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# **The Effectiveness of a Teacher Aide- Instructed Beginning Reading Intervention with an Emphasis on Phonological Processing**

A thesis presented in partial fulfilment of the requirements  
for the degree of

Master of Education (Special Education)

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New Zealand

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2001

I certify that the thesis entitled

*The Effectiveness of a Teacher Aide-Instructed Beginning Reading Intervention with an Emphasis on Phonological Processing*

and submitted as part of the degree of Master of Education (Special Education) is the result of my own work, except where otherwise acknowledged, and that this research paper (or part of the same) has not been submitted for any other degree to any other university or institution.

Signed: J. F. Rydes

Date: 4 March 2001

## Abstract

This study had several aims; first, to examine the phonological awareness skills of 6 and 7-year-old children; second, to identify students who appear to be at risk for difficulty in acquiring reading skills; third, to ascertain whether a teacher aide-instructed reading programme, which included systematic training in phonological processing strategies and letter-sound relationships, would be effective in enhancing the literacy skills of those children.

Twenty-four out of 64 7-year-olds were identified as scoring the lowest on a test of context-free word recognition. They were then given a battery of tests that measured skills in phoneme awareness, decoding skills, reading connected-text and reading comprehension. The 24 children were then matched on the basis of his or her raw scores on a context-free word recognition test. Twelve children received an intervention under teacher aide instruction, while 12 children received no intervention. After 24 weeks on the programme, the intervention and control children were tested using the same pretest battery. Follow-up testing was also conducted after two years using the context-free word recognition test and a test of reading accuracy.

Results suggested that the teacher aide-instructed intervention programme was a particularly effective procedure for those children deficient in phoneme awareness, decoding ability and context-free word recognition skills, and that improvements in those skills led to improvements in overall reading.

Teacher aide assistance in reading for those children identified as at risk may not be including direct, systematic instruction of letter-sound relationships and phonological processing skills; the skills which children need in order to become successful readers. This issue is discussed, as well as appropriate identification of children at risk, the use of teacher aides in instructional settings, and educational implications when planning intervention programmes in general.

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# Chapter 1

## Introduction

**Rationale** The inspiration for this study was initiated by an article in which Ryan and Openshaw (1996) openly shared concerns about the numbers of children in New Zealand schools who are failing to become successful readers and writers due to a dominant approach to reading instruction. In light of current reading research which now tells us that phonological processing deficits are what distinguish between good and poor readers (Nicholson, 2000; Spear-Swerling & Sternberg, 1996; Tunmer & Hoover, 1993), New Zealand continues to rely on reading approaches which fail to provide alternative strategies for those who may be at risk of reading failure. Ryan and Openshaw (1996) postulated that the failure to differentiate between groups of special needs children in New Zealand has contributed to the one dominant pedagogy. They further suggested that large numbers of children are not being serviced through New Zealand's two major sources of assistance, Reading Recovery and the Resource Teachers of Reading, as a result of long waiting lists.

This study arose out of a concern that children in New Zealand's junior classes are not receiving appropriate intervention strategies for the reading difficulties they

have, or are likely to have, and that the assistance in reading currently provided by teacher aide instruction may not be adequately addressing their needs.

**The Research Questions** The study sought answers to the following questions:

- Could a programme based on current reading research be run successfully by a teacher aide who has had no prior training or experience with code-emphasis approaches?
- Would the activities presented by the teacher aide lead to improvements in phonological awareness, decoding ability, and reading achievement when compared with a non-treatment control group?
- If higher levels of reading achievement are obtained, would this achievement be maintained over time?
- Could implementation of this programme be a cost-effective alternative for those identified as being at risk of developing reading difficulties?

**The Study** This investigation was an attempt to put research into practice by examining the effects that teacher aide instruction would have on a group of 12 junior children who were identified as being at risk for reading difficulties. These children were pretested and found to have low achievement scores in word recognition skills, phonemic awareness, decoding, and both reading accuracy and comprehension. Most of these children had not received Reading Recovery, and were considered too young for the Resource Teachers of Reading assistance. These children were matched with a control group who received no intervention. It was hoped that teacher aide instruction, through a series of highly sequenced semi-scripted lesson plans, would lead to improvements in the above skills when compared with a non-treatment control group, and that improvement in these skills would be maintained after two years.

