid 1966 p 61).
- Some of the earlier research findings are hopelessly inadequate because young children, below the age of 7 or 8, often answer questions literally. During a structured interview a question to probe knowledge about book content (Where do you get stories?) was answered with : "On the floor - near the piano". This referred to the place where the class sat when the teacher read stories (Downing 1969 p 220). The researcher noted this tendency to answer questions literally, but did not alter her research procedure to accommodate the fact. This lack of abstract thinking ability often confounds interviewers and muddles the results from structured interviews with children. In an open-ended interview the interviewer would be free to explore the child's observation and probe the depth of his knowledge.
- Thus earlier researchers concluded that young children cannot distinguish between sounds and words, phonemes and syllables, phrase or sentence when asked to identify these (Downing 1969, Reid 1966, Tovey 1976), The children probably could not, not because they lacked the auditory discrimination ability, but because they lack the concepts of 'word" "sound" "letter" or "number" used in the structured interviews.

Later research indicated that young children seem not to be aware of separate words in written or spoken language. They tended to segment sentences into semantic units. "Fish and chips" is seen as one word, a sentence like this is divided into three "words" "The book - is in - the desk" and a Russian four year old segmented the sentence "Galya and Vova went walking" into two "words" : "Galya went walking" and "Vova went walking". These examples show clearly that children can distinguish semantic units in speech (Ehri 1979, Karpova 1955, cited in Ehri and Sweet 1991, Holden and McGinitie 1972 cited in Moore 1982).

Another of the early researcher's conclusions was that young children have difficulty in understanding the purpose of writing and reading, due to the very different logic of young children (Downing 1969, p 217).

These early conclusions on young children's metacognitive knowledge about reading were explained in the light of Piaget's theory of the development of thinking. When the young child is expected to start reading, he still has an ego-centric view of his environment and lacks the cognitive framework to cope with abstract terminology. He is not able to express verbally what he intuitively does when solving problems. Piaget concluded : "A child is actually not conscious of concepts and definitions which he can nevertheless handle when thinking for himself. Verbal forms evolve more slowly than actual understanding" (Downing 1969 p 226).

Vygotsky applied Piaget's research conclusions to the teaching of writing and came to several conclusions :

- "Our studies show that it is the abstract quality of written language that is the main stumbling block" to the teaching of writing.
- The child "has little motivation to learn writing when we begin to teach it. He feels no need for it and has only a vague idea of its usefulness" (Downing 1969 p 219).

- Direct teaching of concepts is impossible and fruitless. A teacher who tries to do this usually accomplishes nothing but empty verbalism, a parrotlike repetition of words by the child, simulating a knowledge of the corresponding concepts but actually covering up a vacuum" (Downing 1969 p 226).

If this bleak picture painted by numerous researchers, of young children's abilities (or rather lack of abilities) is accurate, it makes the achievement of early readers all the more remarkable. What enables the early reader to discern the purpose of reading and make the connection between the written squiggles that he sees and the meaning thereof at an age when (according to Piaget) he does not have the abstract cognitive ability; and (according to Vygotsky) he does not have the inclination?

The young fluent readers in Clark's study, aged 5, gave evidence that they understood the terminology concerning reading. Only a few could explain the terms but most could give an example of a word, letter or a sentence. None of them confused letter with number as did the subjects in Reid's (1966) study. The more intelligent could also give the double meaning of words like letters : "A part of a word or a postman brings it" (Clark 1976 p 52).

One possible explanation for the discrepancy in the level of abilities between the subjects Reid and Downing studied, and the young fluent readers in the Clark study, is that Reid's subjects were the children of migrant factory workers. These children seem to have had little exposure to books. There is little evidence that they were read to by their parents and some children were even unsure if their parents could read. Early readers on the other hand, came mostly from bookish families. Their parents were avid readers, the children were read to and books were valued. Clearly, Clay's (1972) insight that "Good reading depends on rich sources of information" (p 9) holds true in this instance : children who are exposed to books and reading, will develop

the metacognitive knowledge about reading in proportion to the richness of the information provided.

In conclusion, it would seem that, in order to begin reading, the child needs the basic metacognitive knowledge concerned with reading. He must be able to distinguish letters from words from sentences. He must be able to grasp the symbol-sound relationship between letter and phoneme and he must grasp the function and value of writing and reading. The young child may not be able to verbalise these understandings but he must possess the concepts and be able to manipulate the concepts when solving the problems encountered when learning to read as indicated by Mason (1980).

2.4.3 Reading Strategies

Research into the mode of acquisition of concepts about print led to the conclusion that print awareness is acquired from birth onwards through exposure to environmental and other print. The general consensus seems to be that children either arrive at school with the basic knowledge of print conventions, or acquire it so soon after, that it need not be an area of concern for teachers (Bussis, *et al,* 1988, Saracho and Dayton 1991) while the developmental nature of the acquisition of reading skills was accentuated by Hiebert (1984) and Hiebert, (1981) :

"Mastery of reading readiness skills occurred prior to mastery of print awareness concepts" (p.123).

Whether this is in fact true of early readers is open to speculation. Early readers master the conventions of print as early as 3 years of age when they are still developmentally far too immature to pass the visual discrimination, space relations or motor sub-tests of any reading readiness battery. The achievement of early readers may support the convictions of many researchers that the discrimination of shapes may be unrelated to reading ability (Reid in

Clark and Milne 1973). It is not known if any systematic study into this area has been undertaken with early readers.

Research into the reading strategies used by early readers yielded useful conclusions. Early readers could read sentences and passages faster than average readers two years older, but actually read words slower (McNaughton 1983, McKay and Neale 1991, Jackson and Biemiller 1985). It would seem that early readers use "top down" processing strategies (McKay and Neale 1991) and sophisticated cognitive and metacognitive strategies (Garner 1987), thus reading for meaning rather than decoding individual words. They utilise prediction based on visual clues, contextual clues and their existing knowledge base. When confronted with unfamiliar words, they search for familiar word parts and guess the word from the familiar part rather than resort to sounding the word (Hardy in Clark and Milne 1973, Neale and McKay 1991, Laminack 1990).

These findings seem to support the hypothesis that early readers discern the meaning of print and concentrate on meaning rather than decoding. They seem to excel in the "skill in selecting the fewest, most productive cues necessary to produce guesses which are right the first time" in the words of Goodman (1976).

2.4.4 Print Awareness

From the aforementioned research it seemed that the language pre-requisites of early reading had been thoroughly researched within the framework of the existing theories on learning to read. Lacking new insights or new theories, it was decided not to cover the same ground for this dissertation. There were other aspects of the early reading phenomenon that remained unexplored.

It would seem that no study concentrated exclusively on how these early

readers initially grasped the meaning of print, one difficulty being that they make the speech-print connection at an age (usually before 3 years) when they do not have the expressive ability nor the cognitive abstraction ability to explain what they do or think.

The interviews conducted during the Clark study yielded useful pointers to the sources of early awareness of print and the first steps of early readers in acquiring literacy. She mentions their interest in car or product names and TV commercials as well as books as sources of early print awareness (Clark 1976 p.49).

Several single subject case studies also touched on the print awareness of their subjects. Chomsky described how her 3 year old son constructed words with his toy blocks after being given the sound values of the letters. As is to be expected, he constructed the phonetic pattern of the words, not the correct spelling (Feitelson 1988 p.56). What is unexpected, is that he could differentiate the sounds in individual words at such a young age. Laminack described his son's interest in environmental print. His son asked questions about the print he saw outside and made the sound symbol connection by identifying the letter with the sound in words beginning with the same sound. Once he grasped the sound-symbol correspondence he tried to decipher every word he saw (Laminack 1990 p 13).

John, the little black American boy described by Torrey (1973) learned to read by watching TV commercials where words were often repeated and shown on screen simultaneously. The most amazing fact about John was that he spoke the dialect of Black Americans in his neighbourhood, but this did not deter his reading of standard English. He would, for instance, use the plural of child as "childs" and when Torrey did not understand him, he spelt the word correctly for her "c-h-i-l-d-r-e-n" demonstrating that he knew the correct word (and its spelling) although he would not use it when speaking.

As John was reading fluently at age 5 when Torrey assessed him, she could not determine how his print awareness developed initially. The one aspect that Torrey did not explore, was the role of John's older siblings. He had two older siblings passing through junior primary at that time when he started to read at age 3/4. It could well be that John, who is described as a competitive child who enjoys showing off, grasped the meaning of print as well as the rudimentaries of sound symbol correspondences by observing his older siblings struggle through their first readers. Being denied access to their readers, he presumably then turned to the print on cereal boxes, tins, the TV and grandmother willing to answer his questions when the others were at school, to master the skills of reading.

Ehri and Sweet (1991) found that the success of early readers with the above mentioned strategy of speech to print matching, was influenced by the amount of print knowledge the early reader possessed. Van Kleeck (1990) and Hiebert (1984) both point out that children learn about print from birth through meaningful experiences, but little work has been done on how early readers acquire their print awareness at such an early age. Early readers are typified by researchers like Durkin, Torrey and Clark as children who "ask the right questions" (Forester 1977 p.161) and have an interested and available adult to answer these questions. None of them answers the question as to what sparks the initial interest in print in the early reader.

Several researchers stress imitation of a reading adult as the initial spark to understanding the meaning of print (Huey 1908, Schonell 1961, Forester 1977). Several examples are cited in literature. Huey described a young boy who had his favourite book read to him till he could "read" it for himself, keeping his place by association with the pictures on the page, and thus building a sight vocabulary. Several children who learned to read with "story tapes" were encountered by this researcher. The child listens to the story being read on the tape while following in the story book. There is a sound

on the tape that indicates when to turn the page. In each instance however, there was an interested, available adult who initially read to the child and introduced the child to books. (It is only Tarzan, the young Lord Greystoke, who is reputed to have learned to read from the primers left in his long dead parents' hut without the aid of any literate adult!)

One could then hypothesize that imitation, which forms an integral part of the way in which a small child learns social behaviours and skills, also assists him in learning to read. The one study that systematically explored a situation of early reading by imitation, was that of Norris and Stainthorp (1991). They studied 8 pairs of siblings, in which the younger of the pairs were all identified as early readers on school entry. All were tutored by the older sibling.

Most of the older siblings were early readers themselves - taught by their parents. The interesting fact is that these younger early readers, apart from coming from the same "bookish" kind of family and showing similar personality traits to the early readers in other studies, all asked the right questions. The tutor siblings said things like :

> "She always wanted me to teach her"
> "She kept asking what the words meant"
> "She'd ask what words and signs were" (p.17)

The methods used by these sibling tutors (most of them were only 4 or 5 when they started teaching their younger siblings) forms the basis of that study. Their methods were different from those their parents used to teach them: they used whole word learning in context, but they also supplemented this with direct teaching about words and expected accurate word reading from the younger siblings (p.18). All read stories to their siblings and made learning a positive experience for the younger child, thus modelling fluent reading.

2.4.5 Reading Stages

The acquisition of reading seems to be a sequential process. Awareness of print precedes the knowledge of print concepts which seems to be a prerequisite for actual reading. The child's progress through the stages of reading seems to go hand in hand with the knowledge he had acquired about language and print. Six year olds generally have more phonological awareness than five year olds and seem to utilise more advanced reading strategies. Weak readers generally have less knowledge about language structures, less phonological awareness, and use less effective word attack methods (Shapiro *et al,* 1990, Pratt and Brady 1988, Drehner and Zenge 1990).

The acquisition of reading is seen as a two stage process by Feitelson (1988):

- acquiring automacy in decoding
- transition to independent reading (p 9)

whereas Schonell (1974) stresses the pre-reading and preparatory stages as well, during which the "Beginner needs to view reading as a communication process" (p 56) and then gradually relate print to oral language.

Clay (1972) in her approach to teaching reading, identified a number of concepts the beginning reader has to master before he actually reads :

Stage 1 - Print can be turned into speech :
The child experiments with books equating print and spoken language but is not actually reading.

Stage 2 - The child begins to imitate the grammatical structures found in books when "reading" (eg Here is a ..... and naming the picture).

Stage 3 - The accompanying picture is seen as a guide to the message. He may invent a statement that is appropriate to the picture but not an exact rendering of the test.

Stage 4 - The child relies on his memory of the text read to him, when "reading". His "reading" more or less conveys the message of the text.

Stage 5 - The child begins to identify individual words and build a sentence word by word.

During this process of learning to extract meaning from print (according to Clay, 1972) the teacher reads to the child and interacts around his reading efforts, but does little direct phonics or alphabet teaching. Although placed in a classroom situation, the child is allowed to progress at his own pace till he can derive meaning from text, without being taught.

Shulby (1985) studied the pre-reading stages in kindergarten children in the Northwest of America by observing their "reading" of storybooks. Without reference to either the work of Clay or Reid on the subject, Shulby identified virtually the same pre-reading stages as Clay (1972) :

picture governed attempts

without story line (picture naming) with story line formed.

oral language like story line

written language like story line

print governed attempts

reading (individual words) and story telling mixed.

independent reading.

The stages described are very similar but Clay's pre-reading stages will be used as her descriptions are more applicable to this study.

This raises the question whether early readers acquire reading by the same process? Obviously, they must grasp that print is meaningful to begin to read,

but do they acquire the concepts via the same five stages specified by Clay?

At the age of 5 or 6 many of the early readers observed were well beyond the decoding stage (Clark 1976) and it is difficult to assess how, and through which stages they progressed to become fluent readers. It seems essential to determine, apart from reading age, which reading stage the early readers have negotiated successfully before instruction started, and how and in which order they negotiated the reading stages.

An assessment of the early reader's attainment can be undertaken with reference to Chall's (1983) proposed stages of reading development.

Stage 0. Pre-reading (extended by Clay 1972)

The child acquires his oral language. They gain some insights into the nature of words and develop the basic auditory visual and motor reading readiness skills. They encounter environmental print, form some concepts about print and may even recognise familiar words, like names.

Stage 1. Decoding State

The child learns to associate the graphemes with the phonemes that make up the word. This is a complex process that progresses through several stages till the child can comfortably decode the most common words.

Stage 2. Confirmation, Fluency, Ungluing from print.

The child consolidates and expands on the phonic and semantic knowledge gained in Stage 1. He becomes more fluent and gains more courage to use contextual clues. He can only negotiate texts of which the language and content is familiar.

Stage 3. Reading for learning the new.

Up to Stage 2 the child learned by listening and watching, now he also gains knowledge from print. He does not have the vocabulary or cognitive ability to process more than conventional knowledge from print. Towards the end of this stage a reader is able to negotiate popular magazines and newspapers.

Stage 4. Multiple View points.

To negotiate Stage 4 a reader needs to be able to cognitively manipulate abstract ideas. He encounters multiple view points, conflicting sets of data, and different theories. He needs to learn to acquire abstract concepts and different points of view through reading.

Stage 5. Construction and Reconstruction.

The (adult) reader reads selectively for a specific purpose, he analyses, evaluates and synthesises the ideas into specific knowledge pertaining to his aim or interest. He learns to construct knowledge on a high level of abstraction and generality (p 25).

"The most difficult instructional moment .... seems to occur at the transition from the conception of knowledge as a quantitative accretion of discrete rightness (including the discrete rightness of multiplicity in which every one has a right to his own opinion) to the conception of knowledge as the qualitative assessment of contextual observations and relationships". (Perry 1970 in Chall 1983 p 27).

One can not expect early readers age 5 or 6 to be beyond stage 3 as they can not yet have achieved the cognitive maturity to deal with abstract ideas or multiple points of view, but the study will attempt to ascertain how, and by which route, early readers attain their reading skills.

2.5 STYLISTIC APPROACHES TO READING

Aims of this unit are to give an over view of how attributional style became a research topic in reading; characterize typical styles; hypothesize about the styles early readers might utilize and determine specific areas to observe and explore through the parent interview.

"Styles are conceptualized as characteristic ways of perceiving, remembering, thinking and problem solving. Styles connote how people typically act and think and express themselves, rather than what they accomplish or know" (Bussis, *et al, 1985,* p.146).

During a large scale study of reading acquisition by Bussis *et al,* pervasive style differences were observed not only in children's general classroom functioning, but also in their approach to the reading task. While the research was primarily aimed at studying how children acquire reading skills, the researchers noted the associated style differences among the children, and were able to identify specific clusters of associated styles. As style is highly personal and manifests itself in preferences for and approaches to activities, it is more relative in nature than skills. The order, rate and level of skill acquisition can be determined by objective measures, but style has to be observed in the person's approach to and handling of specific situations, especially in young children still unable to verbalize their "embedded" .. modes of thought (Donaldson, 1978). Styles are relative in nature and can not easily be described by an objective criterium; therefore styles are typified by describing the more extreme characteristics of the style at either end of a continuum.

Styles are usually described by using a bi-polar continuum e.g. extrovert - introvert; neat - untidy; concrete - abstract. These poles are not objective or objectively quantifiable; each derives its meaning in contrast to the other, and many variations are possible and acceptable (e.g. by mothers) along the continuum between neat and untidy. Styles therefore, are best conveyed by behaviourial descriptions of the early

reader's tendencies in either direction (Bussis, *et al,* 1985).

> "..... Learning style is the way individuals concentrate on, absorb, and retain new information or skills. Style comprises a combination of environmental, emotional, sociological, physical and psychological elements that permit individuals to receive, store and use knowledge or abilities" (Dunn 1983 p 496).

It can be expected that the style preferences of a person should generalize across a variety of tasks and activities. In the study of style preferences of early readers, it would therefore be wise to augment questionnaire data with observations to substantiate their style preferences. Donaldson (1978) pointed out that children's performance in a test situation is determined by the meanings that they impose on a task. She observed that young children often demonstrate an ability in one context but not in another. Therefore, data from a test situation alone, will not suffice. Behaviourial descriptions across a variety of tasks may be needed to ascertain a child's habitual approach to tasks and from there hypothesize how their style preferences influence their early reading ability.

While Donaldson was studying cognitive development of Piagetian concepts, she observed and pointed out to psychologists the need to consider the situation from the child's point of view. She pointed out how the test performance of a child is the result of his interaction with the examiner in a specific context and the meanings he attributes to the situation. Donaldson pointed out that the meaning a child attributes to a task will influence his performance. The child's individual style is the way in which he perceives and reacts to a situation, and will determine the meaning he attributes to a given situation.

The following conclusions about the formation of meaning by the individual, can be formulated :-

(i) a person does not absorb like a sponge, but constructs perceptions and

thoughts;

(ii) anticipation and intention exert a directing influence on the formation of cognitions;

(ii) meaning is derived through perception and interpretation of events, patterns and relationships; and,

(iv) the person's central striving is to create meaning.

This view "is so well documented that it is accepted as 'given' by most social scientists" (Bussis, *et al, 1985,* p.12).

In studying the styles that early readers use in their approach to reading and other tasks, the above mentioned pointers will be taken into account. The influences from the environment that stimulated the child's interest in early reading, and the meaning the child attached to reading material and reading experiences, will be investigated.

Approach styles of young children

In their comprehensive study on stylistic influences in learning to read Bussis *et al,* (1985) described the behaviours of children exhibiting different styles. The children who displayed consistent preferences across a wide variety of classroom activities were finally grouped together in two style clusters. They "describe general classroom manifestations of each style first and then consider how the combined characteristics of each style cluster were evident in the children's efforts to learn to read" (Bussis, *et al, 1985, p.149).*

2.5.1 Preferred expressions of meaning

(Imaginative and divergent versus realistic and convergent)

Convergent versus divergent cognitive processes were identified early during the extensive research on intelligence testing (Madge, 1985, p.34).

Convergent and realistic

Convergent and realistic thinking styles would imply that the person attends to the characteristics and opportunities presented in the object or situation and remains within the boundaries set by the objects themselves. They would concentrate their efforts on maximising the possibilities offered without over-stepping the given boundaries.

