Paired reading: An investigation into using parents as tutors in one mainstream high school

Miguel R. Fernandez
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PAIRED READING: AN INVESTIGATION INTO USING PARENTS AS TUTORS IN ONE MAINSTREAM HIGH SCHOOL

By

Miguel R. Fernandez (B.Psych)
(B. A. Sociology & Anthropology)

A thesis submitted in Partial Fulfilment of the Requirements for the Award of

Master of Psychology

at the Faculty of Health and Human Sciences, Edith Cowan University

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ABSTRACT

Contemporary research on reading has investigated the use of parents and peer tutors in assisting schools to improve reading accuracy and comprehension. Some of the techniques that have been used are Hearing Reading, Paired Reading, Shared Reading, Relaxed Reading, Pause, Prompt and Praise and Direct Instruction. Of these techniques, Direct Instruction and Paired Reading have been shown to be the most effective programs using parents within the primary school setting. However, many studies in Paired Reading research have lacked experimental data using parents as tutors in high schools. The aim of this paper was to assess the impact of Paired Reading on the improvement of oral reading in a high school using parents as tutors. The subjects were 38, Year 8 students. A pretest-posttest experimental-control design was used with the two dependent variables of accuracy and comprehension. Specifically, the study sought to determine whether Paired Reading would produce higher levels of reading accuracy and comprehension than the existing school-based reading program. Results have shown that Paired Reading was not significantly better than the existing reading method used at school. Supplementary analyses have, however, noted that the Neale Analysis of Reading Ability Revised (1988) may have specific problems related to its use with a high school population. The data suggests further investigation of Paired Reading in high schools should be undertaken with an awareness of the possible limitations of the Neale Analysis of Reading Ability Revised (1988).
"I certify that this thesis does not incorporate, without acknowledgment, any material previously submitted for a degree or diploma in any institution of higher education and that, to the best of my knowledge and belief, it does not contain any material previously published or written by another person except where due reference is made in the text."

Signature: 
Date: 30th June 1995
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To my daughter, Whitney, for putting up with my absence
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Chapter 1

1.1 Introduction

Background to the Study

It has become apparent that more parents are requesting greater participation in their children's education (Topping, 1987). This has been reinforced through various legislative procedures which ensure parental involvement in education. Parental involvement has, for example, been utilised in the area of reading remediation (Keele & Harrison, 1971; Topping, 1991; Topping & Lindsay 1992; Winter, 1989). There are, however, some teachers who look unfavourably upon parental involvement and may see it as interference in their domain (Topping, 1984). For these teachers, parents are only valuable in providing useful background information, and their roles do not extend to therapeutic intervention. Leach (1986) reports that it is assumed that parents are difficult to train and are unreliable in direct intervention roles with their children, and therefore should not be used as change agents when dealing with school-based problems. Ashman (1994) suggests that impediments to parent/professional collaboration are due to previous negative experiences when dealing with each other, the place where these interactions have taken place and the different psychological and social barriers that have been erected.

Many researchers however have initiated programs involving parents as direct intervention agents in regular schools (Fernandez, 1990; Hewison,
1982; Lahey et al., 1977; Robson, Miller, & Bushell, 1984). The results from these studies have demonstrated that parents are very good change agents because they are able to ensure more successful long term therapeutic programs than most professional interventionists.

The use of parents as direct intervention agents originates from two considerations. Firstly, parents are the primary socialising agents for their children, and therefore including them in the enhancement of their children's learning environment appears likely to be good therapeutic practice. Secondly, parents are in a strong position to assist with behaviour problems. They control most of the reinforcers in their children's environment, and can usually provide the greatest motivation for change. This can be an enormous advantage over the school/classroom situation where an already tenuous teacher-pupil relationship may exist.

However, inviting parents to help their children with reading without specific guidelines will lead to limited success (Glynn, 1980). An attempt to change this has been the development of reading programs that can be used by parents at home and in school (e.g., Reading Related Reading programs, Direct Instruction Reading programs and Scripted Oral Reading programs).

Of the different reading programs, research into Scripted Oral Reading Programs has been quite extensive. Specifically, an oral reading technique called Paired Reading has shown great promise when used with parents as tutors in primary schools (e.g., Topping, 1991).
Paired Reading trains, guides and provides support to parents helping their children to improve their reading ability. Numerous studies (e.g., Hewison, 1985; Joscelyne, 1989, 1991; Leach & Siddall, 1990, Leach, 1993) using Paired Reading have provided evidence of its cost effectiveness and its success in accelerating accuracy and comprehension in reading. Most of the experimental studies however have been in primary school settings. Paired Reading studies (e.g., Topping, 1989; Winter, 1991) that have been conducted in a high school setting using peer tutors to coach students (tutees) have shown promising results. These studies indicate that improving reading accuracy and comprehension in high schools is still essential. The question is raised as to whether the Paired Reading technique using parents as tutors, that has proved so useful in primary schools, can also add value to reading programs in high schools.

The reader will be introduced to some of the ideas and research showing that parents can be useful adjuncts to the learning process with their children in general, and reading in particular. Home based reading programs will also be described and the research discussed to show that oral reading programs appear to be the methodology of choice for parental involvement. Oral strategies will be outlined and research will be presented which suggests that in primary schools, one of the most consistently successful programs using parents appears to be the oral reading program called Paired Reading.
The purpose of the research project presented here, is to attempt to experimentally assess a Paired Reading intervention using parents as tutors to improve reading accuracy and comprehension skills in Year 8 students from a mainstream high school. Paired Reading will be compared with the ongoing school reading program.
1.2 *Parent Involvement in Children's Learning.*

It appears that an argument exists for the use of parents in remediation programs involving children. This need is exacerbated by ever increasing educational cutbacks, resulting in a reduction in the time spent between teacher and student (Winter, 1989). Collaboration and equal partnership in problem solving have been utilised extensively with the disabled population (Raciti, 1993). There is, however, limited literature which has seen its application within the regular school population (Leach, 1986).

Leach (1986) proffers three reasons for using parents as direct intervention agents:

1. They can control the immediate learning environment of their children.

2. Research has documented the importance of individualised instruction as seminal to accelerated learning. Parents are in an ideal position to offer this kind of instruction.

3. Parents are able to regulate reinforcement and provide the greatest opportunity for change.

Since the late 1970's there has been an increase in the number of research papers documenting studies using parents as change agents. A sample of these studies is presented:

Fernandez (1990) taught parents to teach functional speech to two
autistic children. Using a single subject reversal of baseline (A-B) experimental design, he demonstrated increase in word usage for both subjects. He recorded that parental involvement made the autistic children more receptive to the tutoring and, therefore, was a major component in the children's success.

Leach and Ralph (1986) examined the use of general behavioural principles in designing, implementing, and evaluating a collaborative program for a 16 year old boy who was extremely disruptive. The program involved parents checking daily school report cards and, through consultation with the boy, controlling the type of reinforcement and praise through the use of privileges. The results showed that there was a significant drop in rule violation behaviour by the fourth week.

Lahey et al. (1977) were interested in testing the collaborative mode using parents as change agents. Their program involved the daily use of report cards in which teachers of kindergarten children who were demonstrating behaviour problems were given full responsibility for the implementation of the program. Twenty-five cards were sent home to parents who were not trained in any special way to react to the information. They were sent daily to the parents who were encouraged to share the information with their children and to reward them for a good report. Punishment was not to be meted out for poor reports. No other advice was offered to the parents. Results revealed increased participation in class and improvement in
sleeping behaviours by approximately 10-20%. There was also a reduction in

distracting behaviours of approximately 80%.

Walberg (1983) has suggested that the atmosphere at home could
account for up to 50% of the variation in achievement of school children.
Specifically, Ashton, Stoney and Hannon (1986) demonstrated that by
parents listening to their children read for 15 minutes, five times per week,
reading gains of up to 1.8 years could be achieved. Paschal, Weinstein and
Walberg (1984) have concluded from their research;

"Because of the large amount of time
in the home environment, it appears
that small variations in efficiencies of
parental support of academic progress or
direct teaching and stimulation in the
'curriculum at home' can have a large effect
(on learning)" (p. 97).

1.3 The Efficacy of Parent Teaching in Relation to Reading.

Traditional reading instruction has emphasised individual oral
reading programs. Specifically, schools have adopted programs such as
DEAR (Drop Everything And Read), SSR (Sustained Silent Reading) and
USSR (Uninterrupted Sustained Silent Reading) to ensure that there is
consistent and concentrated reading within school. However, dwindling
resources and a continuing need to broaden the curriculum have seen
reduced opportunity for teachers to hear children individually. Thus, in reality, children are increasingly exposed to insufficient individual reading practice. The dual push towards providing quality education and professional accountability in the light of education cutbacks, necessitates the involvement of parents in reading programs (Winter, 1989). Thus, both interest and concern make it necessary for a co-operative relationship between parent and school teacher (McNaughton, Glynn & Robinson, 1981).

A problem with conventional reading programs at school is that in many cases what may appear to be reading, might in fact be simply a child staring at the book (Topping, 1991). This is more prevalent with weak readers who, by the time they start high school, are quite adept at shielding their reading problems. In summary, the development of fluent and accurate reading is dependent upon the nexus of close monitoring of the program, immediate or delayed error correction and corrective, positive feedback (Leach & Siddall, 1990; Lindsay, Evans, & Jones, 1985). This nexus possibly excludes most teachers because of current curriculum burdens. Although tailored computer technology has been used quite effectively in most school remediation programs, Bloom (1984) found from his review of the effective methods of one-to-one teaching in groups that there was no substitute for one-to-one teaching and monitoring.

Dening (1985) attempted in one section of her eight week study, to compare three parent tutoring methods to improve reading. The three
methods were Pause, Prompt and Praise, Paired Reading and Hearing Reading. Each method involved co-operation between the schools and using parents as tutors. Parental training was undertaken at school on a group and individual basis as well as individual sessions at home. All parent meetings lasted 90 minutes. Four home visits were also conducted over the eight week period. One hundred children from a mainstream primary school participated. Her results revealed that all three parent tutoring methods demonstrated a significant increase in reading accuracy. Significant improvements were achieved in comprehension only when using the Pause, Prompt and Praise and Hearing Reading methods. She concluded that brief parent training could produce significant improvements in reading skills.

Tizard, Schofield and Hewison (1982) in their study asked parents to hear their children read aloud for a few minutes, several times per week. Several research questions were addressed: Were parents willing? Were they able? and Were they effective as instructors? The answer to all three questions was affirmative. The results revealed a 6% reduction in below average performance on the NFER (National Foundation for Educational Research) test. No such reduction was found with the control group. A follow-up conducted a year later revealed that approximately 9% of the project group were still below the age appropriate standardised score of 84 compared to 25% to 30% of the control group. Tizard et al. concluded that there was definitely merit in using parents as remedial agents.
Bushell, Miller and Robson (1982) demonstrated the potency of parents as instructors when training them to use the Paired Reading technique with 10 children, 9-11 years of age. This technique involved parents reading with their children for 20 minutes; six days per week. Results showed an acceleration of 12 months in both reading accuracy and comprehension over a nine week period. The researchers added that although there was no control group the results were encouraging. A follow-up after six months revealed that gains of 12-24 months in accuracy and 1-12 months in comprehension were still being maintained.

Other studies (Carrick-Smith, 1982; Glynn, McNaughton, Robinson & Quinn, 1980; Morgan, & Lyon, 1979; Quisenberry, Blakemore & Warren, 1977) have also demonstrated the efficacy of using parents in home-based reading remediation programs.

1.4 Principles For the Effective Use of Parents as Tutors.

Glynn (1980) has already suggested that tutoring effectiveness is minimised without proper guidelines for parents. Cahill (1981) found that in over 200 different cases seen at the remedial reading centre at the University of Delaware, several had tried to teach their children to read with negative results. McNaughton (1981) demonstrated that the majority of parents who tutored their children used procedures that encouraged dependency rather than independent reading. For example he noted approximately 70% of his parent sample provided the correct word immediately following
mispronunciation. In addition, positive reinforcement was minimal and often sessions were punctuated by criticism and verbal coercion to "try a little harder." Bushell et al. (1982) also reported that parents in their program found it difficult to ignore errors before being adequately trained - the implication being that they spent more time on correcting errors than on correct reading. This suggests that parents may in some cases hinder the progress of their children by using approaches that promote dependency. Therefore, there is need for reading remediation programs that teach parents efficient approaches to improve their children's reading ability and promote independent reading.

Research by Leach (1986) has outlined seven principles for practitioners when working with parents as direct intervention agents. They are:

1. Use pretested programs that are suited to the nature of the problem. This not only implies using the most cost-effective programs, but an essential component of professional accountability is that practitioners are keeping abreast of the latest intervention procedures.

2. Intervention programs should be the least intrusive, minimally disruptive and should fit within the routine and styles of the family.

3. Intervention programs should specify what is required of parents. This involves (a) setting precise behavioural goals that may involve teaching parents specific skills that are relevant only to their particular child, (b)
providing written instructions or carefully scripted programs, (c) negotiating
parental contracts to ensure commitment to the program, and (d) stating
specific measurement outcomes regarding achievement/nonachievement of
program goals and setting dates for review and (e) well orchestrated
initiation and termination of programs.

4. If parents need to be trained, then this must be done until parents
are experts in program delivery. It is the psychologist's duty to ensure that
parents are taught correctly. The simple task of hearing a child read can lead
to failure without proper instruction.

5. A program once initiated, must also be monitored, reviewed at
some specified date, modified (if necessary) and evaluated as to its success.
Quality checks are necessary to ensure the efficacy of the program.

6. If an intervention program requires a long-term approach, then
provision must be made for parental involvement for its duration. These
provisions include a) ensuring that parents teach specific skills, b) ensuring
pretested, scripted programs are used. If these are not available, then
provisions for general problem solving techniques must be incorporated into
the intervention program, c) ensuring that self-regulatory and
self-reinforcement strategies are taught. These may involve creating routines
for the programs, and rehearsing procedures to enlist the support of other
family members and friends and d) psychologists need to modify their role
of trainer to that of collaborator.
7. If a program fails, a parent should not be blamed. Failure of a program should be attributed to either the design, the method of application or to inadequate training of the parents. This "no-blame" approach can secure the future involvement of parents.

1.5 Home-Based Parent Tutoring Programs

Leach and Siddall (1990) have identified many studies that have looked at methods of teaching and guiding parents at home to assist with their children's reading skills. Early studies concentrated on providing the ideal "reading environment" (Leach & Siddall, 1990, p. 349) and improving the relationship between home and school. However, more recent studies have looked at devising and using carefully scripted parent tutoring packages (e.g., Topping & Wolfendale, 1985). These studies generally use different parent/child/school populations, training procedures and evaluation techniques. Despite the obvious differences and varying degrees of success, all studies support the importance of training parents as tutors. Tutoring procedures in the main are one of three main types; reading related activity programs, direct instruction programs and scripted oral reading practice programs.

The relevant merit of the three types of tutoring procedures will be discussed.

Several studies (Cahill, 1981; Fry, 1971, 1985; Jacobwitz, 1979; Keele & Harrison, 1971; Neidermeyer, 1970) into reading related activity
programs in kindergartens and primary schools suggest improvement in specific reading subskills, (i.e., blending, sounding and word recognition) is not synonymous with children being able to read from texts. To determine fluent reading, an assessment of how blending, sounding and word recognition affects oral reading would be advantageous. Smith (1978) has indicated that children's reading skills are developed "by reading." Sound, letter or word recognition may be necessary to the reading process, but they are not sufficient and learning of one does not imply the acquisition of the other.

If the goal is to guide parents in helping to improve their child's reading, then these programs may not be the best tutoring vehicle. Parent time is precious and programs that require long training stints and excessive resources work against the goal of maximum gain with minimum instruction (Dening, 1985).