## **Chapter 2**

### **Review of the Literature**

#### **Introduction**

The importance of the role that phonological awareness has in the acquisition of early reading skills is well established by research (see Nicholson, 2000, for a review of research). Many schools in New Zealand, however, are failing to put current reading research to practice, and are continuing to rely on traditional intervention strategies for all children, regardless of specific need. Programmes such as Reading Recovery, New Zealand's major intervention for young children, have proven to be costly in comparison with alternative programmes which may, in the long run, have greater benefits for children considered at risk of reading failure. Teacher aides, considered to be a highly valued resource for those who may be slipping through the cracks, are currently left with the role of helping those in need of reading assistance without the knowledge or skills of what or how to teach. This study was an attempt to put current reading research to practice by using a valuable school resource, the teacher aide/paraprofessional.

## Paraprofessionals

The awareness of the potential of paraprofessionals/teacher aides employed within the school system is growing (National Joint Committee on Learning Disabilities, 1998). Increases in their employment over the past 20 years have been documented (Jones & Bender, 1993) and are predicted to continue in the future (Giangreco et al., 1997). Teacher aides are considered highly valued school employees. However, concerns have been raised with regards to ensuring that they are used appropriately, have had adequate training, and are supervised and regularly monitored. When appropriately trained and supervised, paraprofessionals are considered a cost-effective means of providing services to children (National Joint Committee on Learning Disabilities, 1998), with outcomes which can be comparable to those found with professionally trained teachers (Snow et al., 1998). This source of labour remains an essential component of special education and related services (Blalock, 1991) and is playing an increasingly prominent role in the education of students with learning difficulties (Balshaw, 1992; Giangreco et al., 1997; National Joint Committee on Learning Disabilities, 1998).

**Terminology** The term "paraprofessional" has been used to describe personnel "who perform some professional level functions under the general supervision of a professional, but ... because of insufficient training or experience, are not allowed total responsibility" (Kelly & Vergason cited in Blalock, 1991, p. 200). In a school setting, labels such as "instructional assistant" (Giangreco et al., 1997), "classroom assistant" (Balshaw, 1992), "paraeducator" (French, 1999), and "teacher aide" (Allen & Dalton, 1990; Clegg, 1987;) are used to describe those "paraprofessionals" who may deliver direct services to students and/or parents under the direction of a qualified teacher or other professional. In the literature, the term "paraprofessional" is used interchangeably with aide, assistant and paraeducator, with no obvious

differentiation between roles. In the context of New Zealand education, however, “teacher aide” remains the predominant term.

**Changing Roles** The role of the teacher aide has undergone a shift from one of performing housekeeping and routine tasks to one of greater classroom involvement and instruction (Andrews & Lupart, 1993; French, 1999). Teacher aides are now spending most of their working hours instructing individuals or small groups of children (French, 1999; Meyen et al., 1993) and are assuming higher levels of responsibility for students’ academic needs (Marks et al., 1999). New roles for teacher aides may include conducting screenings, reporting student progress and assisting with assessments (National Joint Committee on Learning Disabilities, 1998). According to French (1999): “Paraeducators are really ‘teachers’ because what they do is, in fact, instruction” (p. 69).

**Concerns** While recognising the tremendous potential of the teacher aide as a support option for students identified as being at risk, there are a number of concerns regarding their role including:

- **Lack of Research**

Blalock (1991) argues that the integration of trained and practised paraprofessionals into intervention programmes has had a profound effect on individuals with disabilities. Teachers, administrators, and paraprofessionals themselves regard the work they do as an effective method of service delivery (Jones & Bender, 1993), and believe that their role is vital to the success of students (Blalock, 1991; French, 1999). There is little research data available, however, to suggest that students’ academic achievement or social development can be directly attributed to the utilisation of paraprofessionals (Jones & Bender, 1993), and that some approaches to providing teacher aide support may, in fact, be counterproductive (Balshaw, 1992;

Giangreco, 1997). Research into ways teacher aide support can be put to more effective use is needed (Andrews & Lupart, 1993; Marks et al., 1999). According to Marks, Schrader and Levine (1999) "further research to both identify improved practices for utilizing paraeducators in inclusive settings, along with the impact and outcomes of these practices is absolutely necessary" (p 327).

- **Paraprofessionals Who Teach**

Teacher aides are being assigned instructional responsibilities but may have little preparation to teach (French, 1999). They are usually the least trained member of the education team and are asked to engage in the most complex work which includes adapting, designing and implementing instruction without adequate supervision or evaluation (Meyen et al., 1993; Marks et al., 1999). Teachers, on the other hand, are expected to train and supervise the teacher aide in certain tasks which may be essential to the students' programme, but report that they are not prepared for the responsibilities associated with this, and are rarely taught ways to instruct and supervise teacher aides (French, 1999; Blalock, 1991). Without ongoing support and supervision, teacher aides will continue to assume roles that more qualified personnel should assume (Marks et al., 1999).