A child with a realistic approach would use constructional toys like Lego blocks to build a house or boat or even a whole town. When playing with a doll the child would dress and undress is, feed it, put it to bed or carry it around like a baby.

Convergent thinking will assist a child in mastering the mechanics of arithmetic or reading.

Imaginative and Divergent

Divergent thinking allows a person to move beyond the obvious limits of the objects or situations at hand. This is similar to De Bono's lateral thinking concept. The child would give meaning to or use objects in a way not suggested by their shape or normal use. Free play situations will not follow the usual re-enactment of fairy tales or TV stories. They tend to experiment with colour, letter shape and size etc. Imaginative play is idiosyncratic and will vary from situation to situation but indicating a tendency to perceive multiple meaning and functions in ordinary objects.

A child whose attention was caught by a passing plane may construct a glider out of paper and watch its movements when thrown. She may also undress a doll, spread its arms and throw it across the room, thus comparing the aerodynamic propensities of the paper plane with that of the flying doll thus moving beyond the boundaries imply the doll as object, implying divergent thinking.

Drawings and artwork often exhibit the different attitudes towards intrinsic qualities of objects. Drawings could be representational or imaginative, realistic or experimental. The available materials could be used to create recognizable objects (realistic style) or the characteristics of the materials could be explored through play or experimentation (imaginative style).

Care should be taken to distinguish between individual preferences and forced compliance in a structured situation, as all children are able to respond appropriately in a situation that calls for either a realistic or imaginative approach.

Approach styles of early readers

Bussis *et al,* (1985) studied the stylistic influences in learning to read in four different schools. Their study followed some 40 children from pre-school to class one. There were no early readers among their subjects. Although their study yielded valuable information on different approach styles of children in general, there was no clue as to which styles early readers are likely to utilize for their remarkable achievement.

Clark and her team who studied young fluent readers in Scotland in the early 70's did not specifically address the style of their subjects. She did, however, use a De Bono technique in her follow up study of the interests of these children in later years, thus inadvertently tapping their imaginative or realistic approach style. She was so impressed with the quality of some of the designs, that she printed some of them in her book on the subject (Clark 1976). The children are set a problem:

The poor postman has to ride around every day to deliver post; can you think of an easier way that post can be delivered? or,

Houses take a long time to complete; can you think of a different way to do it?, or

If you could have all the games you want, what will it look like?

A seven year old boy drew for the postman a motorised bicycle with mechanical arm. The drawing was executed with meticulous detail with every cog, wheel, bolt and nut clearly shown.

The fun machine designed by an eight year old, had a reclining chair in the centre surrounded by different games each suspended on a moveable arm. This design, as well as the robot like crane for building houses, was executed with meticulous mechanical detail, clearly indicating the imaginative and methodical approach to the problem. A truly imaginative child tends to do hasty sketches accompanied by a rich verbal description. The drawing itself is unimportant, it is only a vehicle for expressing an idea. It can then be hypothesized that early readers have a methodical approach and used divergent thinking processes.

2.5.2 Manner of work

(Mobile and fluid versus contained and methodical)

Bussis *et al,* (1985) found that one prominent feature of children's work habits was "the creation of 'boundaries' to demarcate workspace" (p.157) which lead them to observe the children's manner of work.

Contained and methodical

Children who preferred to work in a contained space not only chose a chair and desk space to work in, but also demarcated this space in some way, thus creating definite spacial boundaries for their work or play activities. Not only do they demarcate the area, they also delineate discreet units within the work process, and complete one section of the task before starting the next.

They often proceeded with tasks in an orderly way, systematically completing each part of a design or ordering the colours from light to dark. These children were usually neat and succeeded in keeping themselves clean even

when working with messy materials.

The methodical qualities of work showed up "in form of planning and projecting needs" (Bussis, *et al,* 1985, p.158). They would count out the pages they were going to need, and collected all the materials before they started. They also kept to time limits.

Mobile and Fluid

Other children would in various ways minimise the spacial and process boundaries in their work and in the classroom procedure. Some children would move about in a restless way from activity to activity, starting and seldom completing projects, while others in this group were less conspicuous but still "unbounded" in their manner of work. Some would carry their work about in the class while others would glide from one activity directly into another. "The trait that singularly unified this group was mobility" (Bussis, *et al,* 1985, p.160).

Workstyles of Early Readers

None of the other studies of early readers specifically mentioned work style. This present study will have to rely on observations and descriptions of the early readers to determine their habitual work style.

2.5.3 Attentional scope and emphasis

(Broad and integrative versus narrowed and analytical)

Attention is described by Strauss as a two fold process consisting of becoming aware (gewaar word) and attending to (attended) cited in Sonnekus 1973, p.76. The child senses an object or person outside of himself; by becoming aware of something the child reaches out to the world around him, with an attitude of "I would like to know more about it" (ek-kan-weet-belewing) (Sonnekus 1973, p.77). Attention refers to the second process where the child

chooses to become involved with the object, person, etc. with the aim of exploring it and learning about it. Only by purposefully attending to the world around him, can the child extend his knowledge of the world.

Although Bussis *et al,* (1985) does not distinguish between the stages of attention, they cite examples of both stages of the attention process in their observations of attentional scope.

They describe young children in their class rooms who seemed to be continually aware of everything around them. They would notice minor details not only in their immediate vicinity, but also across the room. They would be working on a project and at the same time comment on something happening elsewhere, "perceptually scanning the environment" (Bussis, *et al,* 1985, p.165). This broad attentional scope contrasted sharply with other children who could narrow their attention on a single task to the exclusion of all other sounds and activities.

Children they described, who seemed to be aware of everything around them also tended to integrate various aspects of tasks when attending to and exploring objects and their functioning, and tended to minimise boundaries between objects and tasks. The other group was more analytical and tended to emphasize boundaries, such as indicating the line that separates the ground from the horizon in their drawings.

It seems that the attentional style a child employs determines his approach to early reading tasks.

Bussis *et al,* (1985) provides a valuable clue in the description of their subject's different approach to reading when observed in class 2. Children who were observed as having a broad attentional scope in class, would tend to uphold momentum when reading. They would guess at unfamiliar words

and slur over difficult words. They would often skip ahead to see what the story was about, integrating knowledge provided by the pictures as well as the words.

Children who were more analytical and narrow in their attentional scope tended to uphold the accuracy of their reading. They tended to sound out unfamiliar words, and struggled with difficult words, till they managed them, and still were able to retain the meaning of what they read.

The subjects in the Bussis study who employed a narrow and analytical attentional style were much slower in acquiring reading fluency in the early stages. Some children were observed to be hindered in their reading by their tendency to narrow their attention to single letters and words. In their third year of schooling these pupils were often more accurate in their reading than the other group, but their initial progress was much slower.

One could then hypothesize that early readers would be more aware of their surroundings generally and of environmental print especially, and would employ an integrative attentional emphasis which will allow them to grasp the relationship between printed word and spoken language.

2.5.4 Sequencing of thought processes

(Parallel versus Linear)

Linear

Linear thought processes involve following the logical sequence presented by a task to reach a conclusion. As a style of approach it would involve following instructions in sequence, or directions in the order designated, and persevering till the conclusion is reached, or the task completed.

In young children who are still concrete in their conceptualization of tasks linear thinking may be observed in their approach to tasks: if they would

follow logical sequence like paging through a book from first to last to get the story.

Parallel

Parallel thought processes involve being able to monitor and evaluate diverse sources of incoming information simultaneously; make associations between dissimilar ideas and make apparent leaps in connections to new meanings. Bussis *et al,* (1985) described children who could work on two projects simultaneously or work and carry on a conversation at the same time, while other kids found that disturbing. One child could orchestrate complex social undertakings during which he monitored and orchestrated interactions among his friends while simultaneously directing their various inputs towards a flexible but definite plot of his own devising.

Other children in this group seldom did work in the order given, and tended to flip through a book trying to get an over view of the story before they read it. They often asked questions about or predicted the outcome of a story.

Bussis *et al,* (1985) found most clues to children's thought processes in their intimate interactions with the children around reading tasks, where the child's comments or questions on the stories revealed something of their thought processes. They also make the interesting observation that since standardized tests usually require a linear style of working and thinking, children with a linear style tend to be ahead in such tests.

Bussis *et al,* found that the subjects they studied tended to fall into two groups which they designated "style clusters". They found that children who were imaginative and divergent in their preferred expression of meaning, also tended to be mobile and fluid in their manner of work. These children also had a broad and integrative attentional scope and utilised parallel sequencing of thought processes. Children with these style preferences were placed in

Cluster A. They differed markedly from the children placed in Cluster B.

STYLE	CLUSTER A	CLUSTER B
Preferred Expression of Meaning	Imaginative and Divergent	Realistic and Convergent
Manner of Work	Mobile and Fluid	Contained and Methodical
Attentional Scope	Broad and Integrative	Narrowed and Analytical
Sequencing of Thought Processes	Parallel Sequencing	Linear Sequencing

This study attempted to determine if the early readers would fall in one of the identified style clusters or whether early readers had a constellation of stylistic preferences which formed a different cluster.

2.6 THE EARLY READER IN LITERATURE

When researching a social phenomenon one should expect to find useful descriptions in fictional and other literature. The biographies of famous people who were early readers, like Marie Curie, contain useful information on how they came to be literate at a young age.

The most fascinating biography the researcher came across, was the description of Anna, a four year old street child, that was taken in by an Irish lady and her teenage son, nicknamed Fynn. Fynn (1974) gave a detailed account of not only Anna's route to literacy but also her intellectual development. Anna is a typical early reader. Some of the incidents in the book are related in the Annexure B to give the reader a taste of the complexity of early readers, the unbelievable depth of their understanding and the extent of their curiosity.

CHAPTER 3

3. GOALS, DESIGN AND PROCEDURE

3.1 THE GOAL OF THIS STUDY

3.1.1 The Research Questions

The intention of this study was to provide a description of some early readers in the Midlands of KwaZulu-Natal and to compare the features of this sample with the information obtained by other studies, most notably that of the Clark study conducted in Scotland in 1976.

3.1.2 A description of Early Readers

The study attempted to provide a profile of early readers in the sample which included intelligence, visual motor development, auditory ability, and reading as well as personality and socialisation.

3.1.3 Interaction between Early Readers and environment

The study attempted to identify common denominators in the home environment that may influence the development of early reading as well as the personality characteristics of the early reader. The study then further investigated if and how the early readers influenced their environment to provide for their needs. This is based on the hypothesis that the early readers are not passive products of a specific environment but will interact with their environment in the pursuance of their goals. Several studies commented upon the curiosity of early readers, but how does the early reader satisfy his curiosity? How does he obtain the answers he needs?

3.1.4 The route to literacy followed by Early Readers

The study explored the steps followed by early readers to attain literacy. The question as to what sparked the initial interest in print and how the early reader construed meaning from print was facilitated when a number of four year old early readers was located. Whereas the five and six year olds were fluent readers, these four year olds were still struggling through the initial stages of reading development, and the route they used and the steps they went through could be observed.

3.1.5 Stylistic approaches to reading

Bussis *et al,* (1985) identified, in their two year long study conducted in four schools, several distinctly different styles utilised by young children when learning to read. Their study did not concentrate on early readers and the question immediately arose: Do early readers utilise a specific approach style to reading? Will early readers fall in one of the style clusters identified by Bussis *et al,* (1985) or do they display characteristics that constitute a separate style cluster? The Questionnaire and Observation Schedule was carefully compiled to elicit information on the approach style characteristics of early readers.

3.2 RESEARCH METHOD

The choice of a method for this research was limited by the small number of subjects found for the study. The original intention was to replicate the Clark study and then compare results obtained from the South African subjects with those of Clark's Scottish subjects. The small number of subjects found however, was not amenable to statistical analysis and few meaningful conclusions could have been drawn from the statistical analysis of such a small (and therefore a possibly unrepresentative) sample.

An alternative method had to be chosen.

The first question that presented itself was: Why the small sample? Why did fewer South African children of Caucasian descent read early than did their American or Scottish counterparts; that is, if one assumes an even distribution of early readers in a given population. Enquiries at 30 pre-schools in the KwaZulu Natal Midlands Region revealed that only 4 of the 1 348 five year olds in these schools were early readers. This is about one quarter of the number of early readers found in other research studies. Durkin (1966) found 49 from 5 103 entering first graders (Forester 1977 p.160) and Clark had 32 subjects from one school district (total number of entering first graders was not mentioned) (Clark 1976 p.11).

While scouting for subjects for this study, the pre-school teachers contacted were asked whether they had encountered early readers previously, and whether they would encourage early reading if encountered? The unanimous answer was: "No, it is against departmental policy". Some teachers elaborated on this answer, but all reasons given pointed to a prescribed prohibition of the teaching of reading in any form beyond basic phonics work in pre-school. It was decided to interview the Subject Advisor for Pre-schools in the region on this issue, to clarify the matter.

The second question pertaining to the methodology for this small scale research project was: How best to describe the early readers; the environment that produced them; their characteristics and their approach to reading? Since the small number of subjects precluded the selection of hypotheses to test variables pertaining to early reading, it seemed advantageous to regard these subjects as a sample of early readers, and to describe them as fully as possible. The strategy of research through description of a small group, is often referred to as theoretical sampling, in the current literature.

3.2.1 Theoretical sampling

Theoretical sampling is defined as "sampling on the basis of concepts that have proven theoretical relevance to the evolving theory" (Strauss and Corbin 1990 p.176).

In theoretical sampling, a strategy proposed by Glaser and Strauss (1967), "the researcher selects new cases to study according to their potential for helping to expand on, or refine, the concepts and theory that have already been developed" (Taylor and Bogden 1984 p.126). This seemed a useful strategy for this study as Clark, Durkin and others have already produced a sound knowledge base for understanding the phenomenon of early reading. By studying the same phenomenon in a different setting, the concepts developed by earlier researchers may be refined and expanded leading to a better understanding of the phenomenon, and may eventually lead to the formulation of a theory to explain early reading.

This decision placed the present study completely out of the field of quantitative research and into the realm of qualitative research.

3.2.2 Determining the research questions

Qualitative research starts with a research question. Initially the description of the research question is broad and becomes progressively narrowed and more focused as the research progresses. The research question does not include "statements about relationships between a dependent and an independent variable, as is common in quantitative studies" (Strauss and Corbin 1990 p.38). The aim of qualitative research is discovery, and therefore the concepts one wishes to find cannot be stated at the onset. These concepts and the relationships among them, should gradually emerge as the data is coded.

"The research question in a grounded theory study is a statement that identified the phenomenon to be studied" (ibid p.38). The research question guides the researcher in the field, identifies the persons and actions to be studied and interviewed, and prevents the researcher from working too widely or gathering more data than he can manage, which is always a danger when trying to understand a complex phenomenon.

The phenomenon under scrutiny in this research is children who learn to read without formal instruction. The research question that will guide the data gathering can be formulated as:
which characteristics of the child allow him to become literate before he goes to school?

The study will investigate the child in his home environment and try to determine specific intellectual and personality characteristics that may influence or contribute to early reading. The child's attitude and approach style towards print, and the strategies used to decipher print, will be studied.

Although a child can never be fully understood out of the context of the (family) environment in which he grows up, the focus will still be more on the child and the demands he makes on his environment, rather than on the actions and attributes of the care-givers.

Child and care-giver, and the influence they have on each other, can never be ignored in the study of any developmental issue, if full understanding is to be obtained. Therefore the influence of and example of the parents on the early reader cannot be ignored. A complete evaluation of familial influences on early readers, however interesting, falls regrettably outside the scope of this small scale study. Therefore, only the more readily observable family characteristics will be included.

Therefore, data collection would be limited to the attributes of the child that may have influenced his early reading ability and the demands the child made on his environment in his quest for early literacy.

The data obtained would be processed by using the methods described in qualitative research.

3.2.3 Qualitative Methodology

When methodology is taken to mean: "the way in which we approach problems and seek answers" (Taylor and Bogden 1984 p.1), then qualitative methodology is an inductive process where the researcher "develops concepts, insights and understanding from patterns in the data" (Taylor and Bogden 1984 p.5). A qualitative researcher approaches his research field with an open mind, and gradually develops concepts about the field, based on the data gathered. The quantitative researcher on the other hand collects data to substantiate his preconceived hypotheses or theories - a deductive approach.

The aim of qualitative research is to "understand people from their own frame of reference" (ibid p.6) therefore they choose methods like field work, participant observation and open ended interviewing that will allow the researcher to enter into the life-world of the people he is studying.

The first goal of the qualitative researcher is to produce "rich descriptive data" of the phenomenon under study as it occurs, capturing the words and observable actions of the participants of this phenomenon.

The second goal is, through an involved process of coding, to begin to determine the concepts and the relationships among these concepts, pertaining to the phenomenon under study. The process of determining concepts from data is guided by the researcher's theoretical sensitivity.

> "Theoretical sensitivity refers to the attribute of having insight, the ability to give meaning to data, the capacity to understand, and the capability to separate the pertinent from that which isn't. All this is done in conceptual rather than concrete terms" (Strauss and Corbin 1990 p.42).

Theoretical sensitivity is developed through study of the literature, both technical and non-technical, professional experience, and personal experience relevant to the phenomenon under study. Thus, a pre-school teacher studying 5 year olds would gain insights quicker than say a nurse, while the teacher would be at a disadvantage in a hospital setting, as knowledge and experience, even if implicit, is taken into the research setting and drawn on, to gain insight.

The process of concept formation from data is crucial in the developing of a theory from the data that is "conceptually dense, well integrated" and grounded in the data (ibid p.42). The development of a grounded theory from data to explain the phenomenon, is the ultimate aim of qualitative research. It would seem that if the crucial element of this method is dependent on the attributes of the researcher, this could also be the weak point of this method.

Glaser and Strauss (1967 p.46) pointed out that theoretical sensitivity is dependent on the personal and temperamental bent of the researcher as well as his

> "ability to have theoretical insight into his area of research, combined with an ability to make something of his insights" (ibid p.46)

Theoretical sensitivity, once started however, will continue to develop, increasing and heightening the level of insight of the researcher into his field of study. Potential theoretical sensitivity is lost when the researcher commits himself exclusively to one preconceived theory, when he becomes defensive

of this theory and preoccupied with proving or modifying this one angle of approach to problems.

Experienced qualitative researchers are aware of the dangers for novice researchers and gave clear and very practical guidelines for analysis of data to increase "insight and recognition of the parameters of the evolving theory" (ibid p.43-47).

A qualitative approach seemed ultimately the more suitable for this present study. Through the use of qualitative methods a description of the phenomenon, children who read early, can be given. Because the researcher started out without fixed hypotheses, there was room to formulate concepts, test these out against the data, discard what would not fit the data, develop new concepts and gather more relevant data.

This was indeed what happened, originally due to circumstantial factors, and later during the research as part of the planned method of research. Assessment and interviewing of subjects were done over a 16 month period. Two subjects were located right at the onset of the study, both were about to start school, and therefore had to be assessed immediately, which was done using the guidelines and interview schedule provided by Clark. At that stage the researcher had done very little reading into the phenomenon of early reading apart from the work of Clark (1976). Incidentally, both these subjects matched the early readers described by Clark in reading attainment, intelligence and superior auditory ability, leaving the researcher with the preconceived idea that all early readers would follow this pattern.

At this stage the literature review was undertaken. This proved to be a very interesting exercise as every bit of information gained from the literature was offset against the data already obtained. Does this theory explain their reading attainment? Could this issue be a causal factor? What questions must I ask

of the mother to establish if this factor was present? Gaps in the data began to appear, which lead to the compilation of the more complete interview schedule. Other changes were made. The Illinois Test of Psycholinguistic Abilities (1968) was discarded from the test battery, firstly, because it was consistently described as unreliable and biased towards South African subjects and secondly, because the concept of superior auditory ability had already been refined by researchers like Lamb and Gregory (1993), Godfrey *et al,* (1981) and Liberman *et al,* (1967), cited in Lamb and Gregory (1993).