The Direct Instruction Reading Programs (DISTAR) (Englemann & Bruner, 1975) appear to be very productive and have demonstrated reliable gains (e.g., Englemann, Haddox, & Bruner, 1983; Leach, 1985; Leach & Siddall, 1990; Noon & Maggs, 1980). However, these studies reveal two factors that may be problematic for parents in a tutoring role; (a) for some of these programs at least nine hours of parent training are needed and (b) Direct Instruction programs generally involve the purchase of expensive manuals and/or instruction booklets. The Teach your child to read book is an
exception.

The popularity of oral reading programs has increased for two main reasons. Firstly, they rely more on commitment by participants rather than on expertise, and they do not require excessive resources. Ready access to suitable reading material is all that is required. Unlike other programs, there are no expensive manuals, tutoring kits, reading games/activities or cards. Secondly, their success in the reduction of reading deficits is well documented by research (e.g., Ashton et al., 1986; Houghton & Glynn, 1993; Houghton & Bain, 1993; Morgan, 1976; Topping, 1984, 1985, 1986, 1987, 1989, 1991; Tizard et al., 1982).

Many of the children who have difficulties with reading tend to have a reduced opportunity to read from texts for a variety of experiences (McNaughton et al., 1981). Most remedial programs use reading related programs and these, as we have seen, are not always the best vehicle to improve reading (Dening, 1985). Engelmann et al. (1983) have pointed out that one of the difficulties with traditional reading programs is their inability to facilitate clear communication. They add that quite often, children are made to understand the written word before they know how to decode it. Research demonstrates that as verbal coding increases so does comprehension (Curtis, 1980). As decoding is dependent on the ability to sound and blend letters, this would involve reading aloud. A good reading program should therefore involve reading as soon as possible (Engelmann et
In the early to mid-1970's a number of oral reading programs and strategies, using parents as tutors, developed. These studies focussed mainly on general parenting strategies aimed at improving the reading environment at home (e.g., Cramer, 1971; Duncan & Von Behren, 1974; Hubbard & Salt, 1975; Stenner & Mueller, 1973; Strom & Johnson, 1974). From the late 1970's onwards, scripted courses relying on teaching more complex parenting skills have been developed (e.g., Burdett, 1986; Graziano, 1977; Heath, 1981; O'Dell, 1974; Topping & Wolfendale, 1985; Wareing, 1985, Young & Tyre, 1983).

Of these scripted programs, five main oral reading tutorial packages that use parents as tutors have been utilised:

1. Pause, Prompt and Praise (Clvnn, McNaughton, Robinson & Quinn, 1979).

2) Shared Reading (Greening & Spenceley, 1987).

3) Relaxed Reading (Lindsay et al., 1985)

4) Hearing Reading (Hewison & Tizard, 1980).

5) Paired Reading (Morgan, 1976)

1.6 A Description of the Parent Tutoring Programs that Use Oral Reading Techniques

1. Pause, Prompt and Praise

The Pause, Prompt and Praise procedure places its emphasis on
measuring the tutor and child's behaviour. Pre and post measures are intrinsic to a successful outcome.

To facilitate use of this approach several steps are necessary:

1. When introducing the book a brief description of the book's content is discussed.

2. An error made while reading is not corrected for approximately five seconds (pause), to allow for self-correction.

3. If after 5 seconds self-correction does not occur, the tutor prompts the reader.

4. A maximum of two prompts can be used (either attending to the graphics or the contextual clues) to assist the child to comprehend the word. The specific skill of self-correction and prompted correction is taught and reinforced. Reading accuracy is dependent on the accurate feedback provided by these two mechanisms.

5. The final component of the process is praise. This is provided for all self-corrections, corrections that were prompted and correct independent reading. This method is used to encourage the child to continue his/her efforts.

6. At the end of each session, questions are asked about the text to assess comprehension.

7. Books used should be at the appropriate reading age level (i.e., not too difficult). A full description is in Appendix A.
Training of tutors in the Pause, Prompt and Praise technique is done individually and is usually conducted in the tutor's home. To facilitate parent training, two home visits are necessary. Subsequently, at least three tutoring sessions per week are taped by the parent tutor. Tapes are then analysed, and results are obtained and presented in graphic form. In their study, Houghton and Glynn (1993) demonstrated significant improvement in reading accuracy and comprehension.

Pause, Prompt and Praise requires extensive monitoring by both practitioner and parents. Home visits are required necessitating behaviour recording, which subsequently require coding by the practitioner. There is also an emphasis on individual training, similarly requiring extensive practitioner involvement. Despite being able to train larger groups in Pause, Prompt and Praise (e.g., O' Connor, 1984), extensive monitoring is still required.

2. Shared Reading

Greening and Spenceley (1987) describe Shared Reading as essentially a modelling technique which calls for the simultaneous reading of the text by partner and child. Although it shares some features of Paired Reading, Shared Reading does not pay any attention to errors. The partner continues to read with the child even though the child is making mistakes. Shared Reading provides a continuous flow of reading while maximising the use of modelling (i.e., actually giving the word to the child).
The procedure for training the parents takes the following steps:

1. Parents are invited to a meeting at the school and shown a video on Shared Reading.

2. The researchers ask that parents engage in Shared Reading with their child for 10 minutes, six nights per week. The project is undertaken for a short term.

3. The children select their own books and bring them home. It is emphasised that Shared Reading is also done in school by a remedial teacher.

4. There are no home visits.

3. Relaxed Reading

Relaxed Reading is a technique that concentrates on the manner in which reading is taught (Lindsay et al., 1985). Although the components of Relaxed Reading are similar to those of Paired Reading, the Relaxed Reading technique focuses more on the reduction of the child's anxiety during reading. Parents and children are therefore not taught the specifics of Paired Reading.

The following steps are necessary in Relaxed Reading:

1. A reminder of the importance of parental involvement with their children's reading. No mention is made of the Paired Reading technique.

2. A stressful reading session is demonstrated which culminates in a discussion about the session.
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The following steps are necessary in Relaxed Reading:

1. A reminder of the importance of parental involvement with their children's reading. No mention is made of the Paired Reading technique.

2. A stressful reading session is demonstrated which culminates in a discussion about the session.
3. Under supervision, parents and children practice reading together. Parents are guided to reduce negative comments and to increase positive reinforcement. There is no specific method taught, only the improvement of the parents' current style of interaction.

Although the Shared Reading and Relaxed Reading techniques demonstrate reading improvement, they have flaws; (a) the research on both approaches is limited, (b) while procedures are outlined, the components of Shared Reading and Relaxed Reading that make them successful are not succinctly outlined in the research, (c) consistency in improving accuracy, but not comprehension is demonstrated, and (d) the Shared Reading and Relaxed Reading studies have obtained results without using control groups.

4. Hearing Reading

The Hearing Reading approach (Hewison & Tizard, 1980) requires no specific training skills apart from advising the parent and demonstrating the importance of praise. The major advantage of this approach is that it blends with the existing way that parents listen to their children read. Parents tend to be comfortable with it, and are more willing to participate because they are not required to learn a new technique. The approach follows these principles:

1. A warm, relaxed and happy session must be established.

2. Consistent use of praise for correct reading and self-correction of errors.
3. Allowing time for the child to effect self-correction

4. Supplying (modelling) the correct word when the child does not self-correct. This approach is based on findings that the provision of opportunities for a child to be heard reading is an important factor to improved reading ability.

Hearing Reading may be best utilised as an intensive approach, when used in short bursts (Sigston, Addington, Banks, & Striesow, 1984).

The major difference between this approach and providing opportunities for a child to read is the frequent use of praise.

A main difficulty with Hearing Reading studies is the focus on the overall habit of reading rather than on a specific tutoring approach. Research by Leach and Siddall (1990) have suggested that improvements in reading can only be expected from instructional programs that incorporate precise teaching methods. Hearing Reading studies tend to concentrate on generic reading gains with no consistent mention of specifics regarding accuracy and comprehension.

5. Paired Reading

The technique of Paired Reading uses two psychological principles to help remediate reading difficulty:

1. A participant modelling approach in combination with the principles of operant conditioning. Opportunities are created for the acquisition of correct reading responses through positive reinforcement
(Morgan, 1976).

2. Paired Reading approaches reading at a psycholinguistic level. A reader is given an opportunity to rely more on the meaning and grammatical structure of the text by reducing the time spent on errors and difficult words. This promotes more fluency and reliance on contextual clues. If a child is using too much attention on word decoding, then the requisite amount of attention will not be available for comprehension (Curtis, 1980; Topping, 1985). As parent and child anticipate having to deal with difficult words, anxiety is subsequently reduced, and this may also aid the psycholinguistic process (Bushell, et al., 1982).

The Paired Reading process involves the following steps:

1. Simultaneous Reading - the parent and child start reading together. At this juncture, the child receives both auditory and visual information.

2. When the child makes a mistake, the parent waits approximately four seconds, to allow for self-correction, before providing the correct response.

3. Independent Reading- this involves a prearranged signal, (e.g., a knock on the table or a nudge), indicating the child's intention to read alone.

4. During the independent phase, if the child makes an error, the four second delay is also applied. However, after this delay the parent and child resume reading together. The child can then again initiate independent
reading at any time.

5. The parent should praise the child for self-correction at either the moment of completion, or at the end of the sentence. In addition, praise can be given each time the child signals to read alone.

6. Paired Reading should be engaged in each day for a minimum of five and a maximum of 15 minutes. Topping and Lindsay (1992) has emphasised that correct reading is the focus of the program and not error correction per se.

7. All reading material is chosen by the child (see Appendix B).

Paired Reading is designed for short term, intensive reading remediation.

There are several advantages in using the Paired Reading approach; (a) reading independence is encouraged in the secure environment of the home, (b) it is a very simple technique that adapts to changes in both individuals and their reading style, (c) it focuses on performance rather than on remediating individual subskills, (d) it uses the existing strategy of reading words that the child has already learnt (Morgan & Lyon, 1979), (e) the emphasis is not on mistakes, but on correct reading, (f) praise is given for all reading achievements, (g) failure is minimised by concentrating on understanding the whole text and (h) the child chooses his/her reading material, thus reinforcing continuity of the reading commitment.
Training parents in the Paired Reading technique can be conducted in either one or two group meetings, and parents are trained in two phases; (a) Simultaneous reading or reading together and (b) Independent reading. If two meetings are held, at the first meeting parents are taught the Simultaneous phase, while the second meeting may be used to provide feedback and to discuss the application of the Independent phase. Apparently, the choice of approach does not affect reading outcome.

Topping, Mallinson, Gee and Hughes (1985) trained volunteers in one session, using a video and supervision sessions. Their target group consisted of six intellectually disabled participants between the ages of 8-14. Feedback was obtained by the use of coloured cards for different weeks. These cards were sighted by the classroom teacher. They contained information about the name of the book, the length of the session, details of the tutor and what time of the day the session was conducted. After 17 weeks of Paired Reading, mean gains of 10.5 months in reading accuracy and 11.5 months in comprehension were recorded.

Leach and Siddall (1990) used one, 90 minute session to teach both Simultaneous and Independent reading to the parents of 10, Grade 1 children. Their results revealed that Paired Reading and Direct Instruction were superior to Hearing Reading and the Pause, Prompt and Praise method demonstrating two to three times the improvement in accuracy and comprehension skills.
Morgan and Lyon's (1979) study consisted of 12 to 13 sessions to train and monitor parent's use of the two phases. The participants were between 8-11 years of age. Mean gains of 11.5 months in reading accuracy and 11.75 months in comprehension were recorded for the children over a six month period.

Home visits may also be conducted fortnightly. Dening (1985) stated that this can help to ensure that parents use the technique correctly. A major area of concern however is the ability to control the amount of negative feedback a parent may give a child. Quite often parents believe that they are providing adequate praise and are usually quite surprised when they are told the opposite. Morgan and Lyon (1979) found that before training positive reinforcement was not significantly provided by parents while listening to their child read. It appears necessary to teach parents the art of praise to mastery level, and thereby increase their level of competency. Parents competency can be assessed as either, (a) competent performance of the desired skill, (b) desired skill not performed competently or (c) nonperformance of the skill. Checklists can be designed using these criteria for feedback which provides information regarding the need for extra training.

Miller (1987) used an "Elements Checklist" that rated the dyad of parent and child during the two phases of Paired Reading (i.e., Simultaneous and Independent reading). Fifty-four checklists were compiled. At the
conclusion of the study, three psychologists used the results to determine the quality (high or low) of the two reading phases.

Home visits demonstrate participant interest by practitioners and can be a source of encouragement. Visits have the potential to improve the home/school relationship, and to enhance co-operation between parents and teachers. This can be strengthened further if school staff perform the visits. Further evidence suggests that unless school staff become actively involved in the use and promotion of the Paired Reading technique, reading gains may not be maintained. Bushell et al. (1982), found that enhanced reading levels returned to baseline measures when school staff were not actively involved.

However, with dwindling resources in education, the provision of home visits which can be quite costly, becomes a contentious issue. An important question to be asked therefore is, do home visits (or the lack thereof) affect reading outcomes?

Miller, Robson and Bushell (1986) in their Paired Reading program used fortnightly home visits to monitor participants in the experimental group. Their results revealed accuracy gains of 2.43 months for the experimental group and 0.81 months for the control group. Gains in comprehension were 4.36 months and 1.69 months respectively. Leach and Siddall (1990) used one meeting, one home visit and a telephone call to parents. Results showed substantial improvement in reading achievement.
However, an earlier study by Lindsay et al. (1985) found that there was no significant difference in reading gains obtained for two groups where one received home monitoring and the other monitoring by phone. Using the Neale Analysis of Reading Ability (1st ed.) (1958), their results showed a mean gain of 5.57 months in accuracy for their total sample (home and phone monitoring).

These studies indicate that although fortnightly home visits may be ideal, reading gains are not generally adversely affected by infrequent visits, or by the use of other modes of monitoring (e.g., phone monitoring).

Paired Reading approaches reading from the point of view of improving accuracy as well as improving comprehension. Morgan and Lyon's (1979) study showed mean gains of 11.75 months for accuracy and 11.5 months for comprehension after a three month trial. Similarly, Bushell et al., (1982) achieved mean gains of 5.8 months and 13 months respectively in accuracy and comprehension and Bush (1983) achieved mean gains of 11.75 months and 17.25 months respectively.

In summary, Paired Reading does not require long training sessions or consistent home visits to demonstrate reading gains. The technique can be taught to parents at the group level, thus allowing for a greater number of parents and children to benefit from this approach (e.g., Topping, 1991).
1.7 Tentative Conclusions

While all the general research into Reading Related programs, Direct Instruction programs and Scripted Oral Reading programs suggest that they have been developed for use by parents, an evaluation of them using the seven principles developed by Leach (1986) (on p. 11) for the effective use of parents as tutors will add more insight to their relative effectiveness as tutoring programs that can be used by parents.

1. Apart from the Reading Related Activity and the Hearing Reading programs all other tutoring packages use scripted programs.

2. All the reading programs can be implemented around family routines.

3. The reading research (e.g., Dening, 1985) suggests that reading gains are more stable when scripted programs are used. Scripted programs have several advantages (e.g., precision goal setting, appropriate training procedures and the provision for negotiating parental contracts).

4. All the reading programs have tutoring strategies except for the Hearing Reading program, which extends the existing parental method of listening to the child read.

5. Only the Reading Related Activity programs appear to have an inadequate monitoring system. Fry (1985) noted that reading gains in her study were short lived because of the monitoring system.

6. All reading programs appear to be short term, intensive programs.
7. None of the reading programs described suggest that failure to achieve outcomes are due to parental error. Implied in all the reading programs is that failure is likely to be due to inadequate parent training or monitoring of the reading program (e.g., McNaughton et al., 1981).