- **Lack of Communication/Collaboration**

Lack of communication and collaboration is cited in the literature as an area of concern with regards to teacher aides. As Blalock (1991) states: "Teachers assume that the assistants know what they should do, while the paraprofessionals wait for instructions" (p.206). This lack of communication can result in frustration and lack of job satisfaction for both aide and teacher (Blalock, 1991). Time constraints (French, 1999) and lack of adequate training (Blalock, 1991) are cited as major causes of the breakdown in communication.

**Paraprofessionals in the New Zealand Context** Much of the literature concerning teacher aides in New Zealand has been generated by either Colleges of

Education, Special Education Diploma students or Specialist Education Services in the form of a treatise (Clegg, 1987), handbook (Allen & Dalton, 1990), or training manual (Specialist Education Service, 1996). Certified teacher aide training is also offered through a professional and community education modular programme (College of Education, Massey University, 1999). These training packages and manuals, although essential, do not provide teacher aides with enough specific information on current research-based practices in literacy learning. Instead, a philosophy on the New Zealand approach to teaching reading is presented, with Pause, Prompt and Praise (Glynn, 1994) techniques being cited as the only strategy for reading instruction (Allen & Dalton, 1990; College of Education, Massey University, 1999; Specialist Education Service, 1996).

The employment of teacher aides in New Zealand is on the rise as a growing number of schools are trying to cope with the demands of a special education philosophy which has adopted a full-inclusion policy (Moore et al., 1999; Ministry of Education, 1996). The Special Education 2000 initiative targets resources through an ongoing resourcing scheme (ORS) or transitional resourcing scheme (TRS) to only 1% of the school-aged population who are considered "high needs" and are verified. For those large numbers of children who may have "special education needs" but do not fall into the "high" or "very high" needs category, a Special Education Grant (SEG) is distributed to schools to meet the needs of those "moderate" students who have learning and/or behaviour difficulties. Approximately 93% of schools use this grant money for language programmes, most commonly targeting support for individual or groups of students by way of purchasing additional teacher or teacher aide hours (Ministry of Education, 1998; New Zealand Educational Institute, 1999). This grant money may also be used for students identified as being at risk for reading difficulties, even though this particular group of student has never been included in a "special needs" category. Reading help by way of teacher aide assistance is often provided for those children who have failed to learn under expert individual teaching, such as Reading

Recovery (Clay & Tuck, 1992). If only 14% of schools use their Special Education Grant funding to purchase “specialist” services in the way of trained teachers for students at risk (Ministry of Education, 1998), the implication could be that the majority of schools are purchasing “non-specialist” services by employing teacher aides to run literacy programmes.

### **The Importance of Prevention and Early Intervention**

Prevention is cited in the literature as the best intervention for children at risk of reading failure (Blachman, 1996; Foorman et al., 1997; Nicholson, 1999; Snow et al., 1998; Torgesen et al., 1997). Effective prevention, according to Moats (1996) includes “direct teaching of speech-sound awareness, alphabet knowledge, the links between sounds and symbols, and fluent decoding of print” (p. 88). Providing excellent instruction for all students during their first years at school can prevent many children from developing reading difficulties as they grow older (Snow et al., 1998). Despite this, many children are not receiving the preventative instruction or intervention they need due to “wait and see” attitudes which often accompany certain philosophies of teaching and learning (Foorman et al., 1997, p. 244).

The importance of early intervention is well documented in a variety of sources (Clay, 1993; Nicholson, 1999; Snow et al., 1998; Spear-Swerling & Sternberg, 1996) and is evidenced by established programmes such as Reading Recovery (Clay, 1993) and Success for All (Slavin et al., 1994), as well as curriculum materials designed to target children during their first years at school (Adams et al., 1998; Cunningham & Hall, 1998; O’Connor et al., 1998). Campaigns whose goals are to “read by nine” (Ministry of Education, 1999a) and reduce junior class sizes (New Zealand Educational Institute, 2000) are examples of how priority is now being given to student achievement in the early years.