Thus, in true qualitative style, data collection, hypothesis generation and concept formation proceeded simultaneously. The focus of the study gradually shifted from intellectual abilities to attitude and approach style to reading, as it became clear that research into intellectual abilities was near the saturation point. Personality characteristics of early readers were known, but approach styles were not, thus it seemed that research into this area could contribute meaningfully to the body of knowledge about early readers.
"The emerging theory points to the next steps - the sociologist does not know them until he is guided by the emerging gaps in his theory and by research questions suggested by previous answers" (Glaser and Strauss 1967 p.47).

A full discussion of the development of the hypothesis generating interview and the results thereof will be given in subsequent chapters under the relevant headings.

3.2.4 Triangulation: The Method for Verification of Data

Qualitative and quantitative does not refer to two different methods, but signify divergent assumptions about the nature and purpose of research. With quantitative methodology, the emphasis is on representativeness of it's findings, the reliability proved in replication of research, and divergent data is often regarded as an embarrassment (McLaughlin 1991 p.306). Sieber

(1976) suggests that the quantitative requirements of reliability, inter-observer, inter-respondent, inter-instrument or intra-respondent over time, are in many aspects inapplicable in qualitative data collection. Qualitative methods aim at producing a coherent framework of explanation, a theory that can accommodate diversity, that is valid when tested in diverse settings.

Sieber (1976) pointed out that there is an inherent conflict between validity and reliability "the former is what fieldwork is especially qualified to gain, and increased emphasis on reliability will only undermine that unique function" (Miles in Van Maanen 1989 p.2). The interviewer, in qualitative research, will change his attitude to respondents as he gains more insight and will ask unique questions of each subject to gain depth of understanding about a situation. Thus reliability is intentionally violated to enhance validity.

And yet, a growing number of researchers advocate the use of both methods to enhance confidence in findings. But triangulation is more than validation of findings by using a different method. Triangulation is a term used in surveying whereby the position of a landmark is verified by using multiple reference points. It is believed that the term was first employed as a methodological term by Webb in 1966 (Jick in Van Maanen 1989)

"The effectiveness of triangulational designs rests on the premise that the weakness of one method will be compensated for by the strengths of another. Triangulation purports to exploit the strengths and neutralise the weaknesses providing that the different methods or measures used do not share the same weakness or potential bias" (Jick in Van Maanen 1989 p.142).

Researchers found that quantitative data became more meaningful when supplemented with interpretations gleaned from qualitative data. Confidence in data grows when there is convergence in data, and, when divergent results emerge, more complex explanations are generated. Qualitative data is

believed to be superior to quantitative data in density of information, vividness and clarity of meaning, and these characteristics are thought to be more important than precision and reproducibility (Strauss and Corbin 1990, Miles in Van Maanen 1989, McFee 1992, Stoecker 1991).

Types of Triangulation

Triangulation has been extended over the years to include several types of verification of data (Denzin 1970, in Smith 1981 p.358-383).

- Investigator Triangulation

This implies the use of more than one investigator to observe the same phenomenon. When their data is compared potential biases may be uncovered as "investigator bias is always a potential problem regardless of method" (ibid p.178), or investigators with different perspectives may check the coding of the data of the other. If little divergence is found, the confidence in the validity of the data grows. The above method was not practical for this research as only one researcher was used, and one can, at the least, be assured that all data is equally biased.

- Methodological Triangulation

Within Method Triangulation refers to the replication of a study to confirm or disprove data or the theory derived from the data. It could also be used as a test-retest measure.

Between Method Triangulation refers to using different methods to study the same phenomenon and thus confirm or disprove data, especially where findings are an artifact of a particular method.

Where possible, between method triangulation was used to confirm data for this research. Observations by the researcher were offset against descriptions given by parents; examples of specific behaviours or anecdotes were elicited

from parents to confirm results of empirical testing. This will be discussed in the conclusions section of each chapter.

- Theoretical Triangulation

This refers to the use of multiple perspectives in relation to the same data or research. When alternative theories are used to examine data, the researcher may find that other theoretical dimensions may explain the phenomenon observed. When analysis through different theories yields compatible results, then the external validity increases.

- Data Triangulation

This implies that research findings or a theory derived from it, will also be studied in a different time and space to determine if the theory applies in different settings or in different generations. Smith (1981 p.359) uses as example the developmental theorists (like Piaget) who study children in one culture only, and then assume that the developmental stages isolated will hold true for all cultures. Such an ethnocentric approach inadvertently leads to theoretical bias.

In this study the ethnocentric approach was intentionally used in the design of the study to increase validity of the findings as only subjects from an English speaking background were found in order to compare findings with the previous studies of Clark 1976 and Durkin 1966. Thus, data obtained in KwaZulu Natal triangulated with data from similar studies done with children of a different generation, and children of other English speaking countries : Scotland, USA, New Zealand and Canada.

3.3 RESEARCH PROCEDURE

The aim of this chapter is to describe how the research data was obtained, and to give

the reasoning behind the choice of research measures.

3.3.1 Initial Screening

Subjects were required to read at least enough words on the Burt (Re-arranged) Word Reading Test giving a reading age of at least one year above their chronological age.
Initial screening was done with 17 children. Five children were eliminated on the basis of the initial screening. Two of these five children were referred by teachers of an English primary school for Coloured children, but both failed to attain the minimum reading requirement of a reading age of one year above chronological age. It turned out that, in this school, the pre-primary class was overfull and a few pre-primary children were placed in the class one class. The two children referred, did pick up the rudimentaries of sound-symbol correspondence from observing the class one lessons, but they were not early readers.

Two children were referred by over-indulging mothers who heard of the research and wanted to be included. Both children were precocious, but were not early readers.

The last girl, Bee, was the younger sibling of an early reader known to me. Upon inquiry the older sister, now nine, assured me that she had taught Bee to read. In the light of the research of Norris and Stainthorp (1991) on sibling taught early readers, I felt that Bee would be a useful subject for this study, and undertook a 1 200 km journey to visit this family.

On my arrival the older sister presented Bee, book in hand, and instructed her to display her reading skills. Bee "read" fluently, with good inflection, from several 20-words-per-page children's story books. But Bee failed the initial screening test. I couldn't bear the look on Bee's face when she realised that

she had been "found out", for Bee was "reading" from memory only. I told Bee that it wasn't important and proceeded to do the full test battery of the Intelligence Test with her to restore her confidence. The results of this testing of an early reader, who did not meet the criteria for this study, proved to be very useful and will be referred to later.

3.3.2 The Subjects

Children who had not entered class one and could read at least at a level of one year above their chronological age, as assessed during initial screening, were included in the research. The table on page 82 gives the age of subjects at assessment and their respective reading ages, at initial assessment.

Subjects were located over a large geographical area of the Midlands and coast of KwaZulu-Natal. Enquiries made at 30 pre-schools in one school district yielded only 4 early readers. The research area was then widened and early readers were found in Pietermaritzburg, Howick, Bulwer, Amanzimtoti and Durban. The researcher's intuitive feeling that fewer early readers will be found among South African children than the numbers obtained by other researchers, proved to be correct.

In this sample only 2 boys were located. This was surprising as other studies by Clark (1976) and Durkin (1966) indicated that the majority of early readers are boys. The children in this sample are also not a homogeneous age group. Their ages range from 3.5 to 6.6 years complicating statistical analysis. Younger children had to be included as not enough 5 year olds could be located. Although the small number of subjects, and the wide age range of subjects, did preclude a full empirical study, it did prove fortunate in the sense that the age range gave a developmental perspective of early reading : the four year olds were still mastering the first steps of literacy, where as the five year olds were almost fluent readers.

3.4 THE DATA GATHERING PROCESS :

3.4.1 Interviewing and Observation

As was explained previously, the researcher went to the homes of the subjects to do the interviews and assessments. The parents provided a quiet place where assessments could be done without disturbance and the interviews were done in the lounge or around the dinner table. Sharing a meal or morning tea with the family provided a useful opportunity to observe the family patterns and interaction, and to verify the information given by the parents through personal observations.

The parents agreed beforehand that the researcher could spend the day with the family, and being welcomed as a visitor in the home set the tone for the interviews. The interviews were "modelled after a conversation between equals" (Taylor and Bogden, 1984, p.77) around a topic of interest to both, rather than the structured, formal interview where the interviewer, as expert, asks a set battery of questions in a predetermined sequence and style.

In order to obtain an in-depth understanding of the parenting style as well as the development of the early reader, the parents were allowed to narrate their experiences and perspectives. Thus the interview proceeded in flexible, unstructured and open-ended style, in keeping with the qualitative method chosen for this research.

> "By in-depth qualitative interviewing we mean repeated face-to-face encounters between the researcher and informants directed toward understanding informants' perspectives on their lives, experiences or situations as expressed in their own words" (Taylor and Bogden 1984 p.77).

The parents were, one and all, very modest about their offspring's achievements, stressing that they did not teach the children and often did not realise that their children were precocious. As one mother said aghast: "I had no idea! I thought she was normal!" The researcher often took the one-down position in the interviews, convincing the mothers that, since they were with their children, and the researcher was not, their information and their remembrances were vital in understanding how the child came to read. The mothers especially responded well to this strategy, often interrupting the narratives and returning to earlier topics as association sparked memories, thus providing a wealth of information that would have been lost had a structured interview format been used.

Descriptive questioning, which elicits detailed descriptions of key events, places and times, was used to allow parents to "flesh out" their narratives. All parents substantiated their narratives with examples of their children's artwork or writings that they kept. These were very useful in determining the ages of the children at specific stages of their development; as the mementos were often linked to specific events, like Christmases, birthdays or holidays. Comments like : "This is the birthday card she made for my 40th birthday. See, she wrote the 4 upside down and there is her name. She was only 3½ then. So, she must have started writing before then. I didn't realise" (Copies of the most remarkable of these artworks and writings are reproduced in the Appendix).

The interview questionnaire was used by the researcher to ensure that all topics were covered. The most difficult was the section on approach styles, as this required a measure of abstraction to which the mothers were not accustomed. Here the flexible format of the qualitative interview was useful as it allows the researcher to re-formulate and ask for examples or use directive questioning to elicit the required information.

As "a form of conversation, interviews are subject to the same fabrications, deceptions, exaggerations and distortions that characterise talk between any persons" (Deutcher 1973 cited in Taylor and Bogden 1984 p.81).

Keeping this human tendency to glamorise or conceal information in mind, probing and cross-checking was undertaken towards the end of the interview in a sensitive manner, usually by "playing dumb" and asking the interviewee to explain an issue from a different angle. Spending time in the homes of interviewees allowed the researcher to be a participant observer as well as an interviewer, and observations were used to verify interview detail. It is the opinion of the researcher that real family interactions were observed as it is impossible to keep up pretences for a whole day in a house with pre-schoolers and toddlers!

The interviews with the early readers were done after the assessments. Interviews with 4 and 5 year olds present difficulties in that they have a limited vocabulary with which to express often very complex ideas. Here the sensitivity of the interviewer will determine how much she understands or loses of what the child is trying to convey.

Another tendency of these early readers that took the researcher a while to get used to, is their tendency to leave the interview when a difficult question was asked; and to reappear five or ten minutes later with an answer. But this habit is in keeping with the observations of other researchers (Clark 1976, Durkin 1966, Forester 1977) that early readers prefer to work out answers for themselves, rather than to say "I don't know". When Boy 1 was asked what he would invent to keep his room clean he disappeared to his room under admonishings from his mother, which made it clear that his room was a point of friction in the home. Ten minutes later, when I was deep in conversation with his mother, he jumped up from behind the couch and shouted over my shoulder "I'll get a huge vacuum cleaner and suck it all up!"

and disappeared again. It was the mother who realised first that was how he would clean his room. It was often noted that the mothers were far more sensitive to their offspring's expressions and actions and often interpreted these for the researcher.

The four and five year olds would often answer a question with a demonstration. When little Girl 3 was asked if she could remember how she first started to spell words, she proceeded to write a few words accompanied by a sing-song nonsense rhyme that made no sense to the researcher. Only when the mother responded with "Hey, you are big now, you don't have to spell in that way anymore!" did I realise that Girl 3 was demonstrating how she used to spell words : House-Orange-Umbrella-Shoe-Elephant spells HOUSE. When I checked with the alphabet chart on her bedroom wall, I realised that she had associated and memorised the letters with the pictures on the chart, and used these picture associations to remember the sounds of the letters. I was unable to determine at what age she first made these associations as she was reading words by the age of 3½ years.

The above is given by way of demonstrating how questioning, observation and cross-checking was interwoven to arrive at data. The reader will immediately realise that data of this nature can only be tentative and can only lead to hypotheses and pointers for later empirical study of the phenomenon. The researcher is painfully aware of the tentative nature of much of the observations and regrets the time and logistical difficulties that limited the time spent with subjects.

The aim of theoretical sampling, however, is to develop theoretical insights into a phenomenon; to isolate categories and then gather data on these categories till saturation is reached. Glaser and Strauss (1967) warns that researchers could become enamoured with their fieldwork and thus swamp themselves with data which is detrimental to theoretical formulation. A point

well worth taken in this case!

3.4.2 Testing Procedure :

Standardised tests

Initial screening

The Burt's (Rearranged) Word Reading Test (1935) with the Hosking Norms was used. The children were required to read at least one year above chronological age. BURT, C. (1962)

For the purposes of the initial screening test the test was retyped with all the words in capital letters. This change was necessary as many early readers start reading words printed in capital letters and obtained a better score than when reading lower case letters.

The test battery.

Intelligence Test :

Junior South African Individual Scales (Revised 1985)

Visual-Motor development :

Bender Visual Motor Gestalt Test (1946).

Auditory Discrimination :

Wepman Auditory Discrimination Test (Revised 1973).

The original planning for the research also included the following tests :

New Macmillan Reading Analysis 1985

Daniels and Daick Graded Spelling Test (1958)

Illinois Test of Psycholinguistic Abilities (1968) was rejected as too long, cumbersome, outdated and biased towards South African pupils.

After the first few assessments these three tests were discarded. The main reason was that after two to two and a half hours of intelligence and other testing the pre-schoolers were tired and lost interest in formal assessments. Refusals increased as time spent in formal assessment increased. The test

procedure was then revised to alternate the 5 to 6 hours of interviewing with parent and child, with formal assessments.

Several difficulties were encountered with the New Macmillan Reading Analysis. The passages are typed in lower case letters. The early readers who had mastered only capital letters were at a disadvantage and became anxious. As a result the following interview with the child suffered and the researcher had to coax the children to regain their spontaneity on which the success of the interviews depended.

The New Macmillan was discarded in favour of informal assessment of reading strategies around the child's own books. This proved far more valuable. The children were proud to display their own books and their proficiency in reading familiar material, rather than be confronted with unfamiliar material which left them with a sense of failure. They were also able and willing to explain their word attack strategies when using their own familiar books.

The Daniels and Daick Graded Spelling Test (1958) was done with the older subjects, but the researcher found that the test and interview schedule that was developed with the 5 and 6 year olds, was just too long for the 4 year olds. Thus the Daniels and Daick, the last test to be done, was omitted with the younger subjects.

The subjects displayed amazing levels of concentration (and patience) but the full day of intensive testing and interviewing, even when alternated with the interview of parents, was trying for the young subjects, even without the three tests that were eliminated.

3.4.3 Research Setting

Interviews and testing was done in the homes of the subjects. Due to the length of the interviews, half of the subjects were visited twice. Due to the long distances the researcher had to travel, the other half was visited only once, for a whole day. All mothers arranged to stay home for the day and be available for interviewing. Testing was done in a quiet room, without disturbances. Interviews were done wherever was convenient for the family.

Intelligence and other testing was done first, while the pre-schoolers were still fresh, followed by alternate parent and child interviews. The duration of interviews with the children was dictated by the child's attention span. The children were allowed to leave and return to the interview situation at will. This ensured their continued interest and co-operation. Part of the interviews were conducted in the child's bedroom, playcorner or treehouse. The interviewer was treated as almost a playmate, to be entertained by the child, which gave the opportunity for unique observations and data, which would never have been obtained in a formal setting. It was surprising how often the children dictated the flow of events. The mothers were most accommodating, patient and informative, managing their home chores, meals, their toddlers and the interviews with ease.

CHAPTER 4

4. RESEARCH FINDINGS

4.1 CHARACTERISTICS OF THE FAMILIES OF EARLY READERS

The studies of Durkin (1966) and Clark (1976) provided a description of the families of early readers as discussed in Chapter 2. In this study the more readily observable characteristics of the families of the subjects were noted, as it seems worthwhile to pursue the question as to what kind of family produces early readers. This study concentrates on the attitude of the families towards reading and the literacy of their children as well as their interaction around literacy activities. Some of the outward characteristics of the families were also noted in order to compare the families in this sample with those studied earlier.

This section contains the research findings on the following aspects :
Family constellation
Family interest in books
Attitude towards early reading tuition
Interaction with the early reader

4.1.1 Family Constellation

All subjects came from middle class caucasian families. Most families owned their own home and at least one family car. Most of the fathers had university degrees and were working at careers of their choice. The exception was the three single mother families, who were single through divorce or death of spouse. There were no reconstituted families in the sample. The single mothers owned motor cars but not homes, but were able to afford adequate rented accommodation and the smaller luxuries for their children.

The homes all had well tended gardens and most children had their own bedroom, and all children had outside play areas which ranged from

dollhouses, jungle gym, swings, sand pit or pools to treehouses. The one exception was one single mother who lived in an old ground floor flat on the beach front. The reason why only middle class families were located may be that enquiries were done through pre-primary schools, and families from the lower economic groups often cannot afford pre-primary education for their children. Three mothers responded to a small notice in the local paper, but their children were in pre-primary as well. Had the research sample been taken from class one pupils, the sample may have included early readers from lower socio-economic groups, as schooling is compulsory whereas pre-primary attendance is not. The families were generally small with only one or two children, and in bigger families there was a noticeable age gap between older and youngest child.

The table below gives the family size, position of the subject among her siblings, and the age between the subject and the nearest sibling.

Table 1 Position in Family of subjects

Subject	Position of Subject	Number of children in the family	Age gap between subject and nearest sibling
1. Boy 1	2	2	1 year
2. Boy 2	1	2	3
3. Girl 1	1	2	4½
4. Girl 2	4	4	7
5. Girl 3	3	3	16
6. Girl 4	2	3	2
7. Girl 5	1	1	-
8. Girl 6	1	2	4½
9. Girl 7	1	2	1½
10. Girl 8	2	2	2
11. Girl 9	1	2	3
12. Girl 10	1	1	-

N = 12

It will be noted that 7 of the 12 subjects were eldest or only children with a more than two year gap between the early reader and her next sibling. This fact is noteworthy only because most mothers commented on the time they were able to devote to the early reader before the next baby arrived, or because the older children were already in school. All mothers felt that this was an advantage and even a privilege, to be able to devote time to and enjoy the development of the subject.

The mothers in this study were generally more than mature when the subject was born. This is in keeping with findings of Clark (1976).

Table 2

AGE OF MOTHER AT BIRTH OF EARLY READER						
YEARS	18 - 20	21 - 25	26 - 30	31 - 35	36 - 40	41 - 45
Frequency	1	3	5	1	1	1

N = 12

All mothers followed a career but 9 of the mothers chose to do part time or mornings only work or work from home. These ladies all had tertiary qualifications; 2 were medical doctors, one part time student, one university lecturer, one writer of an educational magazine, one accountant and 3 teachers. The exception was the 3 single mothers who all had administrative, full day jobs.

Clark noted that mothers of early readers in her study were reluctant to return to work or resume their careers (Clark 1976, p.43) but in South Africa in the ever worsening economic climate, women are forced to supplement the family income to maintain a fair standard of living. Thus the choice of these mothers to work part-time echoes the same sentiment as the mothers in the Clark study: to spend as much time as possible with their offspring by working mornings only, while giving the child the benefit of pre-school education in the morning.