A specific examination of the parent tutoring packages in primary schools reveals that the reading related activities approach is the least effective in improving overall reading performance. All the literature cited suggests a lack of generalisation from blending and sounding skills to actual reading. The research provided suggests that oral reading programs using parents in a primary school setting appear to be the most successful. The most intrusive and most expensive method is the Direct Instruction approach, as parents are extensively trained using manuals and other literature. Pause, Prompt and Praise involves 50% more training time than Paired Reading, and requires more home visits to help train and monitor tutors (Dening, 1985). Relaxed Reading and Shared Reading share a similar format to Paired Reading, but there is a dearth of research reporting successful programs using these strategies. Hearing Reading is the simplest and least intrusive method, and reading gains achieved were apparently stable. However, research by Leach and Siddall (1990) has suggested that its lack of structure makes it unreliable as a reading method.

The only technique that suggests the consistent utilisation of parents as tutors, and has a demonstrated research base in primary schools, although
lacking experimental data in a high school setting, appears to be Paired Reading. Results suggest that; (a) it appears to be one of the easiest and least expensive to implement, (b) training parents appears easy and relatively simple, (c) the method can be used in training larger groups of parents and students, thereby making it cost effective, (d) it requires minimal monitoring, (e) previous research has demonstrated is effectiveness, and (f) it appears to adhere to the 'max/min principle' of maximum gain for minimum intervention.

1.8 Review of Paired Reading studies

A substantial amount of literature pertaining to Paired Reading is available. To achieve the purpose of this review, the focus will be on mainstream Paired Reading programs. Paired Reading studies which focus on adult literacy in tertiary education and with specialised groups involving children and/or adults with learning difficulties are beyond the scope of this review.

The main standardised tests used for reporting reading gains in the review are either the Neale Analysis of Reading Ability (1st ed.) (1958) or the Neale Analysis of Reading Ability (2nd ed.) (1966). The mode of reporting is in the form of Accuracy and Comprehension scores. If one score is reported then it is listed as an "accuracy" score.

The Paired Reading studies to be discussed will be divided into four categories:
1. Outcome Studies - where reading gains reported are from pre/post analyses performed on the results from the standardised reading tests employed.

2. Miscue Studies - where reading gains are derived from pre/post error analyses: provided by standardised reading tests.

3. Studies with Follow-up Data - Paired Reading studies have used follow-ups to determine the efficacy of gains beyond the initial experimental stage.

4. Other Studies - some Paired Reading studies have provided other information affecting the dyad of parent and child.

Most studies reviewed report gains in reading ages rather than using statistical information. The majority of Paired Reading studies have used primary school aged populations.

1. Outcome Studies

Few Paired Reading studies have reported detailed information on the behaviour of their participants. Morgan and Lyon (1979) collected baseline and post-training data pertaining to the percentage of verbal reinforcement by parents as tutors. The subjects in this study were between 8-11 years of age. In all four parent/child dyads, the percentage of words verbally reinforced rose from 0% at baseline to between 50% and 75% over a number of sessions lasting between 3 and 4.5 hours.

The Bushell et al. study (1982) used home visits to fill out
observational checklists pertaining to parent and child behaviour. The children in this study ranged from 8-11 years of age. Information from the checklists revealed the elements of the Paired Reading approach were the reading together phase (synchrony, adjustment of pace by parents, the child's attention to each word, the amount of time for self-correction and the parent's ability to remodel errors that were made) and the Independent phase (child's signals, response by parent/s, praise, parents indicating minor errors, the return to the reading together phase after 4 seconds and the regularity of praise). The researchers were also interested in whether the reading material was chosen by the child, and if parents avoided negative and anxiety-provoking comments. All checklists were completed by the raters and there was no interobserver reliability. The checklists were separated into two categories; (a) high and low quality of reading together, and (b) independent reading.

In the reading together phase, 44 checklists were rated as high quality while 10 were rated as low quality. There was wide variation with regard to the element of parental praise when signalling and for reading alone. Therefore, the element of praise was ignored as an indicator of the quality of the Paired Reading session. In the Independent phase, 37 checklists were denoted as high while 17 were considered to be in the low category. The initial analyses revealed that age, test scores, sex, reading ages and delays had a non-significant effect on reading gains. A subsequent
statistical analysis of the specific checklist items between the two groups revealed only one significant element, the return to the reading together phase (after the Independent phase of reading). Out of all the different elements of Paired Reading only four correlated with the reading accuracy gains; the quality of independent reading (.27), the percentage of words read independently (.25), the quality of reading together (.10) and the total amount of time spent on Paired Reading. The researchers speculated that the reading together phase was integral to the elimination of parental criticism and, therefore, influenced all other aspects of parental behaviour.

Kroeger (1989) used the Paired Reading approach to determine the effectiveness of parental reinforcement of various reading skills taught at home. She involved 27, Grade 1 children over a 10 week program. Scores on The Informal Reading Assessment Test (Form B) (Gerrard & Beard, 1971) indicated a posttest improvement of 92.3% and an increase of at least two reading levels of the targeted group, well exceeding the anticipated goal of 80%. In addition, the researcher administered a survey to both students and parents at the beginning and at the end of the study. The student's survey noted a 25.2% increase in the group's reading interest. This was slightly below the targeted 30% increase. The parent's survey noted a 9.2% improvement in their attitude toward reading and involvement in a reading program. The expected improvement in attitude of 15% was not achieved. However, all students reached the desired goal of reading achievement for
their age group.

To determine the efficacy of studies using peer-tutored Paired Reading, Limbrick, McNaughton and Glynn (1985) collected quite detailed data on three pairs of tutors aged between 10-11 years and tutees aged between 6-8 years. The researchers noted that they used a minor variation of the Paired Reading technique. Their pre-training baseline measures were based on six parameters; amount of discussion, praising for correct responses and independent reading, attention to errors, supplying unknown words, eliciting positive responses and avoiding negative comments. The pairs were observed weekly, but no interobserver reliability was cited.

After training, a substantial increase in praise for correct responding and reading alone was found. In addition, prompting to obtain the correct response from the tutee also increased. The attention to errors increased slightly, but the quantity of supplying unknown words and negative comments remained the same.

Winter (1991) analysed audio-recordings of 18 pupils, 10-11 years of age who were participating in projects in two different schools. Two difficulties with this study were that (a) there were more students in one of the school samples, which affected the outcome of the study, and (b) the students were not randomly selected. The interobserver reliability rates were between .28 and .93. The elements measured in the study, were the quantity of corrected and uncorrected errors, and the amount of positive verbal
reinforcement. An attempt to collect data on other elements could not be done reliably. Winter reported that the use of praise was lower than one in 200 words or less than twice every five minutes. Six tutor/tutee pairs did not use praise at all. The amount of uncorrected errors outweighed corrected errors by a ratio of 4:1. Despite this, all pairs were consistent in using modelling to correct errors. Modelling accounted for 98% of the observed error correction. There was consistency in the way participants behaved across all the sessions that were observed. It was also noted that correlations between reading accuracy and comprehension did not attain statistical significance.

Sutton (1991) used the peer-tutored Paired Reading approach as one of her approaches with a mixed group of 17, Grade 1, 2 and 3 children over a 12 week period. The Brigance Oral Reading test (Brigance, 1985) was used as a pre/post measure of reading achievement. Results indicated significant increases in the fluency rates of both student groups (58.9%) and a significant decrease in word errors (25%). The amount of time that students were engaged in reading books increased, and the number of books read by the target students also increased significantly.

Leach (1993), in her study, used a Paired Reading program to ascertain the reading achievement and reading attitude of a selected group of 10 primary school students. The students were paired together by relying on the results of a student attitude survey. This was a teacher devised survey
comprised of 20 questions. It sampled reading attitudes that included independent reading preferences, reading done at school, self-perception of the student as a reader, and reading strategies. In addition, at risk students identified more able readers in the classroom and were paired with them in the classroom for a 16 week period, sharing and modelling reading strategies. The California Test of Basic Skills (Tiegs & Clark, 1963) was used as a pre/post measure of achievement. In addition, a pre/post attitude survey was also administered to view changes in attitude toward testing. The student attitude survey indicated an improved attitude to reading for both tutee and tutor. Gains in reading achievement were demonstrated in both tutees and tutors. Tutees gained an average of 2 months while tutors gained 0.9 months.

An analysis of the Paired Reading studies using Outcome data suggest contradictory findings in some of the parent-tutored Paired Reading programs and peer-tutored Paired Reading programs. Results from different reading studies appear to reflect the structure of the delivery method employed rather than the proposed reading method.

2. Miscue Studies

Quite a few studies that have used the Neale Analysis of Reading Ability (1st ed.) (1958) and the Neale Analysis of Reading Ability (2nd ed.) (1966) have measured changes in the rate of reading. In the Lindsay et al. (1985) study, there was a posttest reduction in the rate of reading. However,
in many studies (e.g., Winter, 1985), there have actually been increases (17% in the Winter study) in posttest reading rates. Most reading style studies have used some form of miscue or error analysis in a pre/posttest format on two different parallel texts of similar ability.

There are several studies that describe reading style change in parent-tutored programs. Not all of them are available. Two such studies are listed below.

Scott's (1983) study used pre and posttest measures from a standardised test as well as a miscue analysis when analysing the benefits of a Paired Reading program. The participants were between 9-11 years of age. Only one participant demonstrated slight improvement. The miscue analysis demonstrated that those involved in Paired Reading started to use contextual clues although this was unpredictable and irregular.

Winter (1985) collected reading style data from 10 out of his 33 students. The participants were between the ages of 9-11 and were all below-average readers. In a pre/post analysis, the 10 students were audiotaped reading Form 1 of the Neale Analysis of Reading Ability (1966). Parents were trained in the Pause, Prompt and Praise and Paired Reading procedure. When posttested, it was found that rate of reading had increased while errors had decreased by 22%, refusals by 28% and self-corrections had not changed. There were no significant differences between the two reading approaches.
Several studies have concerned themselves with peer-tutored paired reading during which reading style analysis was undertaken. A sample of published studies is listed below.

Winter and Low (1984) reported data on 15 of their 10-11 year old tutors, in a study using same-age tutors. Using parallel readability texts, tutees’ rate of reading rose by an average of 30% while the error rate fell by an average of 50%. In addition the percentage of self-correction rose by 70% while the percentage of refusals fell from 7% to 0%. These changes were not as significant for the less able tutees, apart from the fact they demonstrated a greater reduction in the percentage of refusals.

Cawood and Lee (1985), reported a study where 11-12 year old remedial students were tutored by 14 year olds. Results were reported for 16 of the 22 participants using pre/post parallel texts. The percentage of errors fell for all 16 participants while for 12 of the 16, the percentage of refusals decreased as well as an improvement in self-correcting behaviour. Ten tutees demonstrated an increase in reading rate per minute. However, four tutees did not accelerate their rate of reading while two tutees actually decreased their rate.

Limbrick et al. (1985) used three tutors aged between 10-11 years with three tutees aged between 6-8 years. All participants were reading retarded. The sessions were audiotaped weekly with both the tutors and tutees reading graded passages and answering questions on them. Two
measures of their reading accuracy and self-corrections were taken. In addition cloze exercises, which concentrated on the overall meaning and grammatical structure, were completed and assessed weekly. As a result, both tutors and tutees improved their reading accuracy, the amount of self-correction and were able to change quickly to more difficult reading materials. Their ability to substitute incorrect for correct words also rose with an improvement in the ability to comprehend questions and to answer them correctly.

Lees (1987) reported different findings. The study compared 10 paired readers aged between 10-12 years to a non-participant group of similar ability and age, and to another non-participant group of younger readers aged between 8-9 years. All students had an average of 2.8 years delay in reading. A pre/post analysis was done on word pronunciation, non-word pronunciation, semantic appropriateness, lexical appropriateness, visual matching, phonological segmentation and use of context. Although the Paired Reading group made the largest gains in reading age, their use of story context showed no improvement. There was also evidence to suggest that there may have been some improvements in decoding by using phonic strategies, or by actually looking at the text. Overall, both non-participant groups used context as much in the pretest as they did in the posttest.

Low, Madden and Davies (1987) used seven graded reading passages to assess their 13 Paired Reading peer-tutored groups and a control
group of similar pairs. Tutors were between 10-11 years of age, while tutees were between 6-7 years of age. The overall error rate of the tutors decreased by 71% as compared to the control group reduction of 59%. The error rate of the tutees declined by 50% in comparison to the control group reduction of 42%. These changes in the experimental group were more pronounced for girls than boys.

Joscelyne (1989) reported on a peer-tutored Paired Reading approach in which a group of paired readers was compared to a group of tutors that only listened to their tutees. Tutors and tutees were between 9-10 years of age. The results revealed an increase of 15% in substitutions while the listening group demonstrated no change. However, there was a drop of 6% in refusals with the Paired Reading group, while the listening group showed an increase of 5% in refusals. Both of these results achieved statistical significance. There were no differences in the category of substitutions. A replication study was undertaken using 11 paired readers in both the experimental and control groups. The groups were tested on two parallel passages and the tutees were tested on their ability to use specific words in isolation and in context. The differences between the two passages were calculated for both groups, which provided a measure of change in using contextually appropriate information. Paired readers demonstrated a statistically significant increase in the use of words in isolation and in context. The listening groups showed no such improvement.
However, Joscelyne (1991) reported that there were contradictory findings with regard to the reading style of peer-tutors. In one of her experiments, paired readers and a reading aloud group showed reduced error rates. Rates of substitutions and refusals were, however, lower for paired readers than for the reading aloud group. Joscelyne stated that the differences were minimised owing to the ceiling effect of the Neale Analysis of Reading Ability (2nd ed.) (1966). In two more studies, error rates decreased for the paired readers, but the refusal rates increased slightly. In the last of these studies, paired readers did show an improvement in using context.

The results from all the miscue studies using the parent, peer and teacher-tutored Paired Reading programs, show that reductions in error rates are found in several Paired Reading studies.

3. Studies with Follow-up Data

Follow-up data gathered after the intensive period of programs have been reported in several studies. A variety of tutors using parents, cross-age peer tutoring, a combination of natural parent, cross-age peer and adult volunteer tutors and tutoring by professionals have been employed. A sample of studies are presented below.

Bushell et al. (1982) reported on a six month follow-up on an unspecified number of participants from three schools in the pilot Derbyshire study. All participants were between 9-11 years of age. Using the Neale
Analysis of Reading Ability (2nd ed.) (1966), the participants from two schools appeared to reach a plateau in reading accuracy after the intensive period, while in a third school the participants continued to improve their reading test scores at the same accelerated rate as was evident during the intensive period. In reading comprehension, participants at one school had regressed on average at follow-up (although not back to the pre-test level), while subjects at a second school maintained progress at normal rates (there was no wash-out). A third group maintained accelerated progress at less than the pre/post rate, but at a greater than normal rate. It was not known if families continued to do Paired Reading at the end of the intensive period (they were not asked to continue).

Lees (1985) study of five, 10 year old weak readers also used the Neale Analysis of Reading Ability (2nd ed.) (1966) at the follow-up 13 weeks later. The interesting variation in this study was that the 10 week, twice weekly program was performed by the teacher. During this period, there were average ratio gains in reading accuracy of 3.2 and 1.3 in reading comprehension. During the 13 weeks, parents were used as trainers. The mean ratio gains were 2.6 in accuracy and 2.1 in comprehension.

Burdett's (1985) four week follow-up with 8-11 year olds after an intensive Paired Reading and control group study, showed a reduction in errors and an improvement in psycholinguistic skills for the Paired Reading group over the control group suggesting better decoding. On average the
experimental group made better progress than the control group. She concludes that using parents ensured that gains were maintained in the follow-up.

Other studies (Carrick-Smith, 1982; Lee, 1986) have also documented continued improvement in accuracy and comprehension, and reading style over different follow-up periods.

Some follow-up gains are below the expected rate of normal reading age development. However, even with these studies, rates of gains were superior to comparison and control groups.