Children who begin reading early are advantaged due to positive Matthew effects (Stanovich, 1986) in that they are able to reap the benefits that are a by-product of reading. Conversely, those students who have difficulties which are not addressed early can easily become “off track” and fall behind their peers (Spear-Swerling & Sternberg, 1996), making remediation difficult as they get older (Wasik & Slavin, 1993). These children may also begin to develop bad habits in the way of ineffective word recognition strategies that, over time, are very difficult to unlearn, further hindering reading progress (McGuinness, 1997; Spear-Swerling & Sternberg, 1996; Tunmer & Chapman, 1996). Ineffective learning strategies can also lead to negative self-perceptions in young children, which in turn affect their willingness to learn (Tunmer et al., 1998). According to Pressley (1998), academic motivation is highest during the first years at school, at which time children believe that success is gained by trying.

## Early Literacy

Learning to read and write is believed to be a lengthy, complex process which begins well before any formal literacy instruction (Adams, 1996; Nicholson, 1999; Pressley, 1998; Snow et al., 1998; Spear-Swerling & Sternberg, 1996) and is influenced by biological, cognitive, and social factors (Snow et al., 1998). Although the capacity to read and write is somehow related to a child's developmental stage, there is no agreement on a precise developmental level or chronological or mental age which must be reached before they are ready (Snow et al., 1998). It is believed, however, that there may be stages that children go through during the process of learning how to read and spell. Anbar (1986), cited in Nicholson (1999), described several of these common stages when studying precocious readers:

- 1) Acquiring a familiarity with books and words in the environment, including looking at books, being read to and recognising signs and symbols

- 2) Recognizing letters of the alphabet and some “sight words”
- 3) Showing an interest in letter sounds and sound games
- 4) Beginning to spell words
- 5) Interest in sounding out new words
- 6) Reading independently

**The Simple View** In “the simple view” of how children learn to read and spell proposed by Juel (adapted from Gough & Tunmer, 1986, and cited in Nicholson, 1999), ethnicity, intelligence and oral language factors (in addition to socioeconomic variables) initially influence the development of phonemic awareness, or the understanding that spoken words are composed of individual speech sounds. Other factors influencing literacy development include exposure to print, cipher knowledge (knowledge of letter-sound relationships), and lexical knowledge, described as the memorised knowledge of how rules apply to particular words (Nicholson, 1999). With respect to beginning readers, however, cipher knowledge (decoding) is the key to recognising single words (Juel, 1994), and “the ability to read words, quickly, accurately, and effortlessly, is critical to skillful reading comprehension” (Adams, 1996, p. 3). According to Nicholson (1999), “word recognition skills are the foundation of literacy” (p. 22).

## **Phonological Awareness and Phoneme Awareness**

Phonological awareness is described in the literature as the conscious ability to detect and manipulate sounds in spoken language (Spear-Swerling & Sternberg, 1996). Enjoying rhymes, counting syllables in words and hearing similarities between sounds in words are general examples of this skill (Snow et al., 1998).

Phoneme awareness is described as the awareness of the discrete individual sounds in words, referred to as phonemes (McGuinness, 1997; Snow et al. 1998). Phoneme awareness tasks usually involve isolating, segmenting or combining phonemes to form words, or changing one word into another by manipulating the sounds (Nicholson, 1999; Yopp, 1988).

Spector (1995) points out that various terms have been used to describe the above abilities, including phonemic awareness, phonetic analysis, phonological processing and linguistic awareness. Spear-Swerling and Sternberg (1996) do not offer a clear distinction between terms. According to Snow et al. (1998), however, the distinction between the terms phonological awareness and phoneme awareness is a technical one, based on the size of the sound unit. Phonological awareness has been used as an inclusive term, referring to all sizes of sound units such as words, syllables, onset-rimes and phonemes, whereas phonemic awareness refers to sounds at the phoneme level only.

Phonological awareness in general and phoneme awareness specifically has attracted extensive research and discussion in several countries throughout the past two decades (Bradley & Bryant, 1983; Byrne & Fielding-Barnsley 1991; Castle et al., 1994; Chafoulease et al., 1997; Davidson & Jenkins, 1994; Griffith and Olson 1992; Hatcher et al., 1994; Lewkowicz, 1980; Lundberg et al., 1988; Olson, 1990; Spector, 1995; Torgesen et al., 1994; Tunmer et al., 1998) due to the relationship between these skills and subsequent reading acquisition and achievement.