4.1.2 Family Interest in Books

The majority of parents of early readers were from an academic background, and had a positive attitude towards recreational reading, as well as utilising writing and reading in their daily activities. The early readers were therefore, exposed to these activities, and their interest seems to have been directed towards the activities their parents value. All previous research located indicated that early readers come from such "bookish" families except Torrey (1973). However, as previously stated, Torrey failed to mention that her subject had two older siblings who read their library books and their reading primers at the time her subject began to read, so that he too, had been exposed to the importance of reading.

Not all the mothers in this study indicated that they were avid readers; but mothers who did not read fiction, read the daily papers and magazines or did the crossword puzzles. They all read to their children and valued the activity. Not all the early readers had access to a library, but all had a personal library containing a variety of books.

In all the families the early readers were exposed to reading and writing as useful and desirable skills, activities their parents valued. One mother wrote and printed an education magazine from home; one mother faithfully completes and enters every crossword puzzle competition; one girl was fascinated with the prescriptions her mother wrote for patients; the teaching or lecturing mothers evaluated the writing of students on a daily basis or wrote lecturing notes. As most mothers worked from home, the early readers were exposed to these activities. It seems logical that the early readers grasped the value of literacy at a young age, and desired to master these skills.

In addition to grasping the value and desirability of literacy skills, the early readers also experienced reading as a personal meaningful activity while being read to by their parents/older siblings.

All parents of early readers said that they read to their children on a regular basis. Comments like :

> "I just had to read to her every evening"
>
> "She wouldn't go to sleep unless one of us read her a story".
>
> "She would not let me stop. She would nag me to just read to end of the chapter, and then to read the next chapter".
>
> "She took hours to choose her library books. She didn't choose books with only pictures. She liked the pictures, but wanted a substantial amount of story in the book".

indicate that being read to was seen as an enjoyable activity by the children and a necessary activity by the parents.

Two possible motivating factors for early readers to start reading themselves (instead of just enjoying being read to) emerged.

The child's natural copying of adult behaviour seems to have played a role in the child copying adult reading or writing behaviour. Most of the children spent a large part of their first four years in the sole company of a caring, responsive mother. During the interviews, several instances of copying behaviour were mentioned; e.g. scribbling, "marking" tests, typing, playing school, "writing" books.

The second motivating factor is the early readers" competitiveness : they want to do what others can do. Not all early readers in the sample were rated as highly competitive by their mothers. But it was evident that the ones who were highly competitive had older siblings, friends or cousins to compete with, whereas the others didn't. These others were often better than their peers, not only in reading, but also in ballet, swimming or cycling and were the leaders in their group. They were not openly competitive; their superiority was accepted by their peers.

Another environmental factor that contributed to early reading/writing mastery, seems to be the availability of reading and writing material, pens,

crayons, paper, blackboards and books. It became clear during interviews that the early readers used these writing materials extensively from an early age for a variety of purposes.

4.1.3 Attitude towards Early Reading Tuition

All the mothers interviewed (only one father was present at interviews) stressed that the initial interest in reading and writing came from the child and that they were surprised by their offspring's first efforts. The mother of Girl 1 discovered on her blackboard the words "Pit me fro" and remembered that she had complained that day about the insistent birdcalls of the "Piet my Vrou", a migrating bird with a distinctive call and an onomatopoeic name, popular with children of all ages as his appearance heralds the summer holidays and Christmas. Girl 1 is a very reserved little girl and her mother could not account for her acquisition of enough knowledge to write a phonetic approximation of the bird's name. All the parents stated that they had not made any effort to teach the child to read.

What was most surprising is that most mothers expressed their fear of having done something wrong when they discovered the child's reading efforts. They expressed the following views :

- pre-school children must not be taught reading and writing; (10 responses)
- it would be damaging to the child in some vague way; (3)
- if taught to write by the wrong method the child will suffer in class 1 when he has to unlearn his bad habits; (8)
- a person with knowledge on the subject (friend/acquaintance) advised them to discourage the child from reading before school entry; (7)
- they sought professional help and were told to discourage the child; (1)
- they were aware of the attitude that children should not read or write before entering school, but did not agree with the point of view; (4)
- they knew of other children who read early and were not harmed by it, so they did not dissuade their child. (3)

These findings are similar to those by Mc Naughton (1987 p 195) : "It is clear that some parents in both Durkin's (1966) and Clark's (1976) studies reported deliberately setting out to teach their children as a response to persistent interest. They deliberately decided, as it were, not to stop the children from learning. This decision was not taken lightly. Both studies report a curious intention, voiced by many parents, to forestall learning apparently under the misapprehension of there being a right way to tutor reading. The right way was seen to be the prerogative of a professional elite teachers" (Mc Naughton 1987 p 195).

The prevalent attitude in South Africa seems to be that the teaching of reading and writing should be left to the professional, qualified teacher. This view is endorsed by most pre-school and primary teachers. One pre-primary teacher criticised the early reader for writing in capitals because "we start with lower case in class one" and failed to see any merit in the early reader's achievement. It was rather frustrating to interview pre-school teachers and subject advisors on the subject as they all stated this concept, and none would give an explanation or logical basis for this point of view. It has the quality of a tradition, and is accepted without question. The Subject Advisor, who did not wish to be named, did mention that pre-school teachers were not fully qualified : many had done only a short course, and such an important aspect as reading can not be left in the hands of untrained teachers. Standards in schools, in contrast, are strictly controlled and class 1 teachers are fully trained, having obtained at least a three year diploma. The child is thus protected and ensured of quality education, she said.

The most evident example of this attitude is the report given to the mother of Girl 3. At the age of 4.10 Girl 3 was taken to a psychological clinic for advice as she was reading almost fluently then, and her mother wanted to know if she could put her in school the following year. Girl 3 had passed the teacher's school readiness assessment but was too young to be admitted.

According to the psychological report Girl 3 was reading at a 6.8 year level

and her motor development was at an 8 year level as assessed with the Wide Range Achievement Test. The report advised the mother to discourage reading and to stimulate her with other activities, to place her in a pre-school to develop her social skills, and to "allow her to experience failure and thus not develop an over-confidence concerning her competence"! When assessed two years later, she was still reading at the same level. Evidently the mother succeeded in curbing her development in reading, but could not extinguish her interest in reading.

One interesting finding is that in an attempt to compromise between the child's expanding interest in reading and their fear of "damaging" the child by encouraging reading, the mothers of eight early readers then individually all made the same decision: they took over reading for the child and read advanced books to the child. The classics like Tom Sawyer, The Wizard of Oz, Mary Poppins and The Wind in the Willows were popular choices. Thus they accommodated the child's growing reading interest and curbed the child's own reading efforts. The children accepted this, but found an outlet for their interest in words through writing. Several early readers expressed this view:

"I don't read, Mom reads for me; I write" (Girl 1).

It seems that the parent's attitude towards the child's reading efforts then shaped the child's further development: where the parent encouraged reading, the child's reading ability advanced rapidly; where reading was taken over by the parent, reading development slowed, and the child became an early writer who directs her efforts towards discovering the phonics structure of words and towards writing.

Several previous studies mention early readers who directed their main efforts towards writing, rather than just reading. Clark (1976) mentions that ten of her subjects were interested in writing before age four (p 51) while others were not, but she did not distinguish between them. Lamineck (1990)'s son seems to have been interested in reading primarily, while Bissex (1980)'s son produced reams of notes, lists, jokes and stories.

During this research it became clear that these early readers fell into two distinct groups : those that produced various types of writing on a regular basis, and those that did not. (Other differences will be discussed in a later section). It also became clear that the mother's attitude towards attaining literacy and their style of interaction with the early reader, influenced the further development of the early reader. Mothers who decided that their children would not be harmed by reading before school entry, encouraged reading, and their child's reading improved rapidly. Mothers who were afraid that some harm could result from the child's early reading, attempted to prevent the child from reading by reading advanced books to the child. They could, however, not stifle the child's interest. The child then continued to explore written language through writing.

The question immediately arises : how many other children would have been early readers, had they been given the amount of attention and support for their initial interest in reading as the early readers received from their parents?

Durkin (1966) found, when questioning parents of non-early readers, that almost three quarters of non-early readers did express an interest in reading before entry into school, but at least a third of their parents reported that they did not give any assistance to the child or support the child's early interest (Mc Naughton 1987 p 191,192).

It would seem that some young children accept their parent's censure of their early reading interest and stop altogether. It is my personal experience that many children are content with their parent's explanation that they will learn to read when they go to school; they stop their own efforts and look forward to going to school to learn. Perhaps it is only those children who are persistent and self willed by nature who continue to explore written language once their interest has been aroused and continue to become early readers.

4.2 INTERACTION WITH THE EARLY READER

One essential element of the home environment of early readers seems to be the availability of an interested, liked adult. From Clark (1976)'s research emerges the picture of a mother figure who was interested in her child, who welcomed verbal interaction with her child and was "willing to provide instant encouragement" (p 43). Another essential element is the fact that the available adult must also be interested in reading, have time to read to the child and answer the child's questions on reading.

In this study the available adult was mostly the mother, although one grandmother and one older sibling were also mentioned. The fathers spent less time with the children, due to longer working hours, and although most fathers read to the child on occasion, the mothers all felt that they were the person who mostly answered the child's questions.

The kinds of help provided by mothers will be discussed in a later section
None of the mothers deliberately taught the child to read, but responded to the child's interest and questions as they arose.

What struck the researchers most, after spending a day or more in each home, was the efficient way all these mothers accommodated their work requirements, household tasks, children, playmates, toys, dogs, servants and uninvited researchers in their homes. None was the houseproud housewife with the proverbial floors clean enough to be eaten from. Their homes were clean, but had a lived-in feel. They seem to have adopted an organised but easygoing lifestyle, which accommodates the needs of each member of the family.

Although they had obviously busy schedules, none seemed to be anxious or tense persons. They dealt quite effectively with toddler's messes or minor disciplinary upheavals without getting upset while the researcher was present.

What also impressed, was their easy but effective discipline. The children were all well mannered and well behaved and although they were not beyond trying to get an

extra privilege or getting by the house rules, they were often dealt with in a humorous way or by way of explanation rather than in an authoritative style.

Children were also given advanced responsibilities and tasks. Three and four year olds were e.g. allowed to answer the phone and were obviously taught to do it in an appropriate way. Five year olds laid the table or made the tea. Children were allowed to organise (or disorganise) their bedrooms and toys as they liked. Some mothers apologised for the condition of some bedrooms, but made it clear that it was allowed.

On the other hand, toys were only selectively allowed into living rooms and had to be cleared away by the child when the game was completed. Children had a full range of basic educational toys like puzzles, crayons, activity books, clay and construction toys, and were encouraged to play.

The mothers were all obviously proud of their children's products and took enjoyment in their children's games and conversations. This was evident in the pride with which they displayed the years accumulated drawings, photo albums, and scribblings and the type of incidents and anecdotes they remembered.

In direct observation of the interaction between mother and early reader, it was noted that the mothers were rather indulgent of the children; they would interrupt a conversation to answer a question, or the child was requested to wait for a second; but the children were never scolded or ignored. The mothers used a lot of praise and every positive action of the child was affirmed. The child's opinion was often asked and the child was given choices. On the whole, it seems, as Clark (1976) remarked, that the mothers enjoyed interacting with their early readers.

The positive interaction must not unanimously be ascribed to the mothers' parenting style. In two of the families the early reader had an older brother with a learning difficulty and it was noted during the interview that the mothers interacted very differently with the learning difficulty child. She was more harsh, more authoritarian and elicited a less favourable response. The learning difficulty children were more

impulsive, whining and demanding and used an irritating tone of voice, whereas the early readers were pleasant, imploring and endearing even when they were ill or tired.

Although the mothers' interaction with the learning disabled children were only observed on four or five occasions during the interviews, the change in tone of voice and attitude towards the learning disabled child was marked enough to alarm the researcher. And having noted the different parenting styles used by one mother with her early reader and her learning disabled child, I sought opportunities to verify this observation in that particular family and other families.

The difference in interacting style of the learning disabled siblings compared to the early readers, was marked enough to be worthy of mention. The learning disabled children were demanding, irritating and socially clumsy compared to their early reader siblings.

The early readers had better command of language and were able to elicit favourable responses by using verbal strategies like humour or logical argument. (I witnessed one ten minute conversation between a mother and an early reader who was told to go and have a bath. The early reader refuted each of her mother's arguments, without resorting to anger, and was in the end allowed to stay). Although conclusions based on so few observations should not be drawn, the early readers' ability to initiate positive interactions with others is noteworthy.

4.3 CHARACTERISTICS OF EARLY READERS

This section contains the research findings on the following aspects :

- personality
- precocious verbal ability
- social interaction
- intelligence
- reading attainment
- memory

mathematical ability
auditory and visual perceptual skills

4.3.1 Personality

Early readers seem to share a number of personality characteristics which aids their mastery of reading. They are found to be "curious, conscientious, serious-minded, persistent and self reliant" (Forester 1977 p.161).

The curiosity of these early readers often surprised their mothers. They commented that the children questioned issues well beyond their years. The ozone layer, sex, politics and nature, are all topics covered by their questions. One wanted to know the difference between mutton and lamb and another wanted to know where the stuff went when you pull the toilet, and then insisted on being taken to the sewerage works.

They seem to be very aware of and very sensitive about environmental issues: several were very upset by the film Fern Gully and Girl 7 gets upset when she sees a new road being built "because they just kill the plants and little animals". Their curiosity is seldom easily satisfied and they often return to a topic with questions of a different nature. One mother said "You can see her mind working, but you just have to wait for the next question".

Not only are their minds very active, but they all display high levels of physical activity. Most mothers comment on sleeping patterns : the early readers tend to sleep less than average, or have unusual sleeping patterns. Even as babies few of them slept during the day. None of the mothers found the child taxing because they amuse themselves, but said that the child "was volatile" or "intense about everything" or "needed a lot of stimulation" or "always busy".

The children were also seen as "very determined" or "stubborn" or "perfectionistic" or "wouldn't stop till she understands it". None of them

"just accept being told", or "being dominated" and often "will argue things through".

The mother of Boy 1 complains that Boy 1 usually gets his own way. When she says "No" to a request she explains her reasons and he argues, refuting every reason. He verbally outmanoeuvres his mother on every point. Several of the early readers were said to apply the same determination when trying to master a new game, toy or book.

4.3.2 Precocious verbal ability

The early readers were thought to have developed verbally faster than their siblings. Mothers said that they did not use "baby words" or that no baby words were allowed. The researcher had the impression that the parents insisted on or instilled correct use of language from comments like :

> "I just corrected her language, it must be the teacher in me".
>
> "I used to say to her : You say it like this, and explain to her why".
>
> "When she was born I couldn't wait for her to grow up. I just wanted her to sit there and talk to me"
>
> "At age 3 her language was better than that of my standard 3 pupils".
>
> "She amused me with her vocabulary; at 4 she used words like 'annoying' or 'irritating' or 'attractive' rather than a common word like 'nice'".
>
> "The librarian remarked on the depth of her questioning at story time".

It must be kept in mind that the early readers in the study spent most of their time in adult company, being only children for a number of years and having their mothers at home. But some like Girl 4 would use ploys to be allowed into adult conversations. She would sit with her puzzles quietly in a corner, listening to the adults, and later discuss the conversation with her mother!

It was found that the amount of time spent with adults other than their parents, increases the rate of early language acquisition (Feitelson 1988 p.30), which

may explain in part the precocious verbal ability of early readers. It seems that their advanced verbal ability allows the early reader a depth of understanding beyond their chronological age. Girl 6 knows her mother's dislike of Disney. After their reading of one story, she remarked : "Gosh Mom, isn't it fortunate that Disney hadn't gotten hold of this story yet!" There were also several anecdotes to illustrate their ability to talk their way out of a situation, or to get what they want. As Durkin, Torrey and Clark observed, they are able to ask the right questions, not only to obtain information, but also to manipulate social situations.

4.3.3 Social Interaction

From the interviews it became clear that the early readers enjoy social interactions, but are also able to amuse themselves for long periods.

When on their own, fantasy plays a big part in amusing themselves. Several had imaginary friends when they were younger. Their games are usually vast story interactions in which they employ their dolls, pets or just pure imagination. Girl 5 said that when she has to swim alone she pretends to be a midget who falls in a giant's soup bowl and then has to swim to avoid being scooped up and eaten. Girl 3 dresses as a fairy, produces magic honey and does good deeds all day long.

All of them enjoy outdoor activities, and most are said to prefer being outdoors to reading and writing, although writing would often be incorporated into their games.

Most of the early readers are the leaders in the group when playing with other children. They are popular in team games because of their superior physical ability but more often because of their organisation and verbal manipulating ability enables them to get co-operation for their schemes. The mother of Girl 5 was most upset when she got calls from 20 other mothers to confirm arrangements for "The Great Pony Gathering" arranged by her 5 year old

daughter.

The interactional style of early readers, as experienced by the researcher, was remarkably mature for their age. The early readers made the researcher welcome, treated me like a guest to be pampered and entertained. When the mother was not present, the early reader took over the role of hostess, and apart from being involved in testing and interviews, also looked after the comforts of the researcher.

Not one of the early readers was tearful, clinging, anxious children who feared separation from the mother. Even the four year olds displayed a mastery of social skills beyond their years, indicating a specific home environment in which self esteem and social poise in children are fostered. It would seem that the parents' appreciative, supportive parenting style provides the opportunities and the support structure for children to also develop precocious social skills.

4.3.4 Reading Ability

Subjects were required to read at least enough words on the Burt (Re-arranged) Word Reading Test (1935) giving a reading age of at least one year above their chronological age. The table below shows the reading ages of the subjects on initial testing on the Burt's Re-arranged Word Reading Test (1935).

Table 3 Reading Age

	Chronological Age (In years)	Reading Age	Reading Age above Chronological Age
Boy 1	5,6	9,5	3,11
Boy 2	4,6	5,8	1,2
Girl 1	6,4	8,10	2,6
Girl 2	5,11	7,0	1,1
Girl 3	5,9	7,5	1,8
Girl 4	4,9	5,10	1,1
Girl 5	6,6	8,6	2,0
Girl 6	5,7	7,7	2,0
Girl 7	5,4	6,10	1,6
Girl 8	5,5	7,0	1,7
Girl 9	4,4	5,8	1,4
Girl 10	3,5	5,7	2,2
Average of Reading Age above Chronological Age			1,10

N = 12

4.3.5 Intelligence

For this research the full test battery of the JSAIS was used. Findings are given in the table below.

Table 4

COMPARISON BETWEEN VERBAL AND PERFORMANCE INTELLIGENCE SCORES				
	Verbal IQ	Performance IQ	Global IQ	Memory Scale /20
B1	142	149	149	17
B2	incomplete			
G1	136	126	129	15
G2	96	127	112	15
G3	118	136	131	16
G4	116	127	121	14
G5	116	127	121	14
G6	122	125	124	14
G7	134	123	130	16
G8	132	125	127	17
G9	109	125	124	14
G10	120	110	118	17
MEAN	121,9	125,5	125,6	15,18

N = 11

Other research (Clark 1976) found that the Verbal IQ of early readers was marginally higher than the Performance IQ. In this sample the Verbal IQ was slightly lower (121,9) than the Performance IQ (125,6). This cannot be taken as representative of all early readers because of the adverse influence of one deviant score on such a small sample. Girl 2 (the girl with suspected brain damage) had a Performance IQ of 31 points higher than her Verbal IQ. This single low score affected the mean Verbal IQ.

The table 5 below shows the discrepancy between Verbal and Performance IQ of subjects as measured on the JSAIS.