4. Other Studies

Several studies have focused on other aspects of the parent/child dyad in the Paired Reading procedure.

In a pilot project Elliott (1989) conducted posthoc interviews with parents who had participated in Paired Reading programs. He audiotaped interviews with 13 subjects. The students were between 6-7 years of age and of mixed skill ability. In the main study, 15 out of the 30 parents had been listening to their children read prior to the Paired Reading program. Despite training, 17 out of the 30 parents did not accurately use the Paired Reading technique. In the final analysis, two pairs only read together, another two pairs only did the Independent Reading phase, another three had difficulties reading together and six tended to switch from Paired Reading to listening to their child read as they carried on with the program. Elliot noted that, in
many instances, Paired Reading tended to be integrated with a preexisting reading program (in this case informal listening). This is despite the evidence that Paired Reading reduced stress in the reading relationship and that the error correction procedure marginally improved sight vocabulary. It must be noted, however, that the adherence to the Paired Reading technique was much greater for the participants in the pilot study.

Josceline (1989) stated that in her peer-tutored Paired Reading programs, there was a tendency for pairs to drift away from the Paired Reading process and move into other methods of reading. She added that close monitoring was necessary to ensure that the Paired Reading process was being strictly followed.

Kroeger (1989) found a positive change in attitude toward reading in both the children and their parents after performing Paired Reading. Leach’s (1993) student attitude survey showed an improved attitude toward reading between tutor and tutee at the end of her Paired Reading study.

These studies alert us to the various dimensions of Paired Reading that need to be taken into account.

Overall, the research presented suggests that Paired Reading is a very successful program with a primary school population.

1.9 Recent Studies in the High School Setting

Although there are a considerable number of studies on high school reading programs, many focus on atypical groups. Also there is a body of
research examining strategies involved in reading improvement with foreign students, and several studies involving deaf students have been reported. The studies reviewed here pertain to mainstream high school programs. They are divided into three categories:

1. Studies that Focus on Comprehension.

2. Studies that use Computer-Aided Strategies to Accelerate Reading Skills.

3. Other Studies.

1. Studies that Focus on Comprehension

Research suggests that levels of comprehension are still a focus when students reach high school.

Alvermann (1988) found that low ability comprehenders performed better than students in a control group with a strategy employing induced lookbacks. The researcher suggested that low ability comprehenders need graphic organisers that represent the gist of the text they are to read.

Kleitzen (1992) noted in her study that proficient comprehenders differed from less proficient comprehenders in their significantly greater usage of vocabulary strategies in story passages.

Kleitzen and Hushion (1992) investigated the use of different reading strategies with at-risk high school students. Students were taught reading strategies that would make reading enjoyable and were also exposed to strategies used by different authors. Students were also encouraged to
look for other books they would like to read. Results indicated an improvement in amount of time spent reading.

An interesting study by Gallini, Spires, Terry and Gleanon (1993) examined the impact of a macroprocessing and microprocessing strategy on comprehension of a text among high school remedial students. This methodology of the study suggested examination of accuracy and comprehension as separate constructs. Results indicated that the macro-level readers were significantly more proficient at accelerating their development of the gist of the text (i.e., their understanding of the text) while micro-level readers appeared to focus on accuracy.

Usen (1993) assessed prereading activities on reading comprehension. Results did not indicate any significant differences between the two groups. Denner and McGinley (1992) investigated the use of story impressions as a prereading writing activity for high school students. Results significantly indicated that story impressions when paired with composition of a story guess, produced the highest level of story recall for both above and below-average readers.

2. Studies that use Computer-Aided Strategies to Accelerate Reading Skills

Several studies have used computers successfully in improving reading skills.

Brennan (1990) and Dillner (1994) designed individual computer programs which combined traditional reading instruction with computer-
aided instruction to improve reading skills of their high school students.

Keene and Davey (1987) used computers to enable their Learning Disabled students to read two expository texts. Results indicated that computers improved these students' "looking back at texts" abilities and also improved their attitudes to reading.


3. Other Studies

Some studies have developed reading programs that combine the quantitative and qualitative strengths of the student/teacher relationship.

Bednar and Kleitzen (1990) assessed the value of a tutoring package comprised of several components; an initial assessment of reading, analysis of reading process and strategy utilisation, presentation of a mediated learning lesson using Direct Instruction, guided practice and independent practice. Results indicated that this procedure was valuable in analysing students' strengths and weaknesses, preferences, preferred reading strategies and the students' ability to accept and provide new reading strategies. Information for improving teaching style was also provided.

Dillon (1989) assessed the English reading abilities of a class of rural secondary negro low-achieving students. Using the Symbolic Interactionist (Blumer, 1969) perspective, she found that an effective teacher
was the translator and disseminator of information and the broker between the different classes.

Egger (1992) used a procedure called Intuitive Reading. This procedure involved students relaxing with their eyes closed, breathing slowly and deeply, relaxing and visualising colour, and pointing to a place in their mind where they could see the colour. Using school-based tests, an improvement in reading ability was demonstrated.

Taylor, Shaw and Goodman (1983) have designed a high school reading program called RIB-IT (Reading In Bed Is Terrific). This is a silent reading program where the main focus is on improving the motivation to read. Reading develops around reading regularly and for pleasure, reading different themes and styles used by authors, and increasing the quantity of books read. RIB-IT has seven main aims. They are; (a) to promote reading as an enjoyable recreational activity; (b) to promote regular reading - during Sustained Silent Reading (SSR) periods in school and at home, (c) to increase the number and range of books read by Year 8’s, (d) to provide guidance to students about suitable literature and assisting their selection of reading material, (e) to improve SSR participation and creating a structure for assessment of SSR, (f) to establish correct SSR and reading habits in Year 8’s which can be developed in future years, and (g) to develop a team approach to SSR and student reading involving library staff, English teachers and SSR teachers.
Currently, the Ribit program is in place at one high school in Western Australia at Year 8 level. Despite this, many students still fail to perform at the average year level at the end of Year 8.

The research suggests that there has been little attempt to increase the level of mainstream high school reading accuracy and comprehension using Paired Reading with parents as tutors. Several of the high school studies focus on elements that do not involve Paired Reading. Only two Paired Reading studies have been published focusing on mainstream high school aged students.

The study by Carrick-Smith (1982) involved students from three mainstream high schools, who were between the ages of 12-13 years with three year delays in reading age. Tutoring was conducted by parents, adult volunteers and cross-age peer tutors. Results indicated significant mean gains in both accuracy and comprehension for the participant group. A follow-up 46 weeks after the posttest with a composite sample of 27 subjects, showed mean gains of 8.1 months in accuracy for the participant group while the control group made gains of 6.6 months. In comprehension the mean gains for the experimental group were 10.2 months, while the control group gained only 6.8 months.

Lee (1986) reported on a 12 month follow-up of 13 participants in a cross-age peer-tutored Paired Reading project where the tutees were high school remedial students aged between 12-13 years of age. When tested on
the Daniels and Diack test (1977) the tutees gained 1.2 years and a further posttest gain of 0.5 years in accuracy during the follow-up period. This was in contrast to the accuracy gains of 0.7 years in the posttest and 0.2 years in the follow-up for the control group (from pretest to the follow-up).

Therefore, total accuracy gains were an average 1.7 years for the experimental group and 0.9 years for the control group. In addition, error analyses performed on the tutees reading style reported a drop of 41% in overall errors and an increase of 135% in self-corrections. The appropriate use of errors increased to 100%. Lee added that there was no evidence of wash-out and that improvements continued without additional tutoring.

The review has suggested that even where reading programs are in place in high schools, home based assistance can also lead to improvement in reading accuracy and comprehension. The success of parents as tutors using Paired Reading programs in primary schools has been established. Some research strongly suggests that Paired Reading could add value to the existing repertoire of reading programs in high school. However, more studies are needed to verify this suggestion. The present project aims to trial a Paired Reading program in a high school.

Summary

The introduction started with a general description of the value of using parents as home-based tutors in the remediation of reading problems in school, and that parents were effective controllers of reinforcement in the
However, merely inviting parents to assist in the classroom without guidelines would lead to limited success. Several home/school-based reading programs were briefly introduced. Of these techniques, Scripted Oral Reading programs appeared to be the most promising when used with parents. Paired Reading was found to be the most consistently successful reading program that utilised parents in the primary school setting. However, research into using Paired Reading with parents in a high school setting was lacking. It was suggested that Paired Reading could be extended into Year 8. Subsequently, the main reading programs were reviewed with the intention of providing evidence that Paired Reading could be used in a high school setting.

The next section initiated a broader analysis of the reading research, and the contributions made by parents. Leach (1986) provided three reasons for using parents as direct interventionists in the school setting. In addition, principles outlined by Leach (1986) for ensuring the effectiveness of parents as tutors were also described in detail.

The three main home-based reading programs that have been commonly used were then introduced. They were: (a) Reading Related Activity Programs, (b) Direct Instruction Programs, and (c) Scripted Oral Reading Programs. Each approach was briefly described.

The Oral Reading Programs were cited as the most popular because
they required commitment by the participant rather than expertise, and did
not require the excessive use of resources. Although several oral reading
programs were described, the five most popular ones were Pause, Prompt
and Praise; Shared Reading; Relaxed Reading; Hearing Reading and Paired
Reading. A review of each program was undertaken. It concentrated on the
different procedures, their relative research successes and their difficulties.

After generally evaluating all the reading programs using the Leach
(1986) framework, specific evaluation suggested that Paired Reading using
parents as tutors appeared to be the most promising program to trial in a
high school setting.

Paired Reading studies were reviewed using four categories;
Outcome Studies; Miscue Studies; Follow-up Studies and Other Studies.

Generally, data from the Outcome Studies revealed that when
training was quite detailed, and there were a smaller number of participants,
positive findings in both reading accuracy and comprehension were possible.
In the larger studies involving parents, adherence to the Paired Reading
technique was found in over half of the studies associated with home visits.
The vast majority of studies still relied on a very basic input-output model.

Despite the fact that many of the Miscue Studies did not use
control/comparison groups, the general trends in Paired Reading results were
less refusals (more confidence), improved fluency, better use of context,
more likely to self-correct, fewer errors (more accurate) and an improvement
in phonic skills

Follow-ups ranged from one to 12 months and it did not appear that the length of the follow-up period consistently related to the magnitude of gains. Although the standard of studies was questionable, they suggested that experimental gains made were somewhat durable (no wash out).

The findings from other Paired Reading studies demonstrated other dimensions of Paired Reading.

The research into high school reading programs was divided into three categories; Studies that Focussed on Comprehension, Studies that used Computer-Aided Strategies to accelerate reading and Other Studies. Results from this research concentrated on several different areas. It was suggested that Paired Reading in the high school setting may be a useful technique to improve reading performance. However, no firm conclusions could be made without conducting proper controlled studies in high schools.

A suggestion that home based reading programs could be used successfully with school based reading programs in high schools was made.
CHAPTER 2

2.1 Purpose of the Study

Proposal for Designing a Paired Reading Program in a Mainstream High School

The current study will attempt to compare the value of a Paired Reading program with the existing school reading program using parents as tutors in a high school setting with Year 8 students. While demonstrating success, Paired Reading studies consisting of subjects in the 10-12 age range have reported variable results. Lees (1987) study reported a reduction in reading errors. Richardson (1986) and Spalding et al. (1984) reported improvements in accuracy and comprehension, but groups may not have been randomly assigned. Simpson (1985) and Sweetlove (1987) both reported gains in accuracy and comprehension, but without statistical data.

To date, only two Paired Reading studies (Carrick-Smith, 1982; Lee, 1986) with a mainstream high school population have been cited in the literature. The Carrick-Smith study reported gains in accuracy and comprehension while the Lee study only reported gains in accuracy for both the control and experimental groups, but more favourable gains for the latter group. A follow-up by Lee also reported improved reading style only with the tutees. The overall results are promising enough to trial Paired Reading with Year 8 students. There remains a need to understand reading performance using Paired Reading in high schools.
To fit in with a high school setting, Paired Reading can be successfully used with a larger parent group requiring minimal training and monitoring. Leach and Siddall (1990) demonstrated that for an additional two hours of parent training per family, new readers achieved impressive reading gains. They add that there are specific benefits in training parents to use this particular technique. The extra training time assures parents that their daily involvement contributes to improvements in their child's reading ability.

Given the research, the best approach would have to be a model that produces the most durable gains, and would also have to consider existing homework patterns. Of the oral reading approaches Paired Reading appears to satisfy the criteria of adjusting to high school needs (e.g., able to fit in with existing homework patterns). In addition, monitoring of parent and child would have to be kept to a minimum. Paired Reading also satisfies this requirement. Traditionally, Paired Reading has required home visits as part of the tutoring program. However, Lindsay et al. (1985) in researching the effects of either home visiting or monitoring by telephone on reading gains found that there was no significant difference between approaches in reading gains.

A second issue of interest in this study will be an analysis of tutoring time to determine its effect on accuracy and comprehension gains. Purnfrey (1986) noted that there may be an optimum length of tutoring time
and raised the question of frequency of tutoring when performing Paired Reading.

Paired Reading must attain experimental credibility in order to be considered a valuable strategy (Purnfrey, 1986; Topping & Lindsay, 1992). This is especially true in the area of high school reading intervention methodologies. Research is required to now focus upon its use with this particular population.

The present research will examine the Paired Reading strategy and extend the literature to include an examination of its use within the high school setting.

2.2 Proposed Research Hypotheses

This study aims to address the following research hypotheses:

1. Paired Reading using parents as tutors will be a more effective reading remediation method than the existing Ribit (Reading In Bed Is Terrific) method and will significantly reduce reading difficulties experienced by Year 8 students from a mainstream high school setting.

2. A significant relationship will exist between tutoring time and reading accuracy and comprehension gains.
CHAPTER 3

METHOD

3.1 Setting

A large Catholic high school with 810 students was selected to participate in this study. The school is located in one of the largest satellite towns east of the metropolitan area. It is co-educational and caters for students from Years 8 to 12.

The socio-economic status of the families attending the school ranges from the low middle to the upper-middle classes. Quite a number of the parents of the current student population have also attended the school. The school attracts students from the surrounding areas as far as Gingin. An important aspect of the school is its policy of catering for physically disabled students. Although a large number of the students are from immigrant families, English is the main language of communication.

The school policy with Year 8 students is to encourage them to read by using the R.I.B.I.T. (Reading In Bed Is Terrific) program, which rewards them with certificates for the number of books read. There are no specific reading programs for the other year levels. The Ribit program is initiated with a list of books suitable for a range of Year 8 interests and reading levels. These are arranged in thematic areas (genres) and are listed in order from easy to read to more difficult. This list is distributed to all Year 8 students and is a guide to their SSR (Sustained Silent Reading) reading for the year. Students can negotiate other titles with library staff, English teachers or SSR teachers. Reading commencement
and completion dates are noted on the student's Ribit list. As each book is finished, the student colours in the appropriate square on the list. Once a student has read 10 books, the SSR teacher fills in a certificate which is presented to the student at the school assembly of that week. Further certificates can be given at 20, 50 and 100 books. At least once a week, either in SSR or at home, students are instructed to write a minimum of one page in their reading journal (exercise book) concerning what they liked/disliked or felt about the book(s) they were reading. SSR teachers check that this is accomplished. English teachers collect and read journals once per term. At some stage during each term, students complete one formal response activity which is marked by their English teacher. This is a book review, oral report, thematic response, character study, illustration or sequel outline.