**Phoneme Awareness as an Unnatural Ability** Adams (1996) states that in order “to learn an alphabetic script, we must learn to attend to that which we have learned not to attend to” (p. 66). Most people are not naturally conscious of individual phonemes when speaking or listening to words because our processing of spoken language has become so automated that attention is paid to higher order

meaning, not to a string of “meaningless” sounds (Adams, 1996). There is little need to pay attention to phonemes in speech until children begin to learn to read and write in an alphabetic language, where letters map on to sounds (McGuinness, 1997; Spear-Swerling & Sternberg, 1996).

Speech is heard naturally as a continuous stream of overlapping sound. Children must re-learn how to break words up into these sound segments prior to understanding the alphabetic principle (Adams, 1996; Lyon, 1996). Those who enter school without this ability can usually acquire it through direct and explicit instruction (Adams, 1996; McGuinness, 1997; Moats, 1996; Nicholson, 1999; Pressley, 1998; Snow et al., 1998; Tunmer et al., 1998).

Elly (1998) states that New Zealand children “learn to work it out by themselves” through shared reading and writing experiences (p. 37). The vast findings of the research community, however, suggest that this skill will not happen spontaneously in all children (McGuinness, 1997; Spear-Swerling & Sternberg, 1996), and that most are not able to do this on their own without explicit instruction or interaction with an adult who systematically draws attention to the code (Spear-Swerling & Sternberg, 1996). As Honig (1996) states: “To expect children to discover on their own what a few unsung geniuses figured out very recently in our species’ history is hopelessly romantic” (p. 31).

## **Phoneme Awareness, the Alphabetic Principle and Explicit**

**Instruction** The English written language is based on the alphabetic principle which is the combination of alphabetic understanding, or the understanding that letters represent sounds, and phonological awareness. The alphabetic principle enables the reader to crack the code by “mapping letters to sound” (Spector, 1995, p. 7). Explicit instruction in phoneme awareness skills is very effective in promoting early reading (Lundberg et al., 1988; Nicholson, 1999). However, explicit instruction in letter-sound correspondence in conjunction with phoneme awareness is

necessary in order to understand the alphabetic principle (Adams, 1996; Ball & Blachman, 1991; Bradley & Bryant, 1983; Byrne & Fielding- Barnsley, 1991; McGuinness, 1997; McGuinness et al., 1995; Mann, 1993; Pressley, 1998; Snow et al., 1998; Spector, 1995;). Without this understanding, a beginning reader will not be able to acquire the skills necessary to recognise words.

**Phoneme Awareness and Letter Name Knowledge** Both phoneme awareness and knowledge of letter names are known to be a strong predictor of success in early reading achievement (Adams, 1996; Spear-Swerling and Sternberg, 1996), although “knowing letter names is not much help in being able to read” (McGuinness, 1997, p. 175). McGuinness (1997) states that the issue of teaching letter names is actually problematic as it gets in the way of automatic decoding and encoding and does not promote good reading skills, whereas the knowledge of phoneme-letter correspondences does. Clay (1993), on the other hand, believes that knowing letter names contributes to the overall reading process as it is a helpful way to discuss print, provides a reference point from which the child can see progress gained, and to where they are headed.

Thompson et al. (1999) found that when children were not explicitly taught letter-sound correspondences they assumed that the labels for the letter names would provide clues to the sounds of isolated letters, and as a result were not learning the correct letter/sound correspondences. Knowing a letter name may be a helpful clue to the sound if the child already has segmentation skills (ie. ‘el’ for ‘l’; ‘es’ for ‘s’, with // and /s/ being the second phoneme). Children who are able to isolate the first phoneme in a word may believe that /e/ is the sound for both l and s, simply because /e/ is the first phoneme in the letter name.

## **The Relationship of Phoneme Awareness, Decoding, Word**

**Recognition and Comprehension** Phonological reading, or what most teachers call decoding, entails the reading of written words in isolation (Spear-Swerling & Sternberg, 1996). It is the translation from symbols into speech sounds or words (McGuinness, 1997), and involves sounding out and blending letters (Ehri, 1997). Children who are able to decode must have enough knowledge of letter/sound correspondences in order to get close enough to the exact word "so that the mind makes the right connection" (Honig, 1996, p. 62). If an individual can not identify words in print, they will not be able to comprehend meaning (Rooney, 1995). Successful sounding out reinforces visual identification of the word, which in turn results in automatic word recognition after a number of successful decodings. "Phonemic awareness is necessary for decoding, decoding is necessary for word recognition, and word recognition is the key to comprehension in first grade" (Honig, 1996 p. 41).