Table 5

Difference between Verbal and Performance IQ			
	Discrepancy in points	Frequency	Totals
Verbal IQ Higher	11-15 6-10	1 4	5
Verbal and Performance IQ the same	0-5	1	1
Performance IQ higher	31-35 26-30 21-25 16-20 11-15 6-10	1 - - 2 1 1	5

N = 11

A direct comparison between Reading Age and Intelligence could not be done because the ages of subjects ranged from 3,5 years to 6,6 years. Therefore the measure Reading Age above Chronological Age was computed for the different IQ ranges.

Table 6

Comparison between Intelligence and Reading Age			
IQ range	Number of Subjects	Mean RA of Subjects	Mean RA above CA of Subjects
140-150	1	9,5	3,11
130-139	3	7,2	1,7
120-129	4	6,11	1,11
110-119	3	6,1	1,4
100-109	0	-	-

N = 11 (One assessment was incomplete)
CA = Chronological age
Mean IQ = 125,6
RA = Reading Age as assessed by the Burt's (Revised) Word Reading Test

One should be cautious to draw any conclusions from the seeming relationship between IQ score and Reading Age attained because of the small sample.

The findings in this study seem to indicate that neither strength in verbal intelligence nor strength in performance intelligence has a direct bearing on the development of early reading in the children studied. Neither is superior intellect a prerequisite for the development of early reading. It would however seem that the level of intelligence does have an influence on the level of proficiency of early reading attained as indicated by table 6.

The high level of intellectual functioning of early readers can not be used as the sole explanation for the development of early reading. Many other children function at similar high intellectual levels, and yet do not develop into early readers. Rather, one must consider the characteristics of the environment that produce early readers, and the interaction between the environment and their innate potential that assist in their precocious development, as one causal factor of early reading.

4.3.6 Memory

The JSAIS test makes provision for the calculation of a Norm Score on a Memory Scale. The Memory Scale consists of the Story Memory Subtest (measuring short term memory for meaningful verbal material), the Memory for Digits Subtest (measuring auditory sequential short term memory) and the Absurdities A : Missing Parts Subtest (measuring visual memory).

When the Memory Scales for the subjects were calculated the mean score was 15,18 (maximum 20). When the significance of the differences between the scaled score averages and the individual subtests of the memory scale was calculated, the memory scores were found to be significantly higher (at 1% and 5% level) for the subjects in the 110-129 IQ range. For subjects with IQ's above 130 the significance was not noticeable, partly due to the ceiling effect of the test.

These findings confirm previous research that early readers seem to possess above average memory. The most notable finding was that Girl 2, (the girl with suggested brain damage) had a scale score of 17 on Memory for Digits (max 20) but only a score of 8 on the Story Memory. The same pattern was noted with the Absurdities A (score 16) where she only had to point to the difference, and Absurdities B (score 13) where she had to explain more fully. Throughout the assessment it became clear that she had no difficulty in organising and conceptualising the information, but that she had a difficulty with Verbal expression of ideas. Her family also tended to speak for her, or complete her sentences for her, in an effort to accommodate her weakness.

It was also noted that she preferred not to read aloud, and that her oral reading was hesitant, but when she was allowed to scan a page, she could answer questions on it; indicating that her understanding of reading was higher than her oral reading scored indicated.

Although one would hesitate to interpret on the basis of N= 1 it is remarkable that her Verbal expression deficit did not deter the acquisition of early reading while she possessed the "prerequisites" of above average memory and verbal comprehension.

During the interviews most mothers commented on the early reader's memory for specific events or places. They remembered the way they travelled to a destination a year or more before and many could give directions to known destinations. They could remember the words of a book or film or often remember the exact words of a conversation long afterwards.

Early readers were also reported to memorise words of songs or poems faster than their siblings or counterparts. Barwick and Valentine (1989) noted that early readers seem to possess above average tonal memory. The was borne out by the examples given of these early readers. They were reported to recognise and remember melodies easily; and several were reported to have been able at a very young age to quote or copy accents different from their

own. Girl 5 had a keyboard organ, she found the approximation of ordinary sounds, like the doorbell or telephone, and used these sounds in her games. These examples seem to indicate good tonal memory in early readers.

4.3.7 Mathematical Ability

This aspect was not touched on during the research except for the Number and Quantity Concepts Subtest of the JSAIS. The results of this Subtest were in keeping with their intellectual ability and not significantly higher or lower.

From the interviews it became clear that none of the subjects had a special interest in numbers but most of them could do basic adding and subtraction in functional situations and several could count out money or calculate change. As one father, an accountant, summed it up in his matter-of-fact voice : "Yes, she is definitely numerate".

4.3.8 Auditory and Visual Perceptual Skills

Several studies (as summarised earlier) indicated that early readers have advanced auditory abilities. In this study the results of the Auditory Discrimination Test (Wepman 1958) indicated that none of the subjects had auditory discrimination difficulties. Results indicated

- the subjects grasped the nature of the test easily;
- they were able to concentrate for the duration of the test, although a few got bored with the repetitive nature of the test;
- the younger children (under 5½ years) had some difficulty discerning differences between beginning as well as end consonants;
- the older children (over 5½ years) had no errors with beginning consonants, and only a few errors with end consonants;
- the most common difficulty was with distinguishing between the f and th sounds as in lave - lathe, or fret - threat as was also noted by Clark (1976 p 34).

- 5 of the subjects were not able to pronounce the th- sound correctly (due to missing teeth, etc.) but of these, only 2 had difficulty with the discrimination of the sound.

The Auditory Discrimination Test was given only to confirm that this sample of early readers conform to the description of early readers in the academic literature and was not fully researched.

In contrast to the early readers, the little girl, Bee, identified as an early reader who did not meet the criteria for this study, had an error score of 8, and thus should be classified as having poor auditory discrimination. Although results of one subject can not be constituted as proof, it is quite revealing that this one reader lacks the two most clearly identified attributes of early readers, namely, good auditory discrimination and above average auditory memory as assessed on the JSAIS memory scale where she scored low on Memory for digits-subtest but high on Story memory-subtest.

Visual Motor Integration

All the girls, except one, in the sample were reported to have very good gross motor co-ordination. They all walked, climbed and mastered tricycles and bicycles at an early age. Several did ballet and were reported to have mastered it well. Girl 5, Girl 7 and Girl 8 all passed their first ballet exam before their 5th birthday with higher marks than their older classmates.

Only one subject had a recent full paediatric assessment. Her physical attributes, height and weight, were found to be average, on the 50th percentile, but her co-ordination was found to be on the 90th percentile; supporting the impression that early readers have good co-ordination.

The only exception was Girl 2 who suffered anoxia during severe birth trauma. She went into convulsion soon after birth and her mother was told by the paediatrician that she would probably be cerebral palsied. This did not happen, but her milestones were very slow and her movements are a little

unco-ordinated and she walks with difficulty. She is not allowed to run or ride bicycles, as her family is very protective of her.

Girl 2 is the only subject who scored below her chronological age on the Bender Visual Motor Gestalt Test (Bender 1964). Her Bender protocol also contained several indications of mild brain damage such as rotation, inability to place two elements of one design in the correct orientation, difficulty with visual planning indicated by colliding and overlapping of different designs and slow completion time.

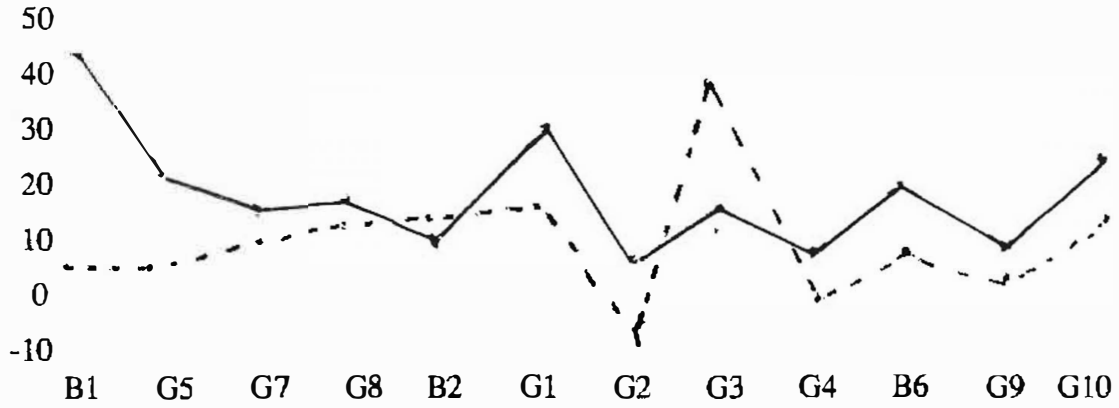
Her Verbal score on the Intelligence Test was also 31 points lower than her Non-Verbal score. A full neurological or neuropsychological assessment could, regrettably, not be undertaken. However, in the light of the indications of some brain dysfunction, her early reading ability is all the more remarkable.

Where the above exceptions are ruled out, it would seem that there is a relation between visual motor development as measured by the Bender Visual Motor Gestalt Test and the Reading Age of the subjects. This result is in agreement with previous research findings.

On the whole, the sample is just too small to draw meaningful conclusions about early readers from these results.

Table 7

A comparison of Reading Ages (given in months above or below chronological age) - and Bender Scores (using the lower Koppitz age in months --- above or below chronological age)



——— Reading age on Burt's (Rearranged) Word Reading Test (19[illegible]
- - - - Age on Bender Visual Motor Gestalt Test (1964)

Discussion

B1 and G5 did almost no writing. Whether they shunned writing because their fine motor development was low, or whether their development lagged because of lack of practice is hard to say.

G2 had low motor development due to possible brain damage and G3 had a low reading age as she was discouraged to read after age 4½ but was still 20 months above her chronological age. Her exceptional visual motor skill is evidenced in her drawings. See appendix.

Orthographic representation

It is impossible to divorce reading from writing as one has to read what one represents graphically. Yet the writing of early readers gives valuable clues to their perception of words and the sound patterns of words.

Most early readers started writing capital letters as most had a writing aid utilising capitals : an alphabet chart or book, typewriter or computer terminal. As they became aware of lower case letters their writing included upper and lower case letters randomly and only later did they begin to use capitals correctly : at the beginning of sentences or for names. There was a clear developmental progression in the use of lower and upper case script.

Also, subjects had a very few reversals of upper case letters, where as reversals of lower case letters and numbers occurred frequently when they just started writing. Bissex (1980)'s observation that capital letters are more distinct in appearance, and therefore easier to remember, whereas one-third of lower case letters depend on their orientation for their distinctiveness, seems to hold true for the early readers.

The observation of Bissex (1980) that children use letter names or sounds as words (eg. R = are, DF = deaf) were evident in many of the early readers' writings in this study. T was used to represent the in the story of rabbit and E used for he in The Factri (see Appendix A). Mostly the words are represented phonetically in the writings of the subjects in this sample.

iscrem - icecream
tine pes - tiny piece
was wocim - was walking
swits - sweets
byootifll - beautiful

A full analysis of the development of writing was not undertaken.

4.4 METACOGNITIVE KNOWLEDGE ABOUT READING

This section contains the research findings on the following aspects :
determining the function of written language
establishing sound-symbol relationships

4.4.1 Determining the Function of written language

This section will attempt to answer the question as to how the early readers determined the purpose of reading and writing. Researching this question proved difficult as none of the early readers could explain or perhaps remember why they first wanted to read, or how they knew what print was for, despite several attempts to rephrase the questions. Answers did not go beyond :

"I always knew"

"Right from when I was a baby, I knew words say something"

"I just learned".

All parents indicated that reading and writing are an integral part of their daily lives. As one mum said : "Writing is what we do for a living. There is just no way she could not notice!" In most of these homes writing, more than reading, had a special significance for the parents, and their own writing efforts were often discussed in the homes.

- One mother publishes a monthly magazine from home;
- three were studying and had to write and send of assignments on time;
- several were teachers or lecturers who on a daily basis, wrote study and lecture notes or marked homework assignments;
- one mum is a crossword puzzle fanatic;
- older siblings had homework and tests to write;

and the early readers were exposed to all these efforts as well as the emotional energy invested in these writing tasks by their parents, so that one could determine that the importance of writing was impressed on their minds from an early age from descriptions of the children's copying behaviour.

The natural imitative behaviour of the young child seems to account for much of the subjects' initial writing efforts. Several parents gave examples of their early readers copying their parents or older siblings at a very young age. After her first meal in a restaurant Girl 5 played waitress at every meal and wrote down orders of family members for mother to serve. Evidently these

early quasi writings were encouraged, and admired. The question "What does it say?" or "Tell me what you wrote?" seemed to have been a standard response to the quasi writing, thus the link between symbol and meaning was enforced for the early reader.

One mum remembered : "We were presented with pages of her 'writing' and then we had to read it! so I bought her an ABC book and she started copying from that". Another told how her daughter would "write"a story and then read it to her teddies.

The most dramatic incident that illustrates an early reader's motivation to start writing, came from the mother of Girl 6. An older cousin of Girl 6 (then 3½) told her scornfully that her "writing" was not real writing. Real writing was done with real letters and not her little circles. Girl 6 was livid with anger, and when her mother confirmed that her "writing" was not real, she was firstly angry with her mother for encouraging her to do something that was wrong, and then insisted to be shown real letters, and would not stop till she knew them all. (Persistence, the reader will remember, is one of the characteristics of early readers identified in every study).

Another characteristic that seems to influence early reading attainment is the strong competitiveness of early readers - to want to do what others can do. This competitive spirit was especially evident where sibling rivalry between the early reader and an older sibling existed. In the case of Girl 9 the "rival" was a class 1 boy in her mother's after school care centre. When this little boy was doing his lessons with her mother, she would hover near and insist on being taught the same lessons.

For a few subjects the initial interest in literacy was in reading, not writing. The older brother of Girl 8 is dyslexic. She would play on the floor while his mother tried to teach him to read. Soon she was answering the questions faster than he was, and by the end of his class 1 year, she, then 4½, read fluently, and he still could not read.

The mother of boy 1 said she only noticed that he could read when, at the age of between 3½ and 4, he read "No preservatives added" on a juice carton. The mother was taught by the "look and say" method and could "read" when she was 18 months old, but insisted that she had not taught him. Upon questioning, she remembered that she used to read to his older sister. She said that her own reading speed was so fast that she struggled to read aloud and used to point with her finger to every word she read to "slow herself down". She said she hardly noticed him, she was so engrossed in her daughter's enjoyment of the tales. Boy 1 used to sit next to her with his finger in his mouth and his eyes never left her finger pointing to the word she was reading. He must have learned whole words, because when assessed at age 5½ he still had only a limited knowledge of phonics but read at a 9½ year level.

Similar cases were cited by Huey (1908) of pre-schoolers learning to read by listening to a favourite story, or a story tape while following in the book (Forester 1977 p 162). This was the case with Girl 7 whose favourite books were the Dr Seuss stories. By age 4 she could "read" them from memory and by age 5 could negotiate new texts with familiar words.

Of the 12 subjects, 8 were "early writers" rather than readers as most of their efforts were in writing, rather than reading. The possible explanations for this will be discussed in a later section.

In conclusion, it seems that a child's interest is stimulated by what his parents do and value. In the homes of early readers, reading and writing are important activities in which the family members invest time and energy. The early reader then gains knowledge about the activities to which he is exposed - in these families writing and reading are the activities of interest - and being either competitive or simply eager to imitate, the early reader or early writer begins to explore these activities parents value and encourage.

However, exposure to print, in the company of adults or older siblings who

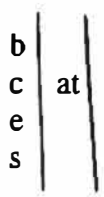
invest energy in these activities alone, can not explain the early reader's achievement. The interaction between early reader and their indulgent, appreciative mothers around their first efforts, must assist in sustaining their efforts to master print. The parents' consistent encouragement of their child's efforts and their pride in their precocious child was so evident in every home, that it cannot be excluded as a motivating factor of early reading attainment.

Every mother had an anecdote of how the early writer's interest in letters started, and progressed. The early writers all had an alphabet book, alphabet chart or an alphabet matching game that lead to persistent questioning by the child of "what does this say?" Letter names and/or sounds were taught by association : "This is J for Jill" or "A for apple". Association was followed by recognition and identification of letters in unfamiliar context like newspapers or storybooks.

The next stage seems to be the mothers inventing a use or practice opportunity for the child's new-found knowledge :

- writing name tags for food, people or objects for the child to identify;
- asking the child to write the shopping list (which initially consisted of an initial letter followed by scribbles or a picture;
- teaching the child to write her own name and later other names;
- writing words on cards and asking the child to build a sentence in the "breakthrough" method was the method of choice for the mothers with teaching background.

- word cards like



- asking the child to recognise specific words in text;
- allowing the child the use of the typewriter or personal computer.

The reader must bear in mind that on initial questioning, none of the mothers said that they had taught the children to read; and I believe that none of the

above was done as formal teaching. The observed interaction between parent and early reader suggests that the parents improvised the above strategies to cope with the child's interest and demands. Feitelson (1988) suggests that skilled parents are attuned to the needs of their children and scaffold learning experiences for them without being aware of teaching them.

The ability of these early readers to "ask the right questions" (Torrey in Forester 1977 p 161) to obtain the information they require, and to ask in such a way as to elicit a favourable response, was evident in the interaction between parent and early reader. This indicates that the early reader took an active role in her teaching.

The next stage in the development of the early writers was to master the orthographic structure of the language : the spelling. Most mothers found this stage very taxing. One mother said :

> "She would ask me a hundred times a day: 'How do you write this?' I got so tired of having to spell the words for her, that I said : 'Let's try to work it out'. It was such a liberation for her. She made a solid connection between sound and letter, and she just took off. Now I just occasionally have to help with the more difficult words ... like reminding her that th makes an f-sound".

Some mothers did not correct spelling - they find their child's phonetic spelling amusing. These children who were not corrected tended to produce more creative free writing. (See the Appendix for the Nonsis Book and the story of rabbit in which pictures and words are combined to create a story).

Other mothers insist on correct spelling. One mother said apologetically :

> "When I noticed how she wrote it I told her the correct spelling. I did not want her to learn her mistakes". (Referring to a popular saying by teachers that children do not learn from their mistakes - they learn their mistakes).

These children who were corrected tended to be more selfconscious about

their writing but generally had a better knowledge of the sound-symbol relationships and could negotiate complicated digraphs in words like mountain or monkey.

4.4.2 Establishing sound-symbol Relationships

Analysis of data indicated that early readers follow two distinctly different routes to literacy : the early readers concentrated on reading, and attained higher reading levels than the early writers who mainly concentrated on writing, while allowing their parents to read for them.

Although most parents indicated that the children were aware of and able to recognise environmental print like STOP signs, logo's or brand names at an early age, the initial link between sound and symbol seems to have been made through an alphabet chart, book or toy. This was true of all early writers except boy 2, whose passion for lorries directed his interest. At age 3 he could recognise every make of lorry and recognise the names from advertisements in the newspaper. However, even he was allowed to use his mother's typewriter from age 3½ to type the lorry names, and thus had an alphabet aid to help him make the sound-symbol link.

In conclusion, it seems that the early writers, once they had mastered the sounds of the alphabet letters, go through a stage of writing words phonetically: that is, producing the pronunciation of a word in writing. This stage is followed by incidental phonics teaching and even teaching of spelling rules by parents as the child progresses to more complex words. These children do writing for their own amusement and rely on their parents to read for them. When reading, their word attack skills consists mainly of sounding out words and then blending the sounds to get the right pronunciation.

The early readers on the other hand do very little writing. They seem to start by recognising whole words or by memorising large extracts of text. It was more difficult to determine how they came by their word attack skills as their

progress was almost unnoticed by their parents, in contrast to the early writers, whose parents were actively involved in every stage of their writing development.