3.2 The Role of Classroom Teachers during the Current Paired Reading program

Prior to the implementation of the Paired Reading program, teachers were briefed regarding the aims of the study, its possible benefits with the involvement of parents and a description of the Paired Reading procedure. Through discussions with the Head of the English department, the Year 8 English language teachers and the Deputy of Curriculum, students were selected on the basis of the results from the Test of Reading Comprehension (TORCH) (Australian Council for Educational Research, 1988) that was taken by all incoming Year 8 students. Teachers were not involved in the actual training of parents or the remediation of students.
3.3 Design of the Study

This was a pretest, posttest experimental design with intergroup comparisons between a Paired Reading group (experimental group) and a Ribit group (comparison group), measuring the effects of reading remediation. The independent variable was a home-based, parent involvement program called Paired Reading which trained parents in reading remediation. The dependent variable was reading achievement which was defined as the ability to accurately decode and comprehend a written text.

3.4 Description of the Instruments

The TORCH (Australian Council for Educational Research, 1988) is a set of 14 untimed language tests and its aim is to assess children's ability to extract meaning from a text. Test A is used with students from Years 3-10, while Test B is for students in Years 6 to 10. The test provides criterion-referenced and group-referenced data, percentile and stanine scores. This test is the standard language test used by the school for all prospective Year 8 students and is administered by the Heads of the English and Mathematics departments.

The Neale Analysis of Reading Ability Revised (1988) is a reading test containing six passages of prose. This forms the basis for reading skills assessment for ages 6 to 12. The objective scores reveal the student's rate, accuracy and comprehension level relative to his/her peers. The Neale has two equivalent Forms, 1 and 2. The reliability of the Neale for the ages 6.0 to 12 and over for both Forms is reported as .94 for rate; .97 for accuracy and .89 for
comprehension, while the criterion-related validity using Form 2 to predict reading ability was reported as .73 for rate; .83 for accuracy and .78 for comprehension (Neale, 1988). The Neale Analysis of Reading Ability Revised (1988) was administered by the researcher.

Several researchers (Brimer, 1965; Lindsay et al., 1985; Pearson & Lindsay, 1986; Josceleyne, 1989) have noted problems with the Neale Analysis of Reading Ability (1st ed.) (1958) and the Neale Analysis of Reading Ability (2nd ed.) (1966) when used with primary school populations. Specifically, issues concerning ceiling effects and the instability of the Comprehension subscale have been discussed. Two studies (Bush, 1985; Carrick-Smith, 1982) have noted some difficulties with inflated individual scores in the use of the Neale Analysis of Reading Ability (1st ed.) (1958) and the Neale Analysis of Reading Ability (2nd ed.) (1966). Stothard and Hulme (1991) in assessing the value of the Neale Analysis of Reading Ability Revised (1988) have pointed out that Form 1 tends to be more reliable than Form 2 as an indicator of reading ability. This criticism about the Neale Analysis of Reading Ability Revised (1988) were also made with results from a primary school population.

The Neale Analysis of Reading Ability Revised (1988) was selected as the final testing instrument with a high school sample for several reasons; (a) over half of the Paired Reading studies reviewed used either the Neale Analysis of Reading Ability (1st ed.) (1958) or the Neale Analysis of Reading Ability (2nd ed.) (1966) and one study used the Neale Analysis of Reading Ability Revised
(1988), (b) it has generally provided stable average to above-average reading accuracy and comprehension scores in previous and current research on Paired Reading (Topping & Lindsay, 1992), (c) the Neale Analysis of Reading Ability (1st ed.) (1958) and the Neale Analysis of Reading Ability (2nd ed.) (1966) also positively correlated with feedback from parents, teachers, children and, in some instances, with self-reports of reading frequency (Topping & Lindsay, 1992) and, (d) to date only the study done by Stothard and Hulme (1991) has noted difficulties with the Neale Analysis of Reading Ability Revised (1988). However, their findings were made with students aged between 7-8 years. They also recognise that this reading test is the most widely used testing instrument for monitoring progress in reading skills and in identifying children who encounter reading difficulties.

3.5 Selection of the Students

Of the 190 Year 8 students at the school, 45 of the lowest scoring students on the TORCH (Australian Council for Educational Research, 1988) language placement test were selected. From this sample a score of 83 represented the 99th percentile. Students who were found to be at or below the a raw score of 47 (27th percentile) were selected. These students were tested on the Neale Analysis of Reading Ability Revised (1988). Of the 45, 38 students had reading ages that were 1 year below their chronological age and these formed the final sample. The 38 subjects were randomly assigned to two groups. Both groups consisted of 19 students. There were six girls and 13 boys in the Paired Reading
group, and eight girls and 11 boys in the Ribt group. All parents and students spoke English as their first language. Subsequently, an official letter was sent home asking parents if they would like their children to be involved in the program (see Appendix C).

Once selected, the children were taken to the school gymnasium and the aims and benefits of Paired Reading were described to them. It was explained to the students that their participation was not compulsory and if some of them did not participate this would not disadvantage them if reading remediation was required in the future. It was also emphasised that all information was confidential. All students who participated were required to sign a document pertaining to the issue of confidentiality and the release of their results for the purposes of this study (see Appendix D).

3.6 Type of Reading Materials

In keeping with the Paired Reading ethos, there were no restrictions put on reading material. It was emphasised to parents that the material their child used was to be their child's own choice. To ensure that the reading material was at an appropriate reading level, a book list of all the recommended Year 8 reading material for the Ribt program (see Appendix E) was also provided. However, no student was compelled to read any of these books for the Paired Reading program.

3.7 Experimental Procedure

The 38 students in the study were randomly assigned using a Random Numbers Table (Downie & Heath, 1983), to a Paired Reading group and a Ribt
group respectively. Nineteen students were in each group. In the experimental condition, subjects participated in the Paired Reading program at home for a period of eight weeks, 15 minutes per session, five days a week. While at school both groups were also involved in the normal school language programs.

3.7(a) Parent Training Procedure and Meetings

Once the children had been selected (and prior to testing), the first 19 parents in the experimental group were invited to a meeting at the school for a demonstration of the technique and to view a one hour videotape on Paired Reading (see Appendix F). This meeting was held in the afternoon when school had finished. At this stage the other 19 parents were informed by telephone that they would be involved in the Paired Reading program in the next term. The students in the control group were informed in a group meeting that they would be doing Paired Reading next term.

At the end of the experimental phase the 19 parents in the Ribit group and their children were invited to a meeting, but only 13 attended. They were then trained individually and as a group. Every effort was made to enable the other six parents to avail themselves of the program.

3.7(b) Instructional Content of the Meetings for Both Groups

The meetings lasted approximately 1 hour. Their format was:

1. Parents were informed of the method of student selection, aims of the Paired Reading program and the benefit of the study to the overall reading improvement of their children.
2. Evidence of the successful use of this approach in the primary schools and of its possible benefits in the high schools was presented.

3. The video on Paired Reading (Topping, 1985) was shown.

4. Parents were made aware of the importance of praise in successful reading and also of good comprehension (i.e., discussing the material that their child read).

5. Parents were asked to sign a consent form (see Appendix G) if interested in participating in the project and if the researcher could use the results of the study for his Master's thesis. Confidentiality of information was assured. All parents in the experimental and control groups consented.

6. Instructions on Paired Reading were distributed to the parents and constant reference was made to this sheet (see Appendix B). It was emphasised to the parents that the children were to choose their own material. Parents were told that the primary criterion for selecting the reading material was the child's interest in it. To ensure that the reading material was not too easy, parents were gently taught how to challenge their children through discussion, for example "Well done, that was excellent; shall we try another, maybe a little bit more difficult?" Until the appropriate reading material was used, there would be no error correction. Similarly, if the reading material was too difficult, praise would be used for correct reading and gentle encouragement to replace the present reading material with an easier one.

7. Parents were then asked to keep diaries on the amount of time spent on
reading and the type and name of the reading material. (see Appendix H).

8. Individual meetings were arranged for the parents to come to school with their child and demonstrate correct usage of the Paired Reading method for the researcher.

9. Parents were informed that they would receive one phone call half-way through the study to address possible problems. However, all parents were informed that queries were most welcome and to ring the researcher at school if required. In addition, a letter would be written to all parents the week before reminding them of the termination of the program at the end of the following week (see Appendix I).

10. Answering of questions.

3.8 School Visits

During the experimental phase all parents and their children in the experimental group were required to make school visits within the first two weeks of the Paired Reading program. At these visits, parents and children were observed using the Paired Reading approach for approximately 10 minutes. The following tutoring aspects were focused on:

3.8(a) Simultaneous Reading

1. Was there close synchrony between the parent and child?

2. Did the parent adjust reading pace where it was necessary?

3. Was the child attempting every word?

4. Was the child given the chance to self-correct?
5. Was the four to five second delay used before correcting the word?

(b) Independent Reading

1. Did the child knock prior to initiating this phase?
2. Was the parent paying attention to the knock?
3. Did the parent praise the child for knocking?
4. When an error was made, was the Simultaneous phase reinstated after four to five seconds?
5. Was the reading material the child's choice?
6. Was there a focus on correct reading (not on error correction)?
7. After reading was time allotted for questions and dialogue?
8. Was the choice of reading material at the appropriate level of difficulty?

(c) Contact by Telephone

One phone call was made in the fourth week of the program to the 19 parents in the experimental group. Parents were asked if there were any problems and were all the procedures being implemented as taught and discussed. If there were doubts in using the method, they were either discussed at this juncture or the parent was invited back to school. All calls were approximately between six and 10 minutes. These parents were also informed that a standard letter would be sent out to them in the second last week of the program informing them of the termination of the program for the following week. All issues were resolved over the phone and no issues required a second visit to the school.
3.9 Paired Reading and the Control Group

Although both the experimental and control groups were involved in the normal school language programs, only the experimental group participated in the Paired Reading program in the initial phase. No advice or special tutoring in reading was afforded the Ribit group until after the experimental period. However, during the experimental phase, to avert the possibility of attention alone making a difference, the parents of this group were asked to spend about 15 minutes for five days over the eight weeks attending to the child. They were asked to spend the time involving themselves in activities like a video or a game. Once the experimental phase was completed, the Ribit group was invited to participate in the Paired Reading program. All the conditions that were implemented for the experimental group were reinstated for this group.

Thirteen of the original 19 parents in the Ribit group took part. All 13 were trained in similar manner to the experimental group. Attempts, as already mentioned, have been made to contact the remaining six to be trained in the technique.

4.0 Other Administrative Procedures of the Study

1. A letter was sent to all 32 parents (Paired Reading and Ribit groups) a week prior to the termination of the studies reminding them that they were to finish Paired Reading by the end of the following week. As no other written correspondence was offered to parents once the reading programs began, this step was implemented as a reminder that all parents finish their respective programs at
the end of the eight weeks. In addition all diaries were to be completed and sent in to the researcher at school.

2. Once the results had been tabulated, a standard letter was sent to all the parents inviting them to a debriefing session at the school (see Appendix J). In that session parents were made aware of the importance of continuing general reading remediation and comprehension tuition into Year 9. Also during this session parents and their children were invited to make appointments with the researcher to discuss individual results. Parents were also advised that continuation with Paired Reading was not necessary to maintain reading gains. Such general maintenance programs could be discussed at the individual meetings. No parent indicated a desire to continue using Paired Reading.

4.1 Analysis of Data

1. A repeated measures analysis of variance (MANOVA) and an analysis of covariance (ANCOVA) were used to test the hypothesis that Paired Reading was a significantly better technique than Ribit. To simplify the presentation of the additional covariance analyses, one-way analyses of covariance was also used to test the Paired Reading versus Ribit groups (independent variable) for differences in posttest-pretest change scores for accuracy (dependent variable) with age, sex and pretest comprehension scores added as covariates in sequential analyses. A hierarchical method of entry for covariates was used to remove the effects of the covariates before testing the main effect. For comprehension, similar analyses substituted comprehension change scores as the dependent variable and pretest
accuracy scores among the covariates.

2. Analyses of the correlation between tutoring time with accuracy and comprehension scores were carried out for the experimental group. A Pearson product-moment correlation was used to perform the task.

3. Parents in the experimental group were asked to respond to a question in their diaries on a weekly basis:

   Was your son/daughter upset by having done Paired Reading with you?

   Their answers were reported in the Yes/No format. Percentages were reported on the answers.

**Summary**

The chapter began with a description of the setting in which the study would take place. The Ribit program was described as the preferred reading remediation technique used by the Year 8's in this school. While the Ribit program was monitored by teachers, there was no teacher monitoring of Paired Reading.

The design of the study was a pre-post intergroup comparison of the two groups; Paired Reading and Ribit.

The Test of Reading Comprehension (TORCH) (Australian Council for Educational Research, 1988) was described and introduced as the initial selection instrument taken by all incoming Year 8 students. Similarly, the Neale Analysis of Reading Ability Revised (1988) was described as the testing instrument used to select the final 38 students for the study. Several reasons were provided for the
use of the Neale Analysis of Reading Ability Revised (1988) in this study.

A complete description of the study's methodology was discussed. The chapter ended with a description of the type of analyses that were involved.
CHAPTER 4

RESULTS

All 38 students were included in this analysis. There were no initial differences in both the experimental and control groups on accuracy, $t (36) = -0.49$, $p > .05$ or comprehension, $t (36) = 1.20$, $p > .05$.

4.1 Preliminary Data and Rationale for Supplementary Covariate Analyses

The 38 students with reading scores at least one year behind their accuracy or comprehension age norms were comprised of 24 males and 14 females. The experimental or Paired group (13 males and 6 females) experienced the Paired Reading program, while the control or Ribit group (11 males and 8 females) continued with the usual Ribit program used at the school.

The average age was 3.95 months higher for the Paired group ($M = 154.21$ months, $SD = 5.72$) compared to the Ribit group ($M = 150.26$ months, $SD = 2.64$). This mean difference was significant using a t-test for independent groups with unequal variances ($t (36) = 2.73$, $p = .01$). As the standard deviations indicate the variance in age was much larger in the Paired group, and Levene's Test for equality of variance showed that the difference in age distributions was significant ($F (1,36) = 8.79$, $p = .005$).

The random allocation did not result in groups being closely matched on chronological age. Examination of the means and standard deviations for males and females showed very similar statistics for both
sexes within the groups. When testing the hypotheses for the effect of reading program on accuracy and comprehension, additional analyses with age as a covariate will be performed to statistically control for the differences in age between the program groups.

Though similar, the distribution of males and females for the Paired and Ribit groups was not balanced. Differences between males and females on pretest Neale Analysis of Reading Ability Revised (1988) accuracy and comprehension scores were not statistically significant but the scores were consistently lower for males. To counter bias possibly because of the differences in sex representation in the groups, additional covariate analyses will control for sex using dummy coding (male=1, female=0).

The sample selection criteria of 12 month delays in accuracy or comprehension was effective for comprehension but not for accuracy, for which pretest scores were higher. Three students in the Paired group and four in the Ribit groups had pretest accuracy scores at the maximum possible Neale Analysis of Reading Ability Revised (1988) score scaled in months (150). Similarly both groups had three other students with pretest accuracy scores within three months of the maximum, and others less than 12 months below the maximum score. Less of the pretest comprehension scores approached the maximum possible, but there were more students with smaller delays in the Paired Reading group than in the Ribit group, as indicated by the high pretest mean for the Paired Reading group (Table 1).
The combination of age of the sample and the reliance on random allocation for matched groups indicates a lack of sensitivity due to ceiling effects for accuracy and comprehension.

Hence, when testing the hypotheses additional analyses will allow for ceiling effects by selecting a subset of students with the lower Neale Analysis of Reading Ability Revised (1988) pretest accuracy scores to ensure at least 12 months behind their respective age in accuracy and comprehension. It is not necessary to select a separate subset for comprehension based on the pretest comprehension scores. As indicated random allocation was effective and did not require a different comprehension group.

The cutoff marked a clear distinction between 22 students (11 in each program group) with large versus smaller reading delays. For the Paired group the subset had a mean accuracy delay of 36.8 months (range 18 to 54 months) and a mean comprehension delay of 41.1 months (range 21 to 65 months). The respective Ribit group means were 29.9 months (range 12 to 54 months) and 41.0 months (range 19 to 60 months).