Reading and comprehension depend upon rapid and automatic recognition and decoding of single words which are associated with the ability to process sounds in language (Lyon, 1997; Nicholson, 1999; Spear-Swerling & Sternberg, 1996; McGuinness, 1997), although having good phoneme awareness is not a guarantee that this skill will automatically be applied as a decoding strategy (McGuinness, 1997). Nicholson (1999) states that there may be some children who enter school with sufficient phoneme awareness skills who do not learn to read easily, while others enter with no phoneme awareness and may still learn to read.

Reading difficulties children encountered by children are often a result of breakdowns at the word recognition level which includes decoding, or sounding-out words. Pressley (1998) states that 20-30% of first grade students experience difficulties learning to decode. Most reading programmes in whole-language classrooms do not teach word level skills, even though sounding out is associated

with strong reading ability, and is the preferred strategy of good readers (Pressley, 1998).

**Phoneme Awareness and Reading as a Reciprocal Process** There is now strong evidence to support a causal relationship between phoneme awareness and learning how to read (McGuinness et al., 1995; Snow et al., 1998;). Some suggest that reading instruction and practice alone cause phoneme awareness (Elley, 1998; Smith & Elley, 1997). However, strong evidence suggests that phoneme awareness is not always acquired by reading alone, and that good phoneme awareness skills are important prior to and during learning how to read (Juel et al., 1986; Pressley; 1998; Snow et al., 1998).

Phoneme awareness has been known to partially develop through children's early writing and invented spellings (Griffith et al., 1992). This awareness may not transfer to reading skills without specific instruction (Thompson et al., 1999). Some phonological awareness and decoding is necessary before a child begins to read words. If these skills are not initially present, a beginning reader will not practise reading. "If you cannot read, you do not practice; if you don't practice, you don't become automatic and fluent in your ability to recognize words" (Blachman, 1996, p. 66).

### **Phoneme Awareness as an Indicator For Later Reading**

**Achievement** Deficits in processing the sounds of language explain a significant proportion of beginning reading problems (Lieberman, 1997; Moats, 1996), and correlated problems with older readers (MacDonald & Cornwall, 1995). Instruction which leads to gains in phoneme awareness can directly affect the ease of reading and spelling acquisition and subsequent achievement.

It is now well established that measures of phonological processing skills or phoneme awareness are the key indicators in predicting reading success or failure, irrespective of intelligence (Hurford et al., 1994; Spear-Swerling & Sternberg, 1996; Tunmer & Hoover, 1993). The power of phoneme awareness to predict reading achievement enables early identification of students who may be at risk of reading difficulties (Hurford et al., 1993; Mann, 1993), and can guide appropriate programme implementation and instruction.

### **Relationship of Phonemic Awareness and Invented Spelling**

“Invented spelling is a spelling method in which the child creates their own spelling system based on knowledge of letter names and/or sounds” (McGuinness, 1997, p. 366). According to Blachman (1997), it is “a term used to justify an educational practice of questionable pedagogical benefit” (p. 425). There are some researchers who do agree on the benefits of invented spelling with respect to early literacy acquisition (Adams, 1996; Griffith et al., 1992; McGuinness, 1997; Nicholson, 1999; Pressley, 1998; Thompson et al., 1999;).

Learning to print letters helps a student to recognise them (McGuinness, 1997). Young children who are encouraged to spell a word as it sounds develop an understanding of the relationship between spoken and written words which reinforces sound/symbol relationships (Adams, 1996; McGuinness, 1997; Nicholson, 1999; Pressley, 1998). Practice in invented spelling helps develop phoneme awareness, improves reading fluency (Adams, 1996), and can become an important diagnostic tool for determining how much progress the student has made in learning the sound-symbol system in order to guide further instruction (Treiman, 1997).

Although there are benefits to encouraging invented spellings in the classroom, there are also concerns that practice in writing using invented spellings will replace direct instruction in word recognition and impede the learning of correct spellings

(Adams, 1996). A “just spell it as it sounds” (Adams, 1996, p. 382) approach may not be explicit enough instruction for some children. Children tend to exploit the names of letters rather than the direct image of the sounds they represent (Adams, 1996). This can be problematic for some, as learning letter names can become confused with sounds (McGuinness, 1997; Thompson, 1999). McGuinness (1997) fears that invented spellings may ultimately be used in order for children to discover the spelling system on their own, with spelling errors off limits to the teacher.