The early readers' interest in words take a different form from the early writers, who started with sounds and built words with the sounds. The early readers started with whole words and segmented the words into syllables. They were observed to look for known parts of words and guess the word from there, or to blend the known parts and other syllables; a well known strategy of good readers (Hardy in Clark 1973). Girl 7 uses her finger to cover parts of the unknown words while she reads the known parts, then takes the finger away and reads the whole word. She seems to have developed it into a useful strategy as she was observed to keep her finger on the line she was reading, covering and uncovering parts of words so fast that she almost reads fluently.

The mother of Girl 5 had tried to teach her the formal spelling rules and reported that they got into so many battles about the exceptions to the rules, that they mutually agreed to leave the writing till she went to school. When girl 5 was asked what she did when she got to a difficult word, she said :

> "I'd rather just help my self". In contrast to the other children who used their mothers as resources.

When prompted, she explained :

> "I sound it like my mother says, and then I sound it fast and I get the word"

and gave an example of syllable blending : de-co-ra-tions. Her mother's teaching method obviously did not suit her learning style. When she read, she read for meaning, as well as for dramatic effect. She preferred to read for an audience, her teddies, or her playschool class : she read with expression, but was seldom word perfect, which irritated her mother.

Boy 1 was by far the best reader in the group and also able to explain or demonstrate his word attack methods more clearly. He chose to read from his

newly acquired 100 page Children's Bible, which he said he read through the day he got it. He read very fast with few mistakes, but the mistakes proved enlightening.

- He read persuade as pursued but immediately corrected himself at the end of the sentence, which indicates his understanding.
- He pronounced plague as plax, but on questioning, said that it must have been something bad that happened.
- He slurred over Sinai but indicated that it must be the name of the place. When asked what he does with words like that, which he didn't know, he said :

  "I just read any old thing!"

  When asked how he would read a word like Egyptians if he had never seen it before, he said :

  "I look at it. I know all the sounds the letters can make and then I read it again like this : E-gyp-tians".

It is clear that the early readers use the syllable as the smallest unit of meaning and not the individual sounds when decoding words, although they are aware of the individual sounds. What was still unclear, after the limited time spent with the children, is how they actually derived the actual sound-symbol relations, except to agree with the observation of Schonell (1961) that they work backwards from context - from word to syllable to sounds.

Their mothers reported that the early readers went through a stage of endless wordgames and word puns before they began to read. Like saying :

"I want T ... not tea ... TV!" or

"You are stu ... pendous"

when he knows very well he is not allowed to call his sister "stupid".

Several mothers reported experiments with rhyme like : jeep -creep - peeperty reap. Girl 5 was remembered to have analyzed the words :

"See iron is like lion - but why must there be an -r- in there?" They truncated and expanded the words, said them backwards and turned them inside out - but almost always at the level of the syllable.

These observations support the finding that early readers use the syllable rather than individual sounds as the smallest unit of meaning in a word when reading.

4.5 RESEARCH FINDINGS : READING STAGES

The different routes to literacy taken by the early readers and the early writers became more clear when their progression through the reading stages were mapped. There is evidence, from the interviews with the parents, that all the subjects in the group started by recognising and later reading whole words. They seemed to build up a sight vocabulary of whole words and then move on to identifying known word parts in unfamiliar words.

It is usually in this stage of their reading progress that the parents introduced the alphabet, the sound value of letters and/or phonics teaching. It seems that the early readers who became early writers then chose to abandon their whole word reading strategy and concentrate on the phonic word structure. Once their curiosity about word structure was stimulated they pursued their new field of knowledge with the same single minded persistence that at first led them to master words.

The subjects who remained early readers either were not given any phonics instruction, like Boy 1 and Girl 7, or resisted their parent's phonics instruction like Girl 5. Girl 8, who learnt to read by listening to her mother teach her dyslexic brother, was aware of the sound values of letters and phonics structure of words as the mother used sound blending : "r-oo-m says room" to teach her dyslexic brother. However, on questioning, Girl 8 said she did not need to read words like that, because she was not stupid like her brother. She too, gave examples of syllable blending as her word attack method.

It became clear that the early readers started by recognising whole words. They build a sight vocabulary and when confronted with unfamiliar words will look for known word parts. They tend to use their parents as a resource when confronted with new words. Most mothers said something like the mother of Boy 1 :

"When I told him a word, that word would never come up again, he had it."

It was noted that the early readers would rather use contextual clues and guessing when confronted with unfamiliar words, than resort to decoding strategies. They obviously read for meaning or for information, and correct rendering of a text was of lesser importance. The early readers seemed to have skipped the pre-reading stages as identified by Clay (1972) or acquired the pre-reading knowledge so quickly that their parents did not notice the individual stages. Once they grasped the meaning of print; that print can be turned into speech; they progressed to identification of words. They also seemed to have skipped the Decoding Stage, identified by Chall (1983) - and moved directly to the Unglueing from Print stage - as they never seem to have been glued to print in the first place. They seem to know that the message of the print, be it information or storyline, is more important than the individual words.

Several examples were cited previously of early readers' concentration on the meaning of text - like Boy 1 who slurred over words like plague and Sinai when he could determine the meaning of the words from text, and Girl 5 whose rendering of the story was often more dramatic than the actual words of the story. Reading is a functional skill for the early readers - like knowing when their TV programs will be viewed. Girl 8 was reported to have stopped her father from using the Sunday newspaper to make the braai fire because she noticed the word Budget on the front page and knew that her mother, an accountant, would like to read it.

The early writers on the other hand, were observed to engage in pre-reading activities like quasi reading and quasi writing. Their reading was in the Decoding stage because of their interest in the structure of words. Although several of them had a sight vocabulary of familiar words, they seemed so engrossed in mastering the phonics structure of words that they did not attempt reading for pleasure or to obtain

information. As described earlier, they relied on their parents to read for them. Because their parents chose to read advanced books that the children would never cope with themselves, the early writers were discouraged with their own struggling efforts to read for enjoyment and concentrated on their writing.

Table 8 Reading Stages as described by Chall Mastered by Subjects

Early Readers	Reading Age	R A above C A	Pre Reading	Read whole words	Decoding	Unglue from Print	Fluency
Boy 1	9,5	3,11		*		*	*
Girl 5	8,6	2,0	*	*		*	
Girl 7	6,10	1,6		*		*	
Girl 8	7,00	1,7		*	*	*	
Girl 10	5,7	2,2		*			
Early Writers							
Boy 2	5,8	1,2		*			
Girl 1	8,10	2,6		*	*	*	
Girl 2	7,0	1,1	*	*	*		
Girl 3	7,5	1,8		*	*		
Girl 4	5,10	1,1	*	*	*		
Girl 6	7,7	2,0	*	*	*		
Girl 9	5,8	1,4	*	*			

It seems that the introduction of phonics teaching to the early reader has a retarding affect on their reading development, as their interest shifts to the structure of words away from functional reading for meaning. This finding is in keeping with Reitsma (1988) who suggests that increases in reading efficiency depend largely on the amount of independent, self propelled reading activity in young readers and not on the type or amount of instruction.

4.6 RESEARCH FINDINGS: APPROACH STYLE TO READING

The research into this section, however interesting, proved frustrating because the time spent with each subject was not enough to make verifiable observations. Some subjects were easy to classify but for others, the information on their approach styles often was not conclusive. It is therefore not possible to give more than tentative conclusions on the approach styles of early readers.

4.6.1 Preferred Expression of Meaning

Bussis et al (1985) identified two preferred expressions of meaning : realistic and imaginative. A realistic child would prefer to stay close to reality when making a story or drawing, and generally stay within the boundaries presented by objects : a cup remains a cup and will not be used as anything else. When using constructional toys, for instance, a realistic child prefers to copy the given designs or to build a realistic looking building or vehicle. The imaginative child quickly moves beyond the given boundaries of objects or toys and uses their fantasy to enhance the given features or expand them.

In determining a child's preference for realistic or imaginative expression, the child's drawings, his play and his behaviour in various settings were observed and verified by obtaining descriptions, anecdotes or examples of the same from the parents.

The majority of the subjects tended to be imaginative rather than realistic. Most engage in fantasy play, but not all to the same extent and most were reported to prefer to build their own constructions rather than follow the given diagrams when using constructional toys. Girl 3 built elaborate buildings with "incredible detail". Girl 4 got angry when she could not find a block to represent what she had in mind. Girl 5 always had a storyline that she played out even while using constructional toys. The younger girls (below 4 1/2 years) tend to portray more realistic copying behaviour when playing

"mother" to their dolls. This should be seen as normal developmental fantasy play.

The divergent thinking (as an example of imaginative expression) was often observed in their drawings and story telling. When colouring, many of the subjects would add detail to the given picture, like making designs on the socks or dress of the girl in the picture, or adding incredibly fine detail to, for example, the shell of a tortoise. Thus, they move beyond the given boundaries of the picture, but at the same time are extremely systematic and methodical in their execution of these tasks. According to Bussis *et al.* (1985) these two styles do not often go together.

Most of these children experimented with colours, blocks and every day objects. Girl 9 made drums with the wash cloth and different containers and compared the sounds. Girl 5 produced many different sounds on the keyboard. Little Anna (Fynn 1974) used to put on coloured glasses when she painted just to laugh at the result. Her experiments with the oscilloscope are also well documented (see appendix B).

4.6.2 Manner of Work

In order to determine whether a child's manner of work was characteristically contained and methodical, or mobile and fluid, the following questions were asked or behaviours observed :

- does the child create boundaries when working?
- does the child prefer working in a demarcated space or does he/she move about?
- does he/she complete one task before starting the next?
- is he/she aware of time boundaries and does he/she keep to it?
- does the parent see the child as methodical?
- how and where does the child prefer to work?

Most subjects were methodical and contained rather than fluid in their work

style. They tend to work in one place, keep their work materials together and finish one task before they start the next. The persistence and single-minded dedication that early readers show are also characteristics that go with a methodical and contained workstyle.

The only subject who was typically fluid in his approach style and tended to wander from activity to activity as they caught his attention, was Boy 1. However, he was also described as a moody child who could sit quietly in a corner with the enclycopaedia for more than two hours at a time.

It would seem that in order to make sense of writing and mastering the sound-symbol structure of language, requires a methodical approach as well as an inquiring mind.

4.6.3 Attentional Scope and Emphasis

In order to determine if the child's attentional scope is characteristically broad and integrative or narrowed and analytical, the following areas were observed or questioned and examples obtained from the parents :

- can the child do two things at once? (draw and talk - watch TV and play) or does he get absorbed in what he does?
- does he seem to be aware of everything around him?
- what kind of observations does the child make or questions does he ask when watching TV or being read to?

Most subjects tended to be broad and integrating in their attention rather than narrowed and analytical. Most were observed to build a puzzle and carry on a conversation. The mother of Girl 5 complained that her daughter would read and watch TV at the same time. However, she also said that she discouraged it, because she could not do it! The subjects were said to be "always the first to know", "very observant", "nosey" and able to "follow conversations across the room", but discreetly so.

A startling example of integrating attentional scope came about like this : I was dictating a list of words for one subject and the next word was "date". She looked up and said : "Date? It must be the 15th today". She clearly was not just focusing on the dictating task.

On the other hand, they were all able to concentrate on one activity for long periods; like watching the cricket and remembering that Kepler Wessels was nearly caught out 4 times in that innings, or remembering the dialogue of a film. It was my impression that when they were really interested in an activity they concentrated on every detail. However, it was not a passive observation of the film, story or sports match. Their little brains seem to be working, anticipating and integrating all the time. This became clear from their comments while watching. They seem to want to know and understand what was happening. Here again, some would concentrate more on questioning the immediate events (analytical), while others tended to predict the outcome (integrating).

Again, these observations can not be taken as conclusive because their response may have been appropriate to the particular event and their type of response may change to accommodate the requirements of different tasks. It was not possible, due to the time restraints, to subject the early readers all to the same tasks to observe their reactions and coping styles.

4.6.4 Thought Sequencing

This was the most difficult area to observe as the researcher had to make deductions from comments of the children to determine if a response indicated parallel or linear thinking.

There was evidence for most early readers to use parallel thought sequencing on occasion. Girl 3 knows the life cycle of her silk worms. When she found a strange worm busy with a leaf she correctly surmised that he was making a cocoon. When Girl 6 was asked what she would do if she had 20 sweets

and 2 kids, she replied : "That's no problem. What if I had 2 sweets and twenty kids. Then I'd have a problem!"

Their questioning too, shows that they can see and question beyond the obvious, and that they consider several options before choosing the most correct answer, whereas a child with linear thinking will tend to look for the one "right" answer and will be uncomfortable with options.

4.6.5 Style Clusters

Bussis *et al,* (1985) identified two style clusters among the young children they observed.

STYLE	CLUSTER A	CLUSTER B
Preferred Expression of Meaning	Imaginative and Divergent	Realistic and Convergent
Manner of Work	Mobile and Fluid	Contained and Methodical
Attentional Scope	Broad and Integrative	Narrowed and Analytical
Sequencing of Thought Processes	Parallel Sequencing	Linear Sequencing

In this sample only 4 children could be identified as typical of the cluster :

Cluster A : Boy 1; Girl 7

Cluster B : Boy 2; Girl 1

A description of Boy 1 and Boy 2 will give an indication how a child with Cluster A characteristics behaved compared to a boy typical of Cluster B. Boy 1 was an early reader. He was highly imaginative. He loved jets and space toys. He wanted to build his own plane and live in it. He played all over and his room was "incredibly messy". When asked how he would get it neat he said he would get a huge vacuum cleaner and suck it all up. He always seems to be in a hurry to explore the next thing. He was also moody, very competitive and socially a bit of a loner. He could be verbally

manipulative and fabricated stories, ...
like saying "I forgot the glass was in my hand and it fell".

Boy 2 was an early writer. He preferred the typewriter because he "could not make the letters exactly right". He seldom experimented, but made slow steady progress. His drawings were detailed and very realistic. His explanations were correct to the last detail and he never fibbed. Socially he was the leader of the group and kept the peace but he never played in the fantasy corner. He enjoyed cricket and remembered every detail of the game but seldom questioned. When asked how he would clean his room he looked around and said "But it is neat" and could not think of a single change to make.

Although these two boys were typical of the two clusters identified, they were not similar to the girls. The girls tend to be mainly Cluster A - except that they were methodical and contained rather than fluid.

When one analyses the early reader's task, one realises that to master early reading the child needs to be curious about the task and to be divergent in their thinking to discover the meaning and purpose of writing. However, they also need to be methodical (and persistent) in their pursuit of this knowledge to grasp all the sound-symbol relationships needed for reading, and continuous practice to progress in reading. This hypothesis, that early reading requires an imaginative and divergent thinking style, as well as a methodical manner of work, did not apply to all early readers.

On the other hand, Boy 1, the best reader in the group, showed little methodical inclination in approach to any task. Both he and Girl 7, who had tended to be fluid, did no writing. They concentrated on reading. The children who had a methodical approach all attempted writing and seemed to enjoy the challenge of gradually mastering more words (except Girl 5 who stopped because of interference from her mother).

It would have been most gratifying to "discover" that early readers had identical approach styles to reading, but the findings in this small sample were not that clear.

Table 9

	Stylistic Approaches							
	Expression of Meaning		Manner of Work		Attentional Scope		Sequencing of Thought	
	Realistic	Imagina-tive	Method-ical	Fluid	Analyt-ical	Integra-tive	Linear	Parallel
Bl		*		*		*		*
5		*	*			*		?
G7		*		*		*		*
G8		*	*		?	?	*	
G10	*		*		?		?	
B2	*		*		*		*	
G1	*		*		*		*	
G2	?	*		*		?	?	
G3		*	*			*		?
G4		*	*			*		?
G6		*	?	?		*		*
G9	*			*	?	?	?	
	4	8	7	4	2	6	3	3

N = 12

This classification is at best tentative. Due to time restraints the researcher was not able to observe the approach styles of the subjects across a variety of tasks. This proved most frustrating for the researcher.

The influence of the approach styles of the children on their approach to reading was however evident, and warrants a full study because of the implications for the teaching of beginning reading.

When the early "readers" were compared to the early "writers" a pattern began to emerge :

The early readers : Boy 1, Girl 5, Girl 7, Girl 8, Girl 10, tended to have the following constellation of characteristics :

Expression of Meaning : Imaginative

Manner of Work : Fluid

Attentional Scope : Integrative

The early writers : Boy 2, Girls 1 - 4, 6 and 9, tended to display the following characteristic styles :

Expression of Meaning : Imaginative

Manner of Work : Methodical

Attentional Scope : Integrative

One could then conclude that early readers on the whole have an imaginative and divergent approach style as well as an integrative and broad attentional scope but the child's characteristic manner of work can determine the child's approach style to mastery of written language .

The early readers concentrate on reading. They grasp larger units of text and tend to read for meaning and/or enjoyment. When confronted with unfamiliar words, they tend to guess the meaning from context and when reading they tend to uphold momentum and fluency rather than accuracy of reading in keeping with their mobile and fluid manner of work.

The early writers on the other hand, explore written language in much more detail. They concentrate on the orthographic structure of the words primarily and uphold accuracy rather than fluency when reading. They seem to concentrate on the smallest unit - the letter - and a correct rendering of the orthographic structure in keeping with their contained and methodical manner of work.

The difference in approach styles of early readers with fluid versus methodical manner of work is not only visible in early readers but in all beginner readers

and holds serious implications for the teaching of beginner reading : a child with a specific approach style to reading, determined by his innate style preference, will benefit from a teaching style that supplements his innate preference.

CHAPTER 5

5.1 DISCUSSION

5.1.1 Implications of these findings

This study provided a broad picture of the characteristics of certain early readers, in personality as well as perceptual skills, as well as the prerequisite of positive literary experiences for the development of emergent literacy. This study produced no new or startling insights but indicated the similarities between the early readers in this study and those studied elsewhere. The findings of several related studies were applied to the early readers providing a more complete picture of the attributes of early readers. The similarity of characteristics of early readers in this study with those reported in other studies lends support to the development of a theory of early reading which broadly defines the characteristics of the early reading child, environment and the interaction between the two, as well as a description of the stages of early reading development. Many of the elements remain to be refined and expanded through detailed studies of each aspect indicated by the broad, descriptional and basic data.

Caution must be used in interpreting the apparent similarity of characteristics and development of early readers indicated in the study as the sample was not randomly chosen. By choosing children that could already read, the sample is intentionally biased towards successful readers, and excluded early readers who were discouraged and early readers who were less successful in their early attempts. Factors like similarity in cultural background, family patterns and parenting styles may operate in ways not probed by this study. Common causality can not be assumed on the basis of similarity of presenting features or common themes in case histories.

Of all the aspects of early reading covered in the study the most promising direction for further studies appears to be the stylistic preferences of young readers with regard to their approach to early reading. The implications of children's stylistic preferences for the success of the various methods of initial teaching of reading has yet to be fully

researched and explained, but can, non the less, not be denied. A clearer understanding of how the child's approach style influences his initial mastery of reading, could facilitate more successful instruction of reading. With understanding of the child's perspective and preference for specific type of instruction the old debate about word reading versus phonics teaching can be reopened, around the new variable: the child's preference. The question now is not which method is best suited for early reading instruction, but which method is best suited to each child, according to the child's stylistic preference.

The most concerning finding of this study is the relatively small percentage of early readers found, compared to other studies conducted elsewhere. One possible causal factor indicated by this study is the discouragement of early reading attempts by local teachers. This attitude of educators should be probed and clarified and if need be, challenged. Parents should be made aware of the necessity of providing literary experiences to pre-school children, if only to develop the necessary pre-reading skills in pre-school children; not to make early readers of children, but to prepare for reading.