Correlations between pretest Neale Analysis of Reading Ability Revised (1988) comprehension and accuracy scores were marginally non significant in the Paired group ($r = .44, p = .06$) and not significant in the Ribit group ($r = .13, p = .59$). For the subset of students with greater reading delays, the difference in pretest score correlations between the Paired group
(r = .65, p = .03) and the Ribt group (r = -.14, p = .69) was found to be greater. Hence, changes in comprehension or accuracy may not be interpreted independently of each other, particularly in the Paired group. Covariance analyses will also be used to allow for the possible dependence of accuracy on comprehension (and vice versa).

4.2 Comprehension: Paired Reading Versus Ribt

Mean Neale Analysis of Reading Ability Revised (1988) comprehension scores are presented in Table 1. From observation of the full sample means only the Ribt group showed any increase. The pretest mean for the Paired group reflects the imbalance of high scores contributing to the selective ceiling effect for comprehension. The Paired group pretest means for the subset are higher than the Ribt pretest means but lower than either posttest mean; the selective ceiling effect is not evident
Table 1

Means and Standard Deviations for Neale Comprehension Scores (in Months) for the Full and Subset Samples

<table>
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<th>Pretest</th>
<th>Posttest</th>
<th>Total</th>
<th>Pre-Post Difference</th>
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<td>Full Sample</td>
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<tr>
<td>Paired</td>
<td>116.95</td>
<td>115.58</td>
<td>116.26</td>
<td>-1.05</td>
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<tr>
<td>(N=19)</td>
<td>(12.09)</td>
<td>(13.32)</td>
<td>(10.80)</td>
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<tr>
<td>Ribit</td>
<td>112.16</td>
<td>116.2</td>
<td>114.18</td>
<td>4.32</td>
</tr>
<tr>
<td>(N=19)</td>
<td>(12.46)</td>
<td>(14.03)</td>
<td>(12.09)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>114.55</td>
<td>115.89</td>
<td>115.64</td>
<td>1.63</td>
</tr>
<tr>
<td>(N=38)</td>
<td>(12.35)</td>
<td>(13.50)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subset Sample</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paired</td>
<td>113.45</td>
<td>117.82</td>
<td>115.64</td>
<td>4.36</td>
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<td>(10.90)</td>
<td>(11.98)</td>
<td>(9.79)</td>
<td></td>
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<tr>
<td>Ribit</td>
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<td>116.18</td>
<td>113.09</td>
<td>6.64</td>
</tr>
<tr>
<td>(N=11)</td>
<td>(9.92)</td>
<td>(13.79)</td>
<td>(10.56)</td>
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<tr>
<td>Total</td>
<td>111.73</td>
<td>117.00</td>
<td>117.00</td>
<td>5.50</td>
</tr>
<tr>
<td>(N=22)</td>
<td>(10.32)</td>
<td>(12.63)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note:* SD in parentheses below means.

Initially a mixed design two-way MANOVA was performed with time (pretest versus posttest) as the within subjects (repeated) factor, reading program (Paired versus Ribit) as the between subjects factor and comprehension scores as the dependent variable.¹

For the full sample the reading program by time interaction was not significant, indicating that the pretest-posttest effect was similar for both reading programs ($F(1,36) = 1.86, p = .18$). Ignoring the reading program, there was no significant difference in total pretest versus posttest means.

¹Univariate tests (Cochran's and Bartlett-Box F) and multivariate tests (Box's M) for homogeneity of variance were not significant for analyses of comprehension and accuracy in the full and subset samples, thus satisfying the required MANOVA assumptions.
\((F(1,36) = .69, p = .41)\), and ignoring time there was no significant
difference in total Paired Reading versus Ribit means \((F(1,36) = 0.32, p = .58)\).

With the subset, neither the interaction effect \((F(1,20) = 0.13, p = .72)\)
nor the overall Paired versus Ribit effect \((F(1,20) = .34, p = .56)\) were
significant, but the total posttest mean was significantly higher than the
pretest mean \((F(1,20) = 4.49, p = .04)\). That is, ignoring the reading program
the total posttest mean was higher than the pretest mean.

The MANOVA controlled the family wise error and was a more
conservative test for the hypothesis. Tabachnik and Fidell (1983) have
stated that when using MANOVA new relationships with the dependent
variables can be formed. It is then possible for ANOVA to assess these
newly formed relationships with the dependent variables.

While the interaction and program effects were not significant, it is
still possible for a simple main effects of pretest versus posttest to be
significant for either the Paired or Ribit group in the full sample, or for
both groups in the subset sample. One-tailed dependent t-tests (ANOVA or
t-tests reveal the same information when using only two groups) showed that
the pretest versus posttest comparisons were non-significant for the Paired
groups in the full \((t(18) = -4.4, p = .33)\) and subset \((t(10) = 1.22, p = .13)\)
samples and approached significance for the Ribit group in the full \((t(18) =
1.61, p = .06)\) and \((t(10) = 1.79, p = .05)\) subset samples.
One-way ANCOVA's were used to explore covariate effects on Paired Reading versus Ribit group differences in posttest-pretest change scores.\textsuperscript{2} Table 2 reports the differences between the Paired Reading and Ribit mean change scores adjusted for the effects of covariates and the significance test statistics for the mean difference in Paired versus Ribit change scores. The adjusted means reflect the influence of the covariates; in the first entry (without covariates) the adjusted means were the same as the observed change score means in Table 1. The first entry with no covariates was equivalent to an independent groups t-test, whereas the following entries allowed for the effect of the covariates.

Table 2

| Adjusted Mean Comprehension Change Scores and ANCOVA F-Tests with Group as the Dependent Variable. |
|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|
| Covariates | Adjusted Means | | | | | |
| Nil | Paired | Ribit | F | df | p |
| Full | -1.05 | 4.32 | 1.86 | 1.36 | .18 |
| Sample | -0.91 | 4.17 | 1.34 | 1.35 | .26 |
| Age, Sex | -1.01 | 4.27 | 1.47 | 1.34 | .23 |
| Age, Sex, Accuracy | -1.37 | 4.63 | 2.36 | 1.33 | .13 |
| Subset | Nil | 4.36 | 6.64 | 0.20 | 1.20 | .66 |
| Sample | Age | 4.55 | 6.45 | 0.11 | 1.19 | .74 |
| Age, Sex | 4.52 | 6.48 | 0.15 | 1.18 | .70 |
| Age, Sex, Accuracy | 3.82 | 7.18 | 0.45 | 1.17 | .51 |

\textsuperscript{2} The homogeneity of variance assumptions for using ANCOVA in analysing both accuracy and comprehension were not violated.
In the full sample only the Ribit had a mean increase in comprehension scores, whereas in the subset sample both groups had mean gains in comprehension scores. In both samples the Ribit group had higher mean gains than the Paired group, but the group differences were much lower in the subset sample. None of the comparisons between Paired and Ribit mean change scores were significant, and the effect of the covariates was minimal.

Examination of the full sample data revealed that individual change scores varied between -20 and +21 in the Paired group, and -20 and +23 in the Ribit group. There was an approximate balance between negative and positive change scores in the Paired group, but more positive than negative change scores in the Ribit group.

4.3 Accuracy: Paired Reading Versus Ribit

Table 3 reports the mean Neale Analysis of Reading Ability Revised (1988) accuracy scores. For the MANOVA on the full sample accuracy scores the reading program by time interaction was not significant, indicating that the pretest-posttest effect was similar for both reading programs ($F(1,36) = 0.53, p = .47$). Ignoring program, the total posttest mean was significantly higher than the total pretest mean ($F(1,36) = 5.23, p = .03$). There was no significant difference in the Paired versus Ribit total means ($F(1,36) = .10, p = .76$).

The results were similar for the subset, with non-significant interaction
(E(1, 20) = 0.14, p = .71) and overall Paired versus Ribit (E(1, 20) = .20, p = .66) effects, with the overall posttest mean significantly higher than the pretest mean (E(1, 20) = 4.89, p = .04).

One-tailed dependent t-tests showed that the pretest versus posttest comparison was significant for the Paired group in the full sample (t(18) = 2.04, p = .03) and approached significance in the subset sample (t(10) = 1.74, p = .05), whereas the same comparisons were not significant for the Ribit group in the full (t(18) = 1.16, p = .13) and subset (t(10) = 1.37, p = .10) samples.
Table 3

Means and Standard Deviations for Neale Accuracy Scores (in Months) for the Full and Subset Samples

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
<th>Total</th>
<th>Pre-Post Difference</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Full Sample</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paired</td>
<td>129.84</td>
<td>134.63</td>
<td>132.24</td>
<td>4.79</td>
</tr>
<tr>
<td>(N=19)</td>
<td>(16.33)</td>
<td>(15.11)</td>
<td>(14.88)</td>
<td></td>
</tr>
<tr>
<td>Ribt</td>
<td>132.63</td>
<td>135.10</td>
<td>133.87</td>
<td>2.47</td>
</tr>
<tr>
<td>(N=19)</td>
<td>(18.58)</td>
<td>(16.73)</td>
<td>(17.05)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>131.24</td>
<td>134.87</td>
<td></td>
<td>3.63</td>
</tr>
<tr>
<td>(N=38)</td>
<td>(17.31)</td>
<td>(15.72)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subset Sample</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paired</td>
<td>117.73</td>
<td>124.55</td>
<td>121.14</td>
<td>6.82</td>
</tr>
<tr>
<td>(N=11)</td>
<td>(9.11)</td>
<td>(11.89)</td>
<td>(8.36)</td>
<td></td>
</tr>
<tr>
<td>Ribt</td>
<td>121.09</td>
<td>125.91</td>
<td>123.50</td>
<td>4.82</td>
</tr>
<tr>
<td>(N=11)</td>
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<tr>
<td>Total</td>
<td>119.41</td>
<td>125.23</td>
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<td>5.82</td>
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<tr>
<td>(N=22)</td>
<td>(13.08)</td>
<td>(14.14)</td>
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<td></td>
</tr>
</tbody>
</table>

**Note:** SD in parentheses below means.

The ANCOVA results for accuracy are reported in Table 4. In both samples, the Paired Reading group had higher mean increases in accuracy scores than the Ribt group, which contrasts to the results for comprehension. Also, in both samples small initial group differences in the observed means were increased by the effect of the covariates, with the adjusted group differences approaching significance in both samples. Age was the most important covariate, with the following covariates not
able to account for further significant variance of accuracy change scores.

Table 4

<table>
<thead>
<tr>
<th>Covariates</th>
<th>Adjusted Means</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Paired</td>
<td>Ribit</td>
<td>F</td>
<td>df</td>
</tr>
<tr>
<td>Nil</td>
<td>4.79</td>
<td>2.47</td>
<td>0.53</td>
<td>1.36</td>
<td>.47</td>
</tr>
<tr>
<td>Full Sample</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>6.68</td>
<td>0.58</td>
<td>3.68</td>
<td>1.35</td>
<td>.06</td>
</tr>
<tr>
<td>Age, Sex</td>
<td>6.74</td>
<td>0.52</td>
<td>3.82</td>
<td>1.34</td>
<td>.06</td>
</tr>
<tr>
<td>Age, Sex, Comprehension</td>
<td>6.85</td>
<td>0.41</td>
<td>3.94</td>
<td>1.33</td>
<td>.06</td>
</tr>
<tr>
<td>Nil</td>
<td>6.82</td>
<td>4.82</td>
<td>0.14</td>
<td>1.20</td>
<td>.71</td>
</tr>
<tr>
<td>Subset Sample</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>9.98</td>
<td>1.66</td>
<td>3.68</td>
<td>1.19</td>
<td>.07</td>
</tr>
<tr>
<td>Age, Sex</td>
<td>10.00</td>
<td>1.64</td>
<td>3.73</td>
<td>1.18</td>
<td>.07</td>
</tr>
<tr>
<td>Age, Sex, Comprehension</td>
<td>10.17</td>
<td>1.47</td>
<td>3.77</td>
<td>1.17</td>
<td>.07</td>
</tr>
</tbody>
</table>

In the full sample individual change scores varied between -20 and +34 in the Paired group, and -15 and +21 in the Ribit group. There were relatively more positive than negative change scores in the Paired group than in the Ribit group.

In the Paired Reading group the change scores for accuracy and comprehension were positively correlated in the full (r = .49, p = .03) and subset samples (r = .59, p = .06); these correlations were significant for the full group and near significance for the subset group. However, change scores were not significant and negatively correlated in the Ribit group in the full (r = -.31, p = .20) and subset samples (r = -.57, p = .07). The probabilities for the correlations are from two-tailed significance tests.
4.4 The Relationship between Paired Reading Time and Reading Scores?

The time spent in Paired Reading was summed from daily logs kept by the parents for each weekday session. The mean duration for a session was 13.0 minutes (range 1 to 22) in the full sample, and 12.4 minutes for the subset sample (range 5 to 17). The average times were slightly below the stipulated 15 minutes for each session, and is attributed to some sessions being missed.

The small positive correlations between time spent and comprehension change scores were not significant (one-tailed tests) in the full sample ($r = .15, p = .28$) or the subset sample ($r = .38, p = .13$). There was no correlation between time and accuracy change scores in the full sample ($r = -.02, p = .47$) or the subset sample ($r = .06, p = .45$).

4.5 Parents and paired readers response to being involved in Paired Reading

In response to the question that parents had to answer weekly, 11 parents (58%) reported that their son/daughter did not demonstrate visible signs of distress by being involved in Paired Reading. Of the remaining eight parents, four (21%) reported that initially their children found it difficult, but soon started to enjoy reading; three parents (15%) occasionally answered the question. Of these three parents, one answered the question for only two weeks, while the remaining two parents
answered the question for four weeks. Although these three parents managed to follow the program through to completion with their children, they found that their children were upset throughout the Paired Reading sessions. The remaining parent did not complete the Paired Reading program.

**Summary**

From the results there appeared to be little difference between the Paired Reading and Ribit groups on comprehension and accuracy. The Paired Reading group had lower mean comprehension gains and higher accuracy gains, but these differences were not significant. However, there were three interesting findings: (a) the significant difference between pretest-posttest accuracy scores for the full Paired Reading group, (b) the effect of chronological age on the accuracy scores, and (c) the difference between the groups in correlations between comprehension and accuracy changes. Accuracy scores from the full and subset groups performing Paired Reading were positively correlated, with a significant correlation for the full group and a near significant correlation for the subset group. Ribit scores were not significant and negatively correlated for both the full and subset samples.

The finding that time was not related to the changes in reading scores corroborates other research (e.g., Miller et al., 1986).
The responses to the question are an important qualitative finding because scant research exists concerning the relationship of the parent/child dyad in Paired Reading.

Three important issues have emerged from the results:

1. The accuracy and comprehension scores suggest the presence of a ceiling effect affecting this age group when the Neale Analysis of Reading Ability Revised (1988) is used.

2. The significant pretest-posttest difference in the accuracy scores for the full Paired Reading group, the effect of age on accuracy and a positive correlation in change scores for the Paired Reading group and a negative correlation with the Ribit group require further investigation.

3. The parental responses suggest some difficulties for this age group within the parent/child dyad.
CHAPTER 5

DISCUSSION

5.1 Interpretation of the Results

The current study attempted to test the hypothesis that Paired Reading using parents as tutors would significantly remediate the reading difficulties of Year 8 students over the existing Ribit program. The initial analysis revealed that there was no significant improvement in comprehension in the full sample between pretest and posttest. However, the subset posttest comprehension mean score for the combined Paired Reading and Ribit groups was significantly higher than the pretest mean score. Within the groups, only the Ribit pretest-posttest changes even approached significance.