**Reading and Conventional Spelling** “An organized spelling programme in which children learn to spell large numbers of words correctly is one of the most productive, and most neglected strategies in helping children learn to read “(Adams, 1996, p. 375). Writing activities that promote conventional spellings can improve automatic word recognition, resulting in reading achievement gains (Spear-Swerling & Sternberg, 1996). Most children are able to gradually progress from invented spelling to conventional spelling by reading and through specific spelling instruction (Nicholson, 1999). Adams (1996) states that children must learn how to read in order to learn how to spell words.

## **Metacognition and Beginning Reading Skills**

Metacognitive strategies teach a child to become aware of how they learn. These strategies encourage the student to self-manage and monitor their own learning (Adelman & Taylor, 1993). Metacognition increases the likelihood of long term, appropriate use of reading strategies by incorporating information about the usefulness of the specific strategy (Pressley, 1998). Adding a metacognitive component to explicit instruction in phoneme awareness and letter-sound correspondences results in significant improvement in word recognition and reading comprehension (Cunningham, 1990; Tunmer et al., 1998).

## Measures of Reading Skills

**Measures of Phoneme Awareness** Assessing phoneme awareness typically involves tasks that require a hierarchy of skills which generally develop gradually in children between four and six years of age (Pressley, 1996). Adams (1996) states that the most primitive of these skills is the ability to rhyme. There is some debate as to whether rhyming skills may involve a separate ability (Yopp, 1988) as it has not been found to directly correlate with later reading and spelling achievement (Lundberg, 1988).

At a higher level of phoneme awareness skill, a child would be able to blend individual phonemes to form words, recognising for example that the sounds /m/ /a/ /n/ when blended together would be the word *man*. A more advanced ability would be for a child to segment a word into its individual sounds. Tests of segmentation and blending are good predictors of reading success. Share (1995), cited in Honig (1996), believes that phoneme blending is arguably the most important phonemic awareness ability in learning how to read. Other researchers consider phoneme segmentation skills to be the best predictor of early reading achievement when measured at school entry (Ehri, 1997). Lyon (1996) states that 80% of 7-year-olds have mastered the ability to segment words into phonemes, with 15-20% of 7-year-olds having difficulty - the same percentage of children estimated to have difficulty learning to read. Liberman (1973), cited in McGuinness (1997), found that phoneme segmentation was a skill in which approximately 30% of children were found to have no understanding, even after having been at school for two years.

The highest and most complex phoneme awareness skill involves manipulating sounds in words. Further tasks of phoneme awareness can include alliteration (naming words that begin the same), phoneme isolation, (naming beginning, ending or medial sounds), phoneme counting (counting the number of sounds in a word), and phoneme deletion (dropping a sound from a word) (Spear-Swerling & Sternberg, 1996).

**Measures of Decoding Ability** Research maintains that tests which involve having children read pseudowords, or nonsense words, are the purist measures of decoding ability, as this ability requires a detailed knowledge of the alphabetic principle and can replicate what a student faces when they see a new word for the first time (Gough & Tunmer, 1986; McGuinness, 1997; Spear-Swerling & Sternberg, 1996). The ability to decode pseudowords accurately is believed to be what sets good readers apart from those with reading disability (Felton, 1993; Rack et al., 1992).

### **Reading Programmes for Children At Risk**

Schools in parts of the United States have adopted specific reading programmes which are used with students who have been identified as needing remedial assistance. These code-emphasis approaches emphasise phonic skills to enable students to “crack the code” by directly and systematically teaching sound/symbol relationships which will then lead to the decoding of words. DISTAR (Direct Instructional System for Teaching Arithmetic and Reading, Englemann & Bruner, 1983), Auditory Discrimination in Depth (cited in McGuinness, 1997), ABD’s of Reading (Williams, 1979) and Wilson Reading System (Wilson, 1988) are all examples of programmes which are “packaged”, and include detailed lesson plans in the accompanying teacher’s manual. The majority of these programmes require extensive training prior to programme implementation.

**The Orton-Gillingham Approach** A number of phonics programmes used in remedial teaching in North America are based on the Orton-Gillingham approach (Spear-Swerling & Sternberg, 1996). Approaches involved in programmes such as these have been described as “highly structured teaching methods in a carefully

planned sequence of presentation, utilizing a multisensory approach to information processing followed by frequent practice/drill and training for the extension of the learned skills" (Rooney, 1995, p. 9). The key principles of these methods include over-learning, automaticity and multisensory (VAK: visual-auditory-kinesthetic) instruction (e.g., students learn letters and sounds by looking, saying and writing).