Secondly, we currently have inadequate criteria for judging which socio-economic factors are relevant for literacy development. It would seem that early reading develops only in print dominated, literate societies. However, studies done by Ferreiro E (1985) who introduced literary experiences to children from illiterate or semi-literate environments, indicated that most children will grasp print awareness concepts and develop pre-reading skills when introduced to books and given literary experiences. These findings hold promise for South Africa where an estimated 45 % of the population is still illiterate and where large numbers of children grow up with illiterate caregivers. Ferreiro (1982)'s studies indicate that adverse effects of illiteracy can be reversed through inexpensive community drives where one literate adult can provide literacy experiences for the pre-schoolers in her area, thus equipping the pre-schoolers with the print awareness concepts, and pre-reading skills necessary for successful school entry. What is needed is community leaders with knowledge and vision to initiate change in communities with a high level of illiteracy.

Concurrent to changing perceptions of educators regarding the necessity of literacy experiences for pre-schoolers, is a need to change SABC TV and other media education policy on pre-school programs to include :
firstly, programs that teach print awareness concepts and pre-reading skills, and secondly, provide educational programs that will teach untrained caregivers how to provide the above mentioned literacy experiences. This much needed information should assist in alleviating illiteracy in the next schoolgoing generation.

5.1.2 Limitations of this study

It became clear during the execution of the testing that the original planning was overly ambitious and too many tests and areas of observation had been included. During the planning the emphasis was on comprehensive coverage of the topic, and the initial schedule was thought to be within the resources available. However, it became clear that the study would have benefited from a more narrow focus. Although the study was personally rewarding and the interaction with the early readers most delightful, the study proved frustrating because individual topics could not be covered in sufficient depth. Each aspect of the research left the researcher frustrated in that it was inadequately covered and warranted a full research into that one topic. However, it was decided to continue with the initial intention to give an overview of early reading as phenomenon as a basis for later studies to elaborate on or clarify issues of early reading.

It also became clear during the course of the research that certain aspects had been covered almost to saturation point by other studies and need not have been included in this study. Again, for the sake of complete overview, they were included.

A caution should be given concerning the observations described in this study which was done by one researcher with her own peculiar style and preferences, which must have an influence on the type of response elicited from respondents and thus influence the observations - a catch 22 situation. It seems difficult to control for observational bias in a one observer study. One can at least be assured that all observations are equally biased!

5.1.3 Indications for Further Research

During this study the family influence on the development of early reading was so notable that the researcher began to hypothesize that early reading may be the result of a particular parenting style; and that one is dealing with an exceptional mother with a responsive child, rather than with an exceptional child with an attentive mother. Data from the 12 interviews was insufficient to test this hypothesis, and further research is needed to probe the nature of the relationship between mother and early reader as well as the characteristics of the parenting style that accompanies early reading. Exploration of the socialisation aspects of early reading will be a useful study.

The study attempted to establish the progression through the reading stages. In order to establish whether progression through the reading stages is a systematic, logically ordered process followed by most readers, (not only early readers) and if there is a developmental trend, further research needs to be conducted to establish if there is consistency in reading stages as well as an upward shift through the stages that would indicate a developmental trend. This would imply an extensive, prospective study.

It can be suggested that the developmental trends of early reading form the basis of an independent study in which early readers and their interaction with printed material, are assessed over a period of time specifically to probe the reading strategies used and the reading stages negotiated. Such a study should yield useful data on the developmental trends of early reading acquisition; not only of early readers, but of beginner readers in general.

This study attempted to document the existence of stylistic approach differences in early readers reading acquisition. As style is not a readily quantifiable characteristic, multiple observations over time and across activities are needed to obtain reliable data on stylistic differences. To gain reliable data on stylistic preferences and their influence on early reading, a rigorously controlled study is needed firstly to identify meaningful stylistic clusters, and secondly to determine the influence of stylistic preferences on (early) reading acquisition.

This study has attempted to give an overview of the features and experiences of some early readers and the known factors influencing the acquisition of early reading. It is hoped that this study will provide later researchers with an interest in early reading as a phenomenon, as well as a basis from which to identify areas for further research and thus contribute to the knowledge base of the field of reading research.

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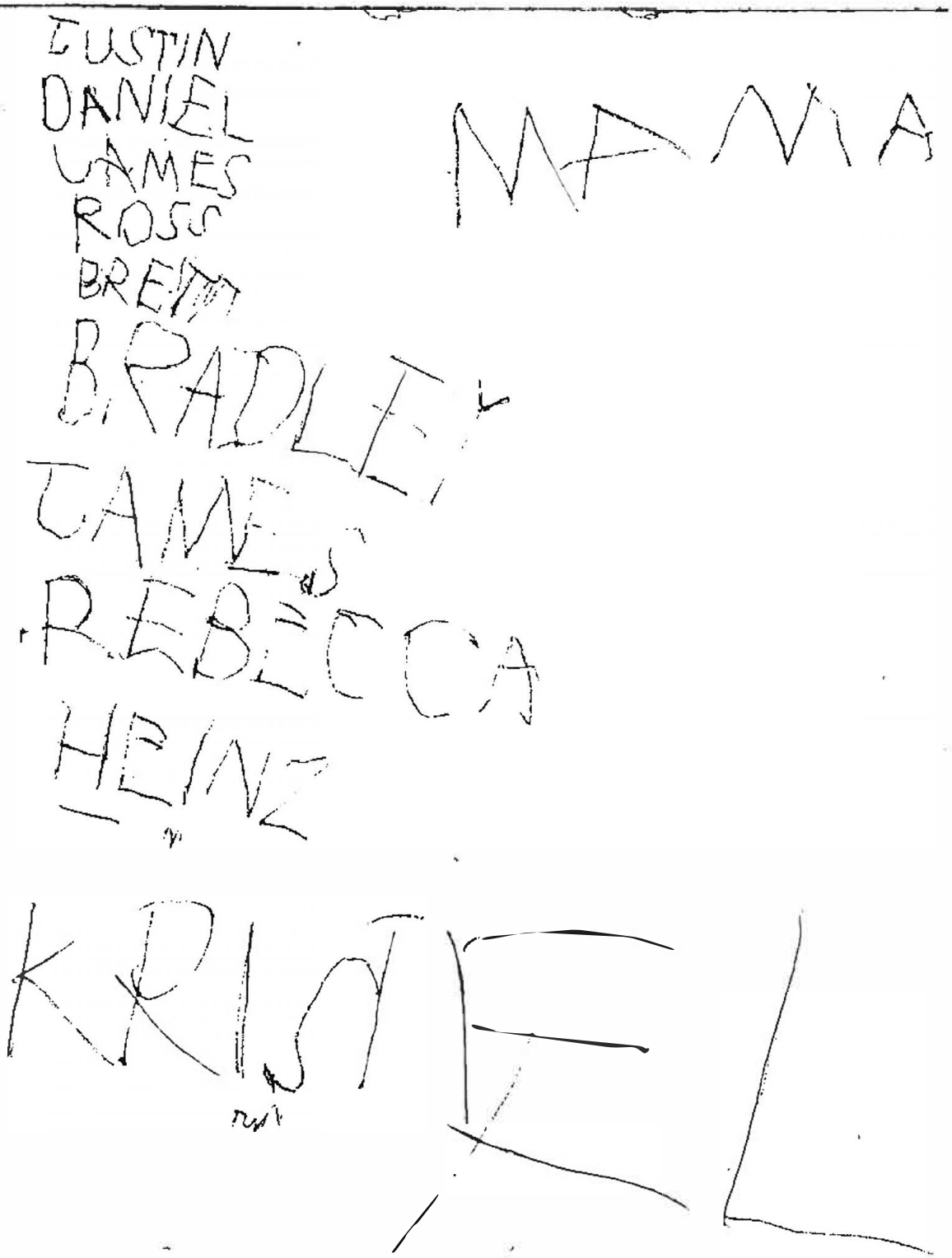
Reading research quarterly Vol 21, 1986 P 150 - 160.

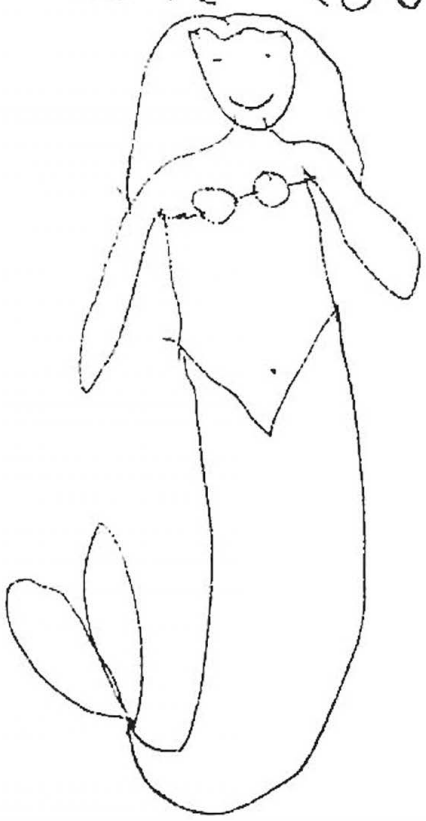
APPENDIX A Examples of children's writing and drawings

Boy 2 age 3½ A letter written in coloured pens.

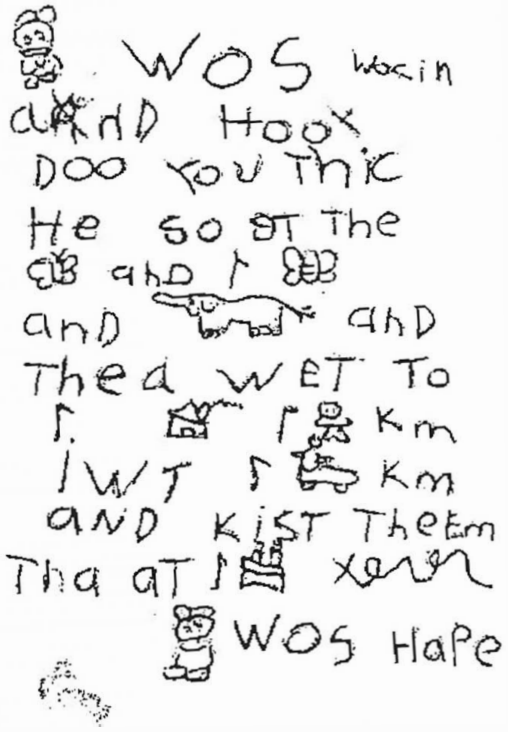


Boy 2. Guestlist for his Fourth birthday.

Dear mommy a had
5 HOT DOGS and iscrem
and mommy i also had a
TIME pes ov wotmeLIN
and i Love You xxxxxxxxx



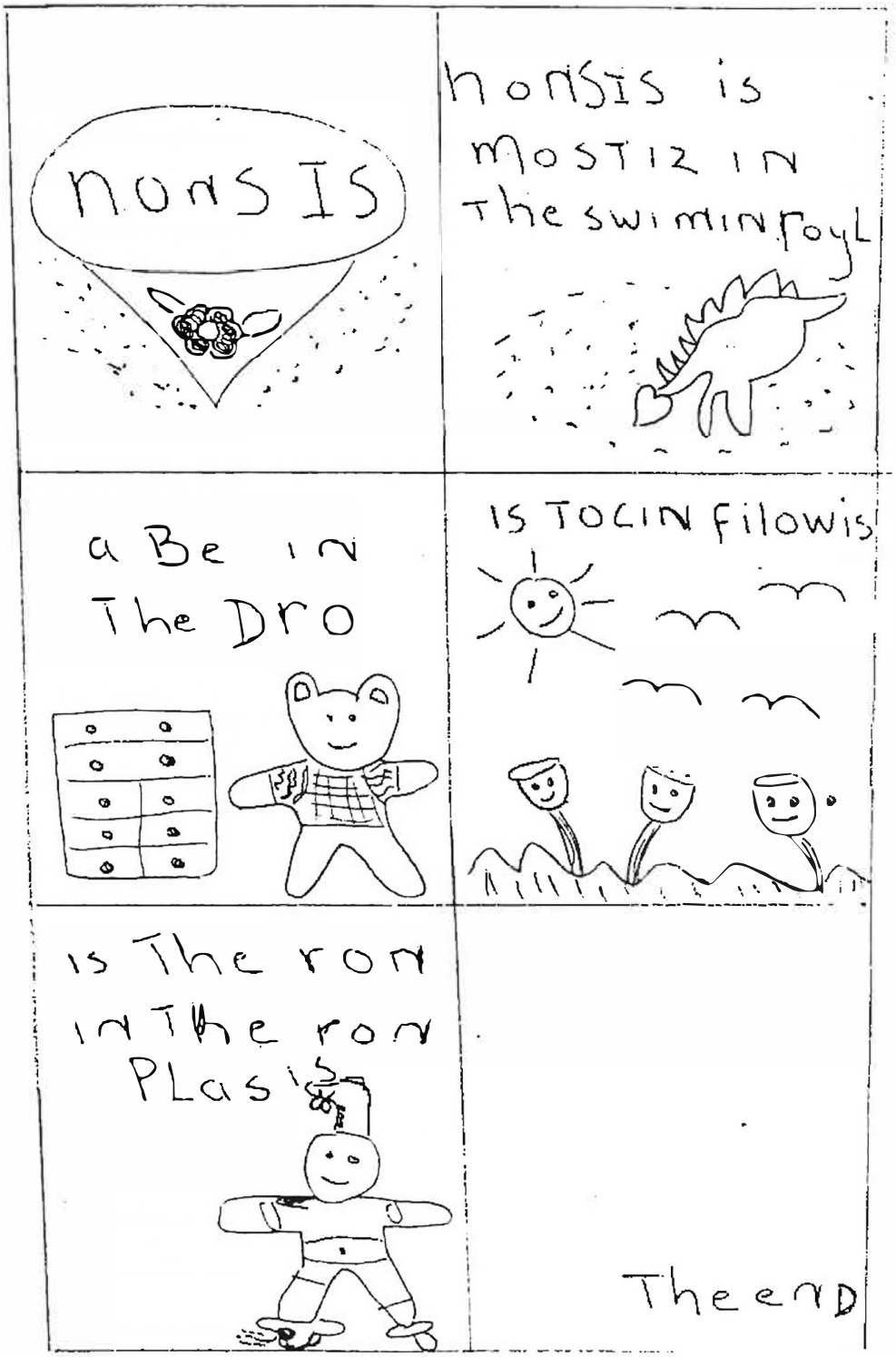
(Note left by
girl 1, age 4)



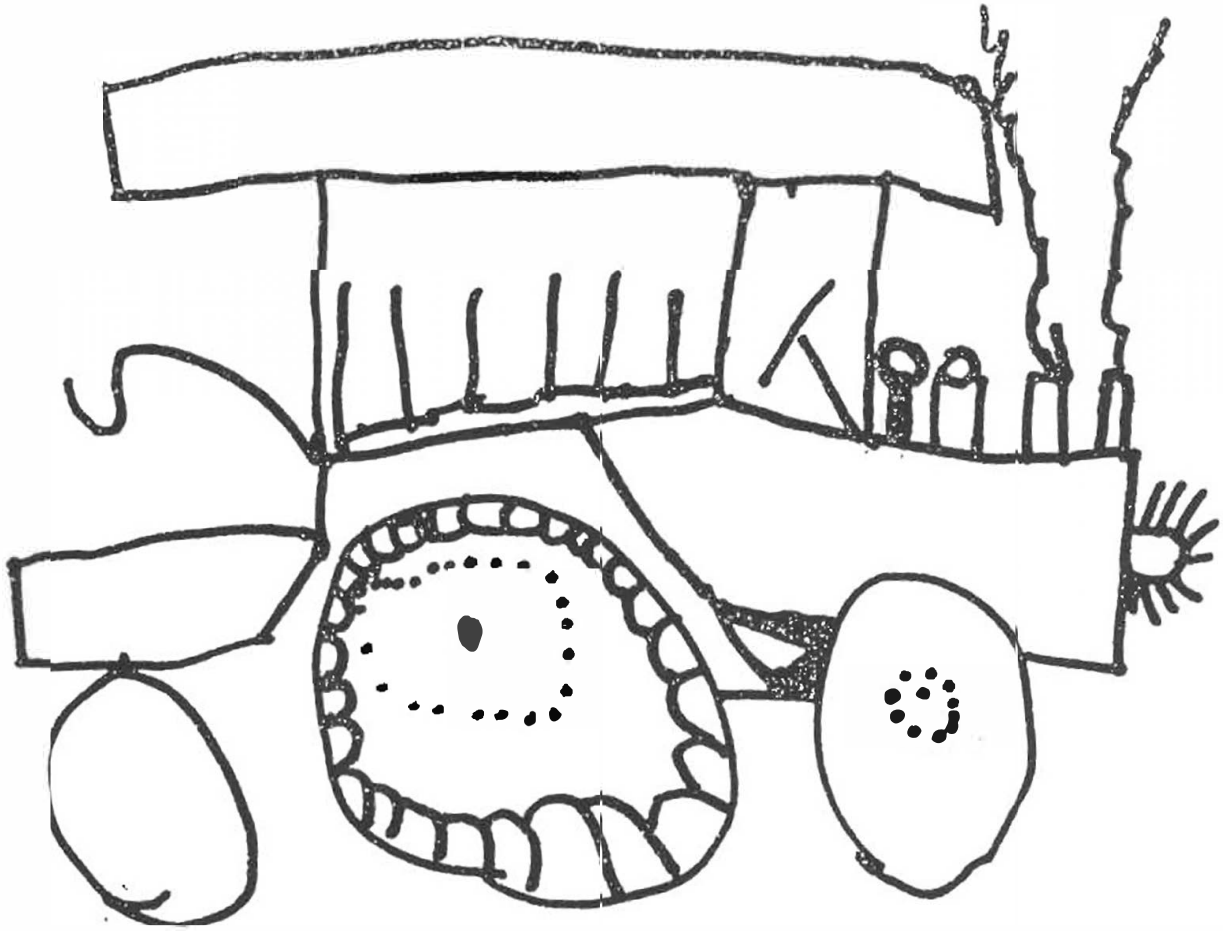
(Rabbit was walking
and who
do you think
he saw at the
butterfly and t(he) bee
and elephant and
they went to
t(he) house T(he) man came
with t(he) car came
and kissed them
there at t(he) ?
Rabbit was happy.)

Done by girl6 at age 5.