Although the Ribit group had larger average change scores, comparisons between the groups were not significant, and the effects of the covariates (age, sex, accuracy) were minimal. There were more positive changes than negative changes in the individual comprehension scores for the Ribit group with an even balance of negative and positive change scores in the Paired Reading group.

Similarly, for accuracy, the interaction effect for the full and subset samples was not significant, indicating that the pretest-posttest accuracy effects were similar for both groups. The combined groups had a significantly higher posttest mean compared to the pretest mean in both
samples, but when tested separately only the Paired Reading group had a higher posttest mean. However, the differences in change scores between the reading groups were not significant. The differences approached significance when the covariates were included (age, sex, comprehension), with age accounting for most of the increase in group differences. There were relatively more positive changes in individual scores in the experimental group than the control group.

No statistically significant relationships were found between time and comprehension/accuracy in both the full and subset samples for the Paired Reading group. This finding is consistent with other studies (e.g. Miller et al., 1986; Leach & Siddall, 1990). Miller et al. have noted that Paired Reading may not be one of the techniques that result in reading proficiency through generic practice.

The hypothesis that Paired Reading will significantly remediate the reading difficulties of Year 8 students over the Ribit reading program has not been supported. This implies that Paired Reading is not a more effective reading remediation technique than the existing school technique. However, the differences between the comprehension and accuracy results warrant a closer investigation.

The study highlighted eight measurement and methodological issues that pertain directly or indirectly to the use of the Neale Analysis of Reading Ability Revised (1988) with a high school population; (a) total Neale
Analysis of Reading Ability Revised (1988) scores, (b) stability of the accuracy scores, (c) instability of the comprehension scores, (d) dependence of comprehension on accuracy (ceiling effect), (e) sampling bias, (f) examination of the total sample's comprehension results, (g) the technique of Paired Reading versus the technique of Ribo, and (h) sex and age in the determination of reading scores.

5.2 Total Neale Analysis of Reading Ability Revised (1988) Scores

In the present study, the pretest mean accuracy scores were lower than the pretest comprehension scores. Of the Paired Reading studies reviewed, several reported lower pretest accuracy scores in comparison to pretest comprehension scores (e.g., Bush, 1985; Bushell et al., 1982; Joscelyne, 1989; Limbrick et al., 1985; Morgan, 1976; Morgan & Lyon, 1979). All studies reporting accuracy and comprehension scores used either the Neale Analysis of Reading Ability (1st ed.) (1958), Neale Analysis of Reading Ability (2nd ed.) (1966) or the Neale Analysis of Reading Ability Revised (1988).

The higher pretest scores for both accuracy and comprehension in this current sample is the result of a few students attaining the maximum (ceiling) standardised score allowed in the Neale Analysis of Reading Ability Revised (1988). The Neale Analysis of Reading Ability Revised (1988) has an age range for children of 6-12, but it is explicitly stated that it can be used for older children and adults (p.8). As noted before, other
researchers (Brimer, 1965; Bush, 1985; Carrick-Smith, 1982; Joscelyne, 1989; Vernon, 1965) have suggested that the Neale Analysis of Reading Ability (1st ed.) (1958) and the Neale Analysis of Reading Ability (2nd ed.) (1966) may not report accurate reading data because of two factors; (a) ceiling levels promote an uneven relationship as score and age increase, and (b) inflated individual scores. The use of ceiling levels and the extrapolation of reading ages are also used in the Neale Analysis of Reading Ability Revised (1988) for rate, accuracy and comprehension, and hence ceiling effects may exist. This could also be one of the main factors affecting individual scores. Specifically, Stothard and Hulme (1991) have found that the procedure of extrapolating reading ages in Form 2 of the Neale Analysis of Reading Ability Revised (1988) is an unreliable indicator of reading ability. They have concluded that both Forms 1 and 2 of the Neale Analysis of Reading Ability (Revised) (1988) may not be parallel and have recommended caution when interpreting retest data.

It is possible that with an older age group the Neale Analysis of Reading Ability (1st ed.) (1958), the Neale Analysis of Reading Ability (2nd ed.) (1966) and the Neale Analysis of Reading Ability Revised (1988) may lack the necessary sensitivity to detect statistically significant results.

5.3 Stability of the Accuracy Scores

The current study was unable to demonstrate significant differences in accuracy between the experimental and control groups. However, the
significantly higher accuracy means for the Paired Reading group (from pretest to posttest) warrants further exploration.

Research by Topping and Lindsay (1992) have concluded that generally the gains in accuracy from all the Paired Reading studies were more stable and reliable than gains in comprehension. In addition, the review also noted that the analysis of accuracy results did not demonstrate regression to the mean. Two studies (Bushell et al., 1982; Carrick-Smith, 1982) using the Neale Analysis of Reading Ability (2nd ed.) (1966) cited durable accuracy gains across different follow-up periods.

5.4 Instability of the Comprehension Scores

The current study was unable to show significant improvement in comprehension in either the Paired Reading or Ribit groups. In several previous studies (Lindsay et al., 1985; Morgan, 1976; Pearson & Lindsay, 1986) using the Neale Analysis of Reading Ability (1st ed.) (1958) and the Neale Analysis of Reading Ability (2nd ed.) (1966), the reliability of the Comprehension scale has been discussed. Specifically, children can only answer questions when they have not exceeded the specified number of mistakes. Therefore, as a consequence of achieving a threshold of just one or two points in accuracy (making less mistakes), subjects may then answer the required comprehension questions. The opportunity to answer an extra comprehension question can improve reading age substantially; an improvement of two months in accuracy can lead to an improvement in
comprehension of seven months. Stothard and Hulme (1991) have noted that comprehension scores from Form 2 of the Neale Analysis of Reading Ability Revised (1988) were unreliable when accuracy scores were in the upper limit of the test's range. Seventeen students (total Paired Reading and Ribit groups) retested on Form 2 in the current sample had accuracy scores in the upper range of the test. From the research by Stothard and Hulme nearly half of the current comprehension retest scores were unreliable. Topping and Lindsay (1992) have recommended "...caution in interpreting scores in comprehension on the Neale analysis" (p.211).

Overall, the greater stability of the accuracy scores suggests that the gains using Paired Reading may be more reliable for accuracy than the results obtained for comprehension.

5.5 Dependence of Comprehension on Accuracy

The Neale Analysis of Reading Ability Revised (1988) assumes that the ability to read words in context (accuracy), and answer questions taken from that context (comprehension) underlie successful test performance.

Obtaining the raw Accuracy score is based on the number of errors. For the first five passages, the highest error score permitted is 16 while, for the sixth passage 20 is the highest error score. Error scores exceeding these levels disallow a subject from answering the Comprehension questions.

Accuracy scores for each passage are obtained by subtracting errors from 16 or 20. Subsequently the passage scores are summed to provide an Accuracy
Raw score. This score is converted into a scaled Accuracy reading age. The highest reading age is 12 years 6 months or 150 months (Forms 1 and 2).

It is assumed that a subject who obtains less than 16 errors will be able to answer all the comprehension questions. A Comprehension raw score is obtained by calculating the number of correctly answered comprehension questions. This is similarly summed for each individual passage and a scaled Comprehension Reading Age is obtained. The highest Reading Age is 12 years 11 months or 155 months (Form 1) and 12 years 6 months or 150 months (Form 2).

Therefore, a better Accuracy score implies a better Comprehension score. Two interesting aspects have been revealed with this current sample (total Paired Reading and Ribit groups using Forms 1 and 2) of students. Firstly, an examination of individual scores revealed that there were 13 students with Accuracy scores between 145-150 months. Apart from one student with a Comprehension score of 141 months, the other 12 students had much lower Comprehension scores between 111-127 months. As the results in the current study indicated, there were less pretest comprehension scores than pretest accuracy scores at the maximum level at the start of the study. Secondly, the 16/20 error threshold revealed that 10 students were disallowed from completing the comprehension questions because they had errors that were greater than the threshold. Their pre/post accuracy scores ranged between 95-137 months while pre/post comprehension scores ranged
between 100-134 months. In comparison, the remaining students that were given the opportunity to continue on to the comprehension questions had pre/post accuracy scores between 96-150 months while their pre/post comprehension scores were between 91-142 months. The differences between the two groups in accuracy and comprehension suggest that the presence or absence of an accuracy threshold does not prevent gains in comprehension. It appears the assumption that comprehension is dependent on accuracy, as measured by the Neale Analysis of Reading Ability Revised (1988), is not a linear or necessary one for this age group. Further research should attempt to assess the value of the accuracy threshold by using two separate scoring conditions while removing the 16/20 error barrier; also to calculate scores by adhering to the error threshold criterion, and also recalculting errors by ignoring the error threshold criterion and including answers for all the comprehension questions.

5.6 Sampling Bias

Sampling bias was also a problem in that the random allocation process did not adequately match the groups on pretest comprehension or age and the distribution of males and females was not equal between the groups. It may have been more appropriate to use a paired matching procedure, that is to rank order all the Neale Analysis of Reading Ability Revised (1988) pretest scores and then randomly assign one subject from each consecutive pair into experimental and control groups. The posthoc
procedure of using subsets based on pretest scores attempted to correct the sampling bias. The covariate analyses provided a post hoc statistical adjustment to compensate for sampling bias. Posttest results from the subset were more useful than posttest results from the full samples.

5.7 Examination of the Total Sample's Comprehension Results

Despite the higher pretest comprehension scores for the full Paired Reading group there was a posttest loss of comprehension. However, the subset Paired Reading group made moderate gains in comprehension. The erratic comprehension gains for the full Paired Reading group could be accounted for by the selective ceiling effect, while the moderate gain in comprehension for the subset sample was possibly the result of removing much of the sampling bias. Dening (1985) has pointed out that only Pause, Prompt and Praise and Hearing Reading had better comprehension because more time was spent 'pausing,' thus allowing the child to self-correct. Recht (1976) has stated that improvement in self-correction indicated that the reader had better comprehension of the text. Self-correction is also part of the Paired Reading technique, but it plays a more prominent part in the Independent phase of reading. In the Simultaneous phase, a parent models the word for the child. If the majority of tutoring time is spent in the Simultaneous mode, then opportunities for self-correction are limited. In the current study, some parents mentioned that their children quite liked the notion of only reading together, and would object to reading independently.
One parent actually found it difficult to graduate to the Independent phase of reading. It is possible that some parents never graduated to the Independent phase of reading. This may have happened for, despite their chronological ages, most of these students were still somewhat basic in terms of reading skills, thus requiring a great deal of reading together. Some students may have actually graduated to the Independent phase and consequently improved their comprehension (through self-correction). These students could account for the moderate gain. However, lack of movement to the Independent phase of reading suggests reduced gains in comprehension.

The near significant gains in comprehension for the full and subset samples of the Ribit group may have resulted from the amount of time spent reading independently. As this group did not have to spend time reading together, there would have been more opportunity for self-correction.

To ascertain whether more opportunities for self-correction leads to better comprehension, Paired Reading sessions could be taped so the amount of time spent in the Independent mode, and the amount of self-correction could be quantified. If the comprehension gains can be linked to the amount of time spent in the independent phase, then more encouragement to promote self-correction could possibly improve comprehension. It is logical to assume that the more frequent the opportunities for self-correction in reading, the more likely a student will be able to use contextual clues in understanding the text.
5.8 The Technique of Paired Reading versus the Technique of Riban.

Studies reporting results from comparisons between Paired Reading and other reading procedures have found no differences when adequate experimental control is demonstrated (Joscelyne, 1991). However, the significant positive correlation between accuracy and comprehension change scores in the Paired Reading group suggests that there may be aspects of the Paired Reading technique that are superior to the Riban technique. Leach and Siddall (1990) have suggested that one of the reasons Paired Reading and Direct Instruction were more successful than the other techniques was their error-correction procedures. As noted Miller's (1987) "Elements Checklist" found that four aspects of Paired Reading were correlated only with accuracy gains. Although these elements were not measured in this study, they are intrinsic to the Paired Reading technique whereas in essence the Riban model is silent reading when alone. Other studies (Burdett, 1986; Elliott, 1989) have also noted improved accuracy because of the error-correction procedures in Paired Reading.

Improved reading together (in the Simultaneous phase) enables other reading skills to focus on comprehension (Topping, 1985). If the struggling reader focuses on word recognition, less skills are deployed for other reading strategies (e.g., using contextual clues). Any higher language processing cannot take place unless there is an automatic primary level of processing (Curtis, 1980). It follows that as attention to correct errors during the two
phases of Paired Reading reduces, and readers become more accurate, more attention is made available for comprehension. By contrast, as Ribit readers' accuracy increased, comprehension decreased. For these readers the decreased comprehension skills may be the result of more attention spent at the primary stage of reading accurately (leaving less attention for comprehension). As noted, these findings suggest that some elements of the Paired Reading technique may be superior to the Ribit technique.

Some experimental evidence for an improvement in accuracy leading to better comprehension can be found in Gallini et al's (1993) study. Students in the macro-level training group had a better understanding of the text over the micro-level readers and the control group. Micro-level readers were still using strategies that involved improving the accuracy of the text while macro-level readers were using strategies of deletion, summary, generation and invention (comprehension). Macro-level readers were not hampered by focusing on strategies to improve accuracy.

In this study the Ribit readers had the same benefits as the Paired Reading group which included parental attention, the comfort of the home, their choice of reading material, parent/student access to the researcher and the same amount of time involved in reading. However, there was no necessity for the parents to read with or listen to them. These children may have spent a lot of time on accuracy, and neglected comprehension which contributed to the negative correlation.
An interesting finding was that while accuracy and comprehension scores were correlated in the full Paired Reading group, only accuracy scores in this group increased (from pretest to posttest). These results suggest two possible explanations; (a) The Neale Analysis of Reading Ability Revised (1988) while able to adequately measure accuracy change scores, is unable to sensitively measure comprehension changes, and (b) although change scores were small, they were systematically related to changes in accuracy and comprehension scores in both Paired Reading groups. It is possible that a different learning process has taken place for the Paired Reading group in comparison to the Ribit group. However, more research is required to investigate these suggestions.

5.9 Sex and Age in the Determination of the Reading Scores.

The effect of sex as a covariate in this study was minimal on both accuracy and comprehension. Bushell et al. (1986) also noted in their study that sex had no effect on accuracy and comprehension. Research by Topping and Lindsay (1992) have stated that boys did not perform significantly better than girls in accuracy and comprehension, the implication being that sex did not have a significant impact on accuracy and comprehension. Of interest is the finding by the same researchers that generally girls at pretest were ahead of boys in accuracy, while boys were better in comprehension. There was no mention as to whether these findings were statistically significant.

While the Bushell et al. (1986) study also pointed out that
chronological age had no bearing on accuracy and comprehension, an
interesting finding from the current study was the impact of age in
increasing the size of the effect on accuracy scores in both the full and
subset samples of the Paired Reading group. The Paired Reading group had
a significantly higher mean chronological age than the Ribit group. In
research by Topping and Lindsay (1992) older children in Paired Reading
groups achieved higher gains in accuracy. However, while the Topping and
Lindsay research noted that the size of the gains were not significant, the
current sample's significant Paired Reading accuracy score with older
children suggest a more thorough examination of this technique. More
research into the effect of chronological age on the relative lability of
accuracy and comprehension scores is warranted.

6.0 Other Issues

Although research (e.g., Kroeger, 1989; Leach, 1993) with a primary
school population found that generally parent and child attitudes to reading
improved, some parents in this current study had difficulty with the
motivation of their children. This provides some evidence for Pumfrey's
(1986) query that the dyad of parent and child can possibly dissuade the
child from reading. In this study three students were upset about continuing
with the Paired Reading program. When asked for their reasons for being
upset, their most frequent reply was that they disliked being singled out.
This concern about being stigmatised occurred despite the fact that careful
attention was given to ensure the anonymity of the children at school. Topping (1991) has pointed out that weaker readers are particularly efficient at appearing on task, when in fact they often are not, and a history of reading difficulty becomes quite visible in a mainstream high school setting. This visibility has the potential to be quite distressing to the child. Future research should take into account the dynamics between parents and high school participants when designing a Paired Reading program.