The 6 pages of the Nonsis Book

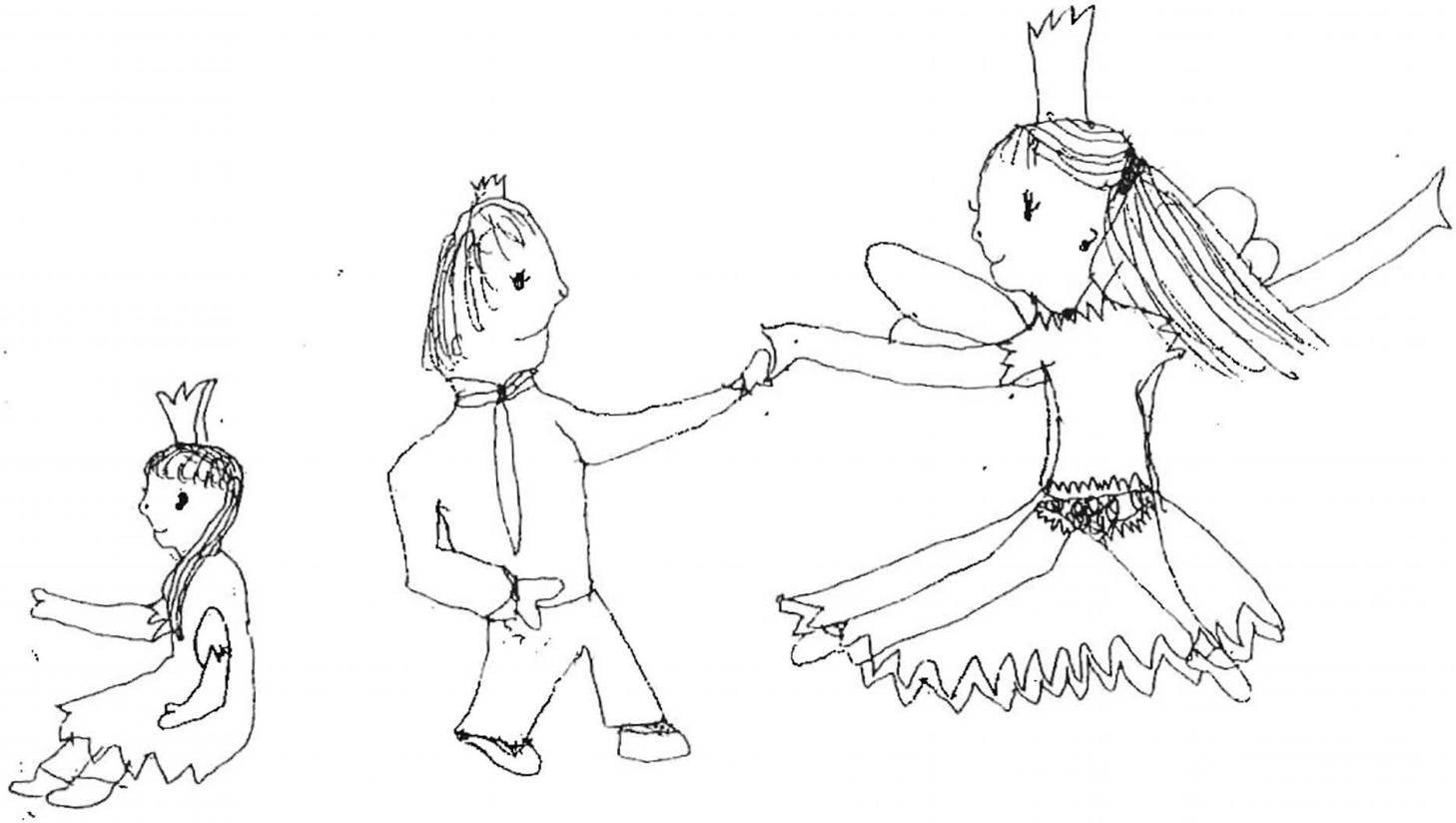


The original pages were 30 cm x 30 cm and stapled together to form a book. Regretably, the colour illustrations would not photocopy.

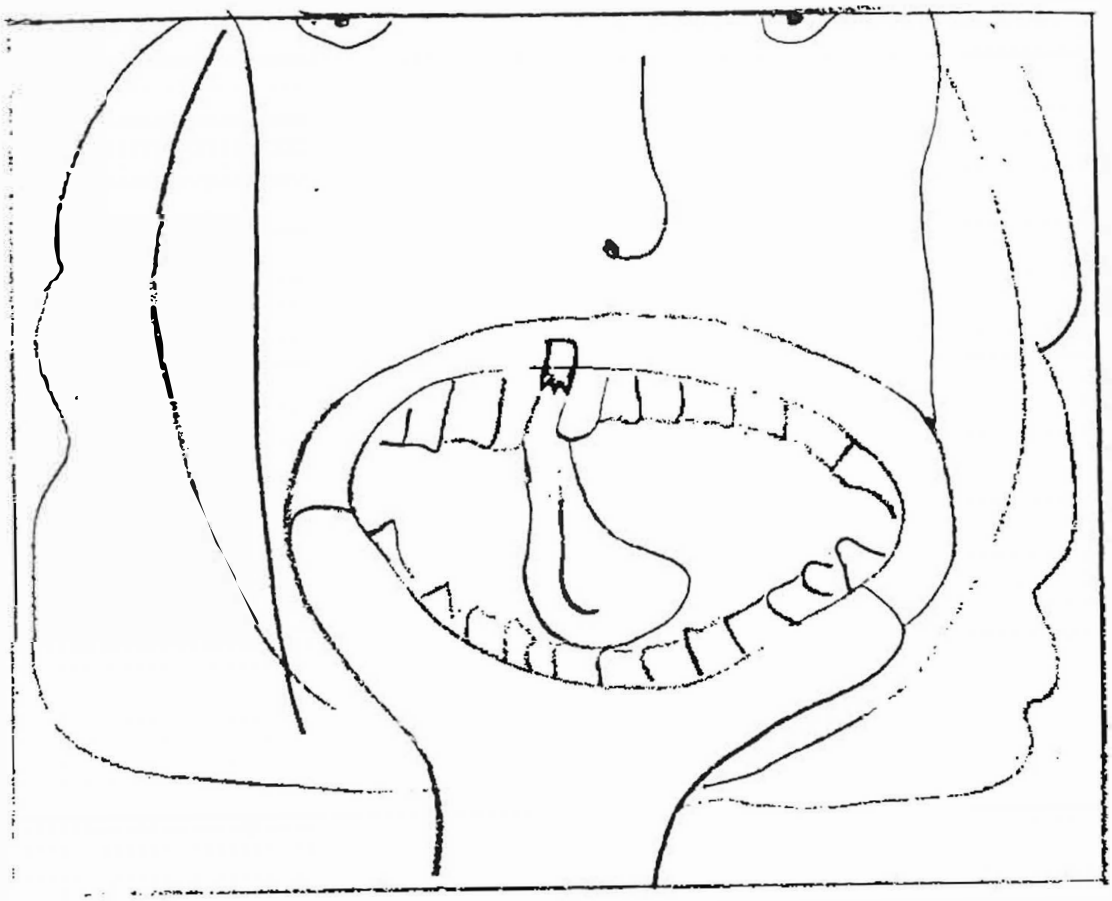


age · 4

The drawings of Boy 2 are mostly representational, the attention to detail indicates his realistic bent.



Drawings done by girl 3 (age 5). She portrays her fantasy characters indicating an imaginative approach but is methodical in execution and attention to detail. She began drawing figures sideways from age 4½ when her visual motor development tested at age 8.



Drawing done by Girl 3 (age 6) of her Friend who's first new tooth had just appeared. (Actual size A4) Notice the typical ragged edge of the new tooth, the hasty unfinished lines. Imaginative children often just express the central idea. They do not consentrate on a realistic portrayal of the subject

APPENDIX B The early reader in fiction: The case of Anna

When researching a social phenomenon one should expect to find useful descriptions in the fictional literature. The researcher came across a biography of an early reader that aroused her interest in the field of early reading and served as a frame of reference as to the depth of data that could be gathered.

Fynn (1974) gives a very detailed account of Anna's development as an early reader. Fynn is an open minded but sensitive observer and as such he gives a far more detailed account of Anna's intellectual exploits and mental gymnastics than most mothers can of their offspring.

Also, Fynn was an adolescent at the time without the set goals and preconceived ideas that guide the lives of adults. He had the time to listen and spent far more hours per day in the sole company of Anna than any mother could. He had an enquiring mind : he not only explored the world but also Anna's ideas with an open mindedness and sense of fun that most adults have lost. Thus Fynn's account of Anna's discovery of reading and writing is far more informative and complete than any information from a parent gained through structured interviews and as such, worthy of inspection to gain a sense of the richness of the field from which the research data is extracted.

It must be mentioned that Anna's first and foremost interest in life was not writing or mathematics, but Mister God. When Fynn found the abandoned child, she already had a firm, personal relationship with Mister God. This wasn't just a childlike faith, but an intense interest.

> "Anna's questioning mind did not limit itself to reading and writing, she had an immediate grasp of pattern, of structure, of the way the bits and pieces were organised into a whole - and everything eventually was linked back to Mister God (Fynn 1974 P.73).

For her the logic of mathematics proved that Mister God existed. But so did the bugs, the seeds that produce flowers and the muddle in men's minds. Church didn't.

Anna questioned everything, including the Reverend, and insisted on finding her own answers - some quite startling! Like her disagreement with the Reverend's sermon on "one

day seeing God face to face."

> "In a whisper that echoed around the church, Anna said : 'Wot the 'ell he gonna do if Mister God ain't got no face? Wot'll he do if he ain't got no eyes, wot then, Fynn, eh?' " (p.142).

No, decided Anna, God don't have to turn around to see people. If He is all-seeing He can't have eyes just in front like us. God can't have a front and a back side! And she leaves Church singing

> "Mister God ain't got no bum" to the tune of Onward Christian Soldiers! (p.143)

Fynn found the bruised and battered child abandoned on the docks and took her home to his Irish mamma. Anna grew up with Fynn and Mamma in the East End of London in the years between the two great wars of this century, till her death just before her 8th birthday.

The environment was rough and poor : Anna would easily say : "Fynn, I want a pee - a piddle - a piss!" in broad East End accent; but the love and caring was genuine, free of pretence and unstifled by education. Fynn, the gangling giant of an adolescent left school at 15, but he shared his love of mathematics, astronomy and electrical gadgets with Anna. He taught her to play the piano and together they roamed the docks, the museums and churches. He introduced her to new people, places and ideas; he patiently listened to her ideas and answered all her questions.

Fynn read to her, anything from poetry to astronomy. She didn't just listen, she mulled over and seemed to integrate every bit of new information with what she knew. Fynn was patient and waited, till she gave him her conclusion or asked a question; as Anna would only question if she couldn't find the answer <u>for herself.</u>

Her favourite books, that she returned to again and again were :

> Cruden's Complete Concordance,
> Manning's Geometry in four Dimensions, and
> a picture book with pictures of snowflakes and frost patterns.
> "Books and writing in general had a much more exciting aspect to them than merely being the machinery for telling stories. She saw writing as a portable memory, as a means of exchanging information" (p.48)

Thus Anna had, like most other early readers, a "bookish" environment, and interested person (in this case an adolescent with an enquiring mind and no one else to share his ideas with) who read to her and answered her questions.

Anna's introduction to environmental print came when the park keeper chased the 4 year old off the grass while she was studying the flowers. First she was terrified, and then angry because she didn't know she was not allowed on the grass. Fynn showed her the "Keep off the grass" sign and spelled the words for her. She was fascinated with this different way of "talking".

Anna resolved that if such important notices, that could have such profound influence on your life, were written, she must get to learn this. The first introduction to print, as Fred Schonell (1974) so rightly pointed out, has a lasting effect ; Anna had launched into the world of print. She saw writing not as a vehicle for stories, but as a portable memory. She carried a notebook and a pencil with her, and when ever she heard a new word, the person, be it postman, friend or passer-by, was requested "Please write it down big, please". All these words were sorted and collected in boxes. Fynn does not recount how she sorted the words, only some of her conclusions.

Question words, like what, which, where, were well behaved "whuh" words, she discovered, but how was a rebel word : it should have been spelt whow like the others, she said. And then discovered that "whuh" words were answered with "thuh" words " what? that, where? there, when? then, but minor problems like who? two still had to be cleared up. Anna was convinced that she could find the answer to ever riddle - if only she looked in the right place.

When Fynn introduced her to the mirror-book she not only discovered geometrical shapes, symmetry and the concept of infinity, but also the proprieties of words : Room in the mirror became moor, lived became devil, roof became foor and being the opposite, couldn't that be the origin of floor?

> "Words became for Anna living things. She took them apart and put them together again. She learned what made them tick. She made no great etymological discoveries, but she learned words and how to use them" (p.120).

She played with words, made word-puns, and invented new words to suit her needs like "squillions" to number the stars, because there are more than millions. Thus we may conclude that Anna, like other early readers subjected to research, had an interest in language and a precocious language ability.

Her second language discovery was when she heard French spoken for the first time. Immediately the Frenchman had to write it down for her, and after a half an hour of conversation, left him with "Au Revoir". This lead to a frenzy of mental activity :

> "It seemed that two questions had germinated in her mind concerning language. The first was : 'Can I make a language of my own?' and the second being 'Just what is language?'

For months Anna experimented with language forms : If you could write 5 apples or five apples, then numbers can be substituted for letters. Thus GOD can be written 7.15.4. Then she substituted objects for letters like her first reader had : A for apple. Thus APPLE could be written with Apple, Pear, Pear, Lemon, Elephant.

The sign language she used with her deaf friend, suddenly became meaningful as language, and lead to the discovery of Braille and Morse Code. And she and Fynn, after much experimentation, eventually invented their own binary-code type language. One should actually read the book, to gain a sense of the dedication, and single-minded persistence with which Anna pursued ideas.

Anna was fascinated with Fynn's oscilloscope which stood on top of the piano, with the "polly wogs" he allowed her to discover through his microscope, and with his slide rule. She soon mastered the business of counting and was extracting roots with the slipstick before she could add in the proper way the class 1 teacher expected.

When Anna went to school, her love affair with numbers soured a bit. Later Fynn discovered it was the unimaginative way the teacher wanted her to add two sweets in this hand and three in the other. And that at a time when she, at 5, was fascinated with magic squares, where every row added up to the same total. Anna constructed many different magic squares, experimenting with numbers in many variations. Anna used to sit for hours

playing single notes and watching the green spot dance on the oscilloscope. Fynn did not realise that the concepts of wavelength and frequency were meaningful to her till this incident. Fynn relates how Anna calculated the number of times per minute a bumble bee flaps its wings. He observed Anna and her friends in the street studying a bumble bee and remarking on how fast his wings goes. Anna hummed the note his wings made, found the note on the piano, and with the aid of the oscilloscope and the slide rule she calculated the number. Fynn said he later looked it up in the library and she was only a few beats out. Anna could not verbalise her insight but she knew a sound depended on how many times it wiggled per second (p.38).

This incident illustrates that Anna like other early readers, must have had superior auditory ability; more specifically pitch awareness and tonal memory, as Lamb and Gregory (1991) and Barwick and Valentine (1989) found is related to early reading. But Anna's superior auditory ability was not limited to phonologically dissecting words as she often did, but also aided her grasp of semantic structure as the following incident illustrates.

Anna had heard that Old Nick was also called Lucifer which means light, and immediately her little mind began integrating this new information.

"Yes, Old Nick and Jesus - both the Light.
You know what Jesus said, don't you?
'I am the Light'. She stressed the word "I". What he say it like that for?"
"So you won't get muddled?"
"Two kinds of light - a pretend one and a real one. Lucifer and Mister God".
Anna's second idea flowed naturally and easily from the first (p.132).

By placing the stress on the I instead of on the Light as is normally done, Anna discovered a truth few adults ever learn. But how, and why? What cognitive skill did Anna bring to bear on that well known sentence to extract new meaning? It seems reasonable to conclude that Anna was aware of the relationship between the inflection of a spoken sentence and the meaning thereof, and the fact that a change in inflection created a change in the meaning. Thus when confronted with a problem, it would seem that Anna, and other early readers, are able to draw on a wider variety of their metacognitive knowledge which they use to work out different solutions to the problem, and then choose the most appropriate solution in that

context. Thus not guessing at meaning based on a few clues as weak readers seem to do, but an informed choice based on a wider knowledge base that was brought to bear on the problem.

It seems to follow that early readers use a more effective cognitive style when confronted with problems of language (oral or written) and thus make sense of language faster than weaker readers.

In summary, it would seem that Anna fits the description of early readers that emerged in the academic literature; she had above average intellectual ability, precocious verbal ability, and good memory, concentration and auditory discrimination. Despite lower socio-economic conditions and the non-standard spoken English she grew up with, her environment contained the necessary conditions to stimulate early reading; a person who introduced her to the meaning of print, read to her to model reading, and was available (and able) to answer her questions. She was, like the other early readers, conscientious, independent and inquisitive, and she pursued new ideas with a remarkable persistence.

And yet, this description misses the essence of Anna. Anna had a specific way of going about acquiring new facts. She seemed to want to integrate every new fact with her existing knowledge. She seemed not only to assimilate new facts, but to explore the possibilities and probabilities of every new discovery. This questioning attitude was not limited to reading and writing, but to every thing she touched : a specific cognitive style that guided her exploration.

Fynn summarised it in this way :

> "She had this capacity for taking a statement of fact in one subject, teasing it until she discovered it's pattern, then looking around for a similar pattern in another subject" (p.109).

For Anna, as well as all the kids in her street, sex was a natural phenomenon, normal enough to be used as a comparison : so words were like sex : they bring forth new ideas, and lessons were like sex:

> "Lessons put things in your head and new things come".

and church is sex : "It put seeds in your heart and some new things come".

"That's why it's Mister God and not Missus God" (p.88) was Anna's final conclusion.

APPENDIX C

PARENT INTERVIEW

CHILD :_____ Date of Birth : _____

1. At what age did you first notice that s/he could read?
2. At what age did s/he start showing interest in print?
3. What kind of questions did s/he ask about words?
4. How did s/he start to read? Quasi reading?
5. Did s/he spell words or read the whole word?
6. What does s/he do if s/he comes to a word s/he does not know?
7. Who helped her/him?
8. What form did the help take?
9. What kind of books/toys did s/he use to read?
10. What interested her/him in learning to read? Sibs/TV/gain info?
11. What does s/he read now?
12. Where does s/he get books from?
13. How much time does s/he spend reading?
14. What else does s/he like to do? TV?
15. Who else in the family reads?
16. Role of older siblings?
17. Reading patterns of the family? Books available?
18. Other members who read to him/her?

Writing and spelling.

19. When did s/he first try to write?
20. Quasi writing?
21. How did s/he start?
22. What kinds of writing toys did s/he have?
23. What kind of help was given?
24. First attempts at writing?
25. Types of spelling errors?
26. Pencil and paper games?
27. Seek feedback or work alone?
28. Read orally or silently?

Family constellation and patterns

1. Mom : Age _____ ed. _____ job _____
   Dad : Age _____ ed. _____ job _____
2. Siblings 1.
   2.
   3.
3. Other members
4. Hobbies/interests

_____

_____

5. Close or distant family?
6. Warm or indifferent?

Child development

1. Birth?
2. Milestones?
3. Separation from mother?
4. Feed, sleep, crying pattern?
5. Emotional
   Examples : quiet, anxious?
   outgoing, aggressive?
   curious?
   serious minded?
   self reliant?
   memory?
   concentration?
6. Behaviour
   with sibs?
   with other children?
   when alone?
7. Drawings done?
   Examples : Young age?
   Now?
8. Other games s/he enjoys?
9. Other interests?

Styles

Realistic - imaginative?

1. Constructional toys? What? How?
2. Imaginary games?
3. Does s/he enact TV shows or fairy tales?
4. Can s/he create his own fantasy world?
5. Does s/he like to experiment?
6. Is s/he interested in how things work?

Convergent - divergent

7. Their reaction in an emergency situation?
8. Examples of kinds of comments on - people?
   - situations?
9. Can s/he see relations between things that are not immediately apparent?

Attentional Scope and Emphasis

10. Does s/he notice minor details?
11. Does s/he seem to be aware of everything around him/her?
12. Or, get so engrossed in games that s/he does not notice time or other things around him/her?
13. Will s/he predict outcome of story or TV program?
14. When reading does s/he skip ahead to see?
    - or guess at outcome?
15. Examples of comments on books or TV?

16. Can s/he do two things at once?
    Can s/he integrate info from different sources?
    Examples.
17. Does s/he work systematically?
    eg. read page by page?

Manner of work : Fluid or methodical

18. Does s/he keep own room clean?
19. Complete one task before s/he starts the next?
20. Work in one place, or all over?
21. Does s/he keep boundaries?
22. Description of work style?

INTERVIEW WITH CHILD

1. Can you remember why you wanted to read when you were small?
2. Can you remember how you first started to read?
   Explain?
3. What do you like to read now?
4. When you watch TV, do you read every word?
5. When you get a new book, what do you do first?
   And then?
6. Do you look at the end to see what will happen?
   Why? / Why not?
7. Tell me about a book you liked?

Spelling.

8. Show me what you do when you get to a difficult word?
9. Will you try it on your own or rather ask someone what the word is?
10. Can you write? Show me?
11. Show me your toys?
12. Do you like to put away your toys?
13. If you could design a playroom with all your favourite toys, but a room that will always stay neat; what will it look like?
14. Can you draw me a picture of it?

Then I saw that all toil and all skill in work come from a man's envy of his neighbour

Ecclesiastes 4 : 4