Dening (1985) has claimed that there are greater benefits when parents are involved in regular programs with guidelines for shorter, more frequent sessions, than with infrequent sessions over longer periods. For example, daily 10 minute sessions may be more successful than five sessions of 20 minutes over six to eight weeks.

A more complete understanding of the issues surrounding reading failure may be needed to compare reading levels before and after parental involvement. These comparisons are difficult to make because of (a) test-retest violation of measurement validity due to repeated administration of the same test, and (b) holding constant all other educational variables during the baseline and intervention. An alternative approach would be to perform a time-series study of each child using a multiple single-case design.

The different standardised reading tests that are available cannot singly account for all the changes in the overall reading process. It has been claimed that the complex process of reading should involve "...attitudinal
measures, the use of contextual clues and word recognition" (Miller et al., p. 283, 1986). As there is a lack of consensus in the understanding of the complete reading process, a battery of standardised testing instruments may be a more appropriate method of assessment.

Finally, the methodology of the current Paired Reading program suggests that it followed the principles for the effective use of parents as tutors outlined by Leach (1986). The current program focussed on a number of issues; (a) scripted programs were used, (b) the current Paired Reading program was designed around homework, (c) contracts, written instructions, recording sheets, review dates and initiation/termination dates were all discussed, (d) parents were trained in accordance with the training methods employed by other Paired Reading studies, (e) a review date was also set up, (f) The current Paired Reading program was not designed for long-term intervention and parents were not interested in pursuing it after the eight week period, and (g) Parents and children were individually debriefed regarding the Paired Reading results. Using this framework, a major shortcoming was the inadequate monitoring of parents. More assessment of the individual skill level of parents as tutors may have been necessary.

6.1 Methodological Issues

Sampling Bias

The experimental and comparison groups could have been better matched in terms of sex, chronological age and reading age. A paired
grouping process could have been used initially and then randomization utilised with one subject from each pair allocated to either group.

**Logistical Flaws**

This researcher contacted each parent at home, tested all the students and taught Religious Education to ten of them. Good rapport was established with all the students. It is possible this may have reduced student anxiety, increased compliance and consequently improved their motivation. As the Neale Analysis of Reading Ability Revised (1988) can be administered by teachers, this would have controlled familiarity with the researcher.

The fact that there was no involvement by teachers made it difficult to obtain objective data on children's reading behaviour in the classroom. This information may have been useful in providing feedback to parents, and also in assessing the generalisation of gains made at home to the school.

Although a checklist was used to monitor correct usage of the Paired Reading program (through phone contact), no assessment was actually made of the individual skill level of the parents. Information as to whether to conduct more Paired Reading training sessions for parents was not sought.

Daily reading activities at school ran simultaneously with the Paired Reading and the Ribit programs. It was possible that contamination from the other reading activities may have occurred. (Richardson & Brown, 1977). If contamination had in fact occurred, it would have been difficult to attribute success or failure to the Paired Reading and the Ribit programs because of
the confounding effect of the other reading activities.

6.2 Summary and Conclusion

Overall Paired Reading did not prove to be a better technique than the existing Ribit reading remediation technique used at the high school. The comprehension posttest scores indicated that the programs did not differ in comprehension gains. There was some evidence to suggest that the mean pretest/posttest gain in accuracy was significantly better for the Paired Reading group.

The research into the Neale Analysis of Reading Ability (1st ed.) (1958) and the Neale Analysis of Reading Ability (2nd ed.) (1966) have noted problems with ceiling effects and extrapolated age scores for accuracy and comprehension. Some Paired Reading studies, using these editions of the Neale have also found flaws with its Comprehension scale. Research on the Neale Analysis of Reading Ability Revised (1988) has also noted difficulties with its construction. It may be possible that the Neale Analysis of Reading Ability Revised (1988) has similar problems because ceiling levels and extrapolated scores are still used in this test.

Other evidence revealed that the accuracy and comprehension change scores were positively correlated in the Paired Reading group, while negatively correlated in the Ribit group. It was suggested that as the Paired Reading group became more accurate, more attention was available for comprehension. By contrast, for the Ribit group, the negative correlation
may have been the result of the Ribit technique which possibly permitted the readers to focus on error reduction, thus using up attention and leaving less for comprehension.

Research has also speculated that the reading together phase, the Independent phase of reading, and the error correcting procedures are responsible for reading improvements. Other research has suggested that the two phases of reading are positively related to the gains in accuracy while the error-correcting procedure is intrinsic to accurate reading. Research into reading notes that the amount of attention is critical to effective reading. This may provide some additional understanding into the positive and negative correlations found in the individual scores of the Paired Reading group and the Ribit group respectively. However, caution was noted when interpreting findings from accuracy and comprehension change scores using the Neale Analysis of Reading Ability Revised (1988).

In this study, sex as a covariate had minimal effect on accuracy and comprehension gains. However, the impact of chronological age on the reading scores emphasises the necessity of exploring this variable further.

The current study also suggested that more qualitative information is required concerning the parent/child dyad. Issues surrounding reading failure were also described. This section ended with a brief description of the current Paired Reading program's ability to fit into the Leach (1986) framework for the effective use of parents as tutors.
Two main methodological flaws with the current study were outlined. These were the sampling bias and logistical flaws.

This study sought to address the lack of Paired Reading studies in the high school setting. The results have raised a number of issues for future research.

1. If more frequent opportunities for self-correction (in the independent phase) are afforded the child, will this improve reading accuracy and comprehension skills?

2. Reading is a complex behaviour and present tests do not capture the processes involved in reading. More sophisticated research, perhaps employing a battery of reading and cognitive tests is warranted.

3. For this age group, does comprehension depend on accuracy as measured by the Neale Analysis of Reading Ability Revised (1988)? To ascertain this, two scoring methods could be used. One method could use scoring in accordance with the accuracy threshold, while the other without the threshold with all subjects allowed to answer all the comprehension questions.

4. An investigation examining the elements of Paired Reading and how it affects overall reading proficiency is advised. Single-subject designs could be used to determine the development of individual skills. A baseline of reading behaviour can be determined prior to the implementation of an intervention phase and intensive monitoring used to log the changes in
component skills.

5. Examination of the individual change scores for accuracy and comprehension, and the correlation between accuracy and comprehension change scores seem to be lacking in nearly all the Paired Reading studies. The results from this study suggest that such analyses can contribute to the understanding of reading.

6. There needs to be a better understanding of the dyadic relationship between parents and high school participants. Some Paired Reading research has demonstrated positive changes in reading attitudes with primary school participants. However, this current research has suggested that there needs to be a clear focus on the relationship between participants and parents when designing a Paired Reading program, with parents as tutors, in high school.

7. The vast majority of Paired Reading studies have not used adequate experimental procedures. When small samples are used, randomization with a paired matching procedure based on pretest scores would minimise sampling bias. The balance between male and female representation could also be used where possible.

8. Many studies in Paired Reading have not reported significant statistical data, have provided limited data and have used simple analyses. Sophisticated analytical techniques can improve the understanding of the factors crucial to data collection, and how these factors are related to reading improvement.
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Appendix A

PAUSE, PROMPT AND PRAISE

1. FOR CORRECT READING

1. Your child should be praised when a sentence is read correctly.
2. Your child should be praised when he/she self-correction.
3. Your child should be praised when, once prompted, the word is read correctly.

2. FOR PROBLEM READING

4. As a tutor/parent allow your child to self-correct. However,

IF THE MISTAKE
DOES NOT MAKE
SENSE

IF THE MISTAKE
DOES MAKE SENSE

IF YOUR CHILD IS
SILENT

5. Clues should be provided pertaining to the meaning of the story, e.g. a question about the story.

6. A prompt should be given regarding the way the word looks, e.g. which part of the word is incorrect.

7. Your child should read to the end of the sentence. Alternatively, your child could start again.

If after 2 PROMPTS,

WORD IS INCORRECT

8. The word should be said for your child, e.g.

"The word is...................................."

M. FERNANDEZ
SCHOOL PSYCHOLOGIST/COUNSELLOR
Appendix B

PARENT AND CHILD READING TOGETHER - PAIRED READING

This is a new way of helping children to read well. I hope it will help you to help your child.

It has been found that some children are able to make very rapid progress with their reading when their parents read with them in a special way. Here are the details of this special way.

Please follow the directions as closely as possible, even though this may make it slow-going at first. It will not work if you get impatient, anxious or bad-tempered, so take your time to get to know it. Both you and your child should enjoy the scheme.

Reading with a Parent

A special Way

1. Your child should choose the book. It can be a school book, one you already have or a library book. (Don't worry if your child chooses something too hard the first few times. If your child keeps on choosing books that are too difficult, then guide them towards simpler material, but still let the child choose).

2. Read out loud, together, with a finger under the word as you read it, if you like.

3. Your child should try every word.

4. If your child makes a mistake, say the word correctly yourself. Then the child should say it correctly. Don't talk about the mistake or analyse the word - just carry on reading together.

5. When your child feels he can read a word without you, he should let you know by your "secret sign". This can be a knock on the chair, a tap on the arm, a tug at the sleeve, but never a word which would spoil the reading. Decide on your own "secret sign" between.

6. When your child makes a mistake when reading alone, do as in No. 4, say the correct word. The child will say it after you. Then carry on reading together until the next "secret sign".

7. This reading together should be for only about ten - fifteen minutes (at the most) and on five or six nights per week. It should be a pleasure for both parent and child, sitting close and comfortably together. Do praise the child for reading, for giving the "secret sign" and for reading alone.

Do not give attention to mistakes. Say the word correctly and carry on together. THIS IS VERY IMPORTANT.

MIGUEL FERNANDEZ
PSYCHOLOGIST/COUNSELLOR
Appendix C

Dear

In my role as the school counsellor, I must determine if you will encounter any academic problems now or in the near future. This is to ensure that your child obtains the maximum educational benefit while at La Salle Collge. At our College we offer a number of different reading programs. These are programs that allow the student to develop to his/her maximum reading potential. However, these are mainly school-based programs. I would like to try another technique out with your child called Paired Reading, which is home-based. This technique will be a continuation of the school-based approaches. I hope to initiate this project in Term 1, 1994.

I am doing this project to ensure that the students do not struggle as the year progresses and to do this some form of remediation must be attempted. I would also, with your permission, like to use the information for research purposes as I am about to complete a Master of Psychology degree at Edith Cowan University.

This project is entitled Paired Reading and it involves parents teaching their children to read (a complete description of the technique will be discussed at a meeting for all the parents of the children involved). This technique is aimed at increasing the reading accuracy and comprehension of students. The research on this technique is quite extensive. However not a lot of work has been done in the high schools. My attempt will be one of the first.

The main side-effects from the programme are boredom, not wanting to participate and anger at being chosen for such a technique (I will discuss this with you at our meeting). Although I am hoping for full participation, this is not compulsory. If you decide, you as parents, are unable to commit your time and your child to this project, then your child will not be involved in this project. However, your child will still be involved in all other school-based reading programs. In addition, your child’s non-involvement will in no way prevent him/her receiving help in the future if reading or other problems are detected. Your child will also be informed that they can remove themselves at any time from the project if they think it is not benefiting them.

I expect the benefits to the school will be enormous for not only the present Year 8’s, but also the students in the other grades. I am instigating Paired Reading as a school-wide training program from 1994 onwards. As this technique has not been attempted at the high school level, it will also benefit other high schools in W.A.

I hope to have 35-50 Year 8 students participate. They will be divided into an experimental group and a control group. The experimental group will undergo Paired Reading for the duration of Term 1 while the control group will commence paired Reading in Term 2. In the meantime the control group will go through the normal reading programs in the College. All the children will be tested for reading using the Neale Analysis of reading Ability.

The title of the project is Paired Reading and if you have any questions please do not hesitate to call me at the College on [redacted]

Yours faithfully

M. FERNANDEZ
School Counsellor
21st November 1993.
Appendix D

CHILD'S CONSENT FORM

I understand that;

(i) Mr Fernandez will only ask me questions about my reading,

(ii) he will be using my result for his research,

(iii) I can pull out of the project at any time,

(iv) once the project is completed, I will know what my reading result was, and

(v) no information about my result will be shared with anyone unless I give written permission.

I understand all of the above,

Signature: ___________ Name: ____________________ Date: ____________
Appendix E

1. Here is a list of books to read this year. The books are in groups like Adventure, Humour etc. You have to read at least 1 book from each group by the end of the year. i.e. 2 categories a term.

2. In each group, the books are roughly arranged in order of difficulty. The easiest books are at the top of the group, then they get harder. Choose books which match how well you read - not too easy, not too hard. Then try to improve over the year.

3. All books are in the RIB-IT corner of the College Library. You can also borrow them from your local library.

4. Keep a Reading Journal as you read. At least once a week, write 2 or 3 pages or more about the books you are reading.

5. Apart from the books recommended in this guide, every book you read this year counts for RIB-IT points. Other books (except English class novels) can be listed on the Extra Reading page of this sheet.

5. To show which books you have read and what you thought of them, colour over their title using the colour code below. It is an easy way to see how many books you have read for the year - just count the coloured-in times.

   COLOUR CODE:
   - **BLUE** : A great book!
   - **RED** : OK
   - **YELLOW** : YUK

7. Your SSR: teacher, your English teacher, your Teacher Librarians, your parents and your College Principal will all support and encourage you in your RIB-IT reading. Every 10 books completed will win you a certificate, a blue card and 2 chocolate frogs. You will also receive marks for English based on your reading from these lists and for your journal.

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### HUMOUR

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### BEING AUSTRALIAN

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### SCIENCE FICTION

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<td>The Hitch hiker's guide to the galaxy</td>
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# EXTRA READING

(Record extra books here - except English class novels)

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Appendix F

23rd August 1993

Dear

As I discussed previously I have scheduled a meeting for all parents who will be involved in the Paired Reading Programme this term. The following are the details of the meeting.

DATE: __________________________

TIME: __________________________

VENUE: __________________________

PLEASE BRING: Exercise book and pen

This meeting is for parents only and will include a video tape on paired reading, a discussion and demonstration of the technique and how I will monitor the programme.

If you have any queries would you please contact me during school hours at 274-6266.

I look forward to seeing you there.

Yours sincerely

M. FERNANDEZ
PSYCHOLOGIST/COUNSELLOR
Appendix G

PARENTS CONSENT FORM

Having attended the meeting,

I would like _________________ to go through the Paired Reading Project in Term ______.

I understand that;

(i) the results from this project will be used in Mr Fernandez's research for his Master of Psychology,

(ii) his/her result will not be discussed with anybody unless express written consent is given, and

(iii) his/her result will be safely secured in a filing cabinet in Mr Fernandez's office for the duration of 5 years.

I understand and accept all these conditions.

Signature: ___________ Name: _______________ Date: ___________
Name: ___________________       Week: ______

<table>
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<th>Day</th>
<th>Name of book</th>
<th>Time</th>
<th>With whom (Mum/Dad)</th>
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Total:

Question: Was your son/daughter upset by having you do Paired Reading with him/her this week?

Yes/No
Dear ________________,

Thank you for your participation in the recent reading project. The project will officially end on ____________.

Could you please keep your diaries and send them to me on the first day back to school.

I appreciate your expedience and attention in this matter.

Yours sincerely

M. FERNANDEZ
SCHOOL COUNSELLOR

4th April, 1994
Appendix J

Dear Parent,

Could I please see you Parent Teacher night on Wednesday (04/05/1994). This is regarding the Paired Reading programme. If you are unable to come to the appointment, could you please contact me at school on [Contact Information].

Thanking you kindly for your attention.

Yours sincerely
Mr. Miguel Fernandez
School Counsellor/Psychologist