Critics of this approach argue that the structure and drill do not allow for any flexibility (Rooney, 1995), instruction does not contain a phonemic awareness component, letter names are taught (which may be problematic for some children), and many of these programmes lack a sound research base (McGuinness, 1997). Proponents maintain other interventions do not present material in a sequenced manner or allow for sufficient practice and review (Rooney, 1995).

- **The Herman Method for Reversing Reading Failure (Herman, 1995)**

The Herman Method for Reversing Reading Failure (Herman, 1995) is a packaged programme which falls under the rubric of Orton-Gillingham based instruction. It is a skill-level programme whereby the learning sequence ranges from letter/sound skills to simple decoding to reading in context, with many opportunities for review and reinforcement. Decoding skills are continually retaught and reviewed using varied materials and are reinforced with encoding practice (Herman, 1995). This programme implements principles and practices of bihemispheric integration, which according to Herman (1995) has been well researched. Research on this programme's effectiveness has not been well documented in the literature.

**Research-based Reading Programmes** There are now numerous published reading programmes which are purported to contain a phonemic awareness component. Many of these programmes do not actually train phonemic awareness or fail to integrate this skill appropriately into a child's classroom reading programme (McGuinness, 1997). News of the latest research provides an

opportunity for publishers to quickly put together curriculum materials or programmes which guide the practice of teachers without serious consultation with researchers. Some of these programmes may lack research support or are methodologically unsound (Shanahan & Barr, 1995). Authors of published material may only provide one-sided instructional information to teachers which de-emphasises word-level strategies and promotes a more whole-language philosophy of reading instruction (Smith & Elley, 1997). According to the Literacy Experts Group (Ministry of Education, 1999b), materials and ideas which influence teaching practices need to be well researched and supported by independent experts in the field.

**New Zealand Interventions and Instructional Programmes** Most accepted reading interventions, curriculum and support materials used with New Zealand children are influenced by meaning-based or whole language approaches to teaching reading, as opposed to instruction which focuses on letter/sound knowledge and word level strategies (Ryan & Openshaw, 1996).

Examples of major interventions or support for New Zealand children who may need extra assistance with literacy skills are Pause, Prompt and Praise, Resource Teachers of Reading, and Reading Recovery.

- **Pause, Prompt and Praise**

Pause, Prompt and Praise is described as a successful remedial reading programme originally designed to be used with older children and trained tutors (Glynn, 1994). The techniques identified with Pause, Prompt and Praise are now widely used in New Zealand schools with most teachers, volunteers, or teacher aides who are helping children with reading difficulties regardless of age or particular difficulty. Pause, Prompt and Praise encourages children to use sentence

context cues, as opposed to word-level strategies, in identifying unknown words (Greaney et al., 1997b).

The basic technique of the programme is to wait at least five seconds if the child makes an error while reading in order to give them a chance to self-correct.

Prompts are given in order to direct the child to the meaning of the sentence, or how the word looks or sounds. If the child doesn't know the word, they are directed to read on to the end of the sentence, or go back to the beginning and try again (Smith & Elley, 1997).

- **Resource Teachers of Reading (RTRs)**

The Resource Teacher of Reading is a specialist resource teacher who provides individual remedial tuition for those children in the middle and upper level of primary school. RTRs are based at one particular school site but itinerate to a number of nearby schools. Their programmes of instruction vary, but have been described as operating similarly to the Reading Recovery Programme, only in a more flexible manner (Greaney et al., 1997a) with Pause, Prompt, and Praise techniques being implemented.

Although these teachers generally do not work with children in the junior school, their role is worth mentioning as many children who are admitted on to their role have already been through, or have failed to successfully complete, Reading Recovery (Ryan & Openshaw, 1996). There is concern with regard to their role, as, to date, they have never received "specialist" training or been independently evaluated for their effectiveness (Ministry of Education, 1999b).

- **Reading Recovery**

The most widely used reading intervention in New Zealand is Reading Recovery, developed by Clay (1991). This is an intensive one-on-one tutorial, taught by specially trained teachers and designed to help the bottom 20% of struggling

readers catch up to their peers. According to Shanahan and Barr (1995), most research on Reading Recovery in North America has not been methodologically sound, in that the studies have failed to use control groups, did not use appropriate standardised testing measures, or did not include the less successful students in the statistics to measure student gains. Research in New Zealand has questioned the effectiveness of the current Reading Recovery Programme for some children, as this programme has traditionally not included instruction in phoneme awareness and word-level strategies; the very skills that most referred children need in order to become competent readers (Iversen & Tunmer, 1993; Nicholson, 1999; Tunmer et al., 1998).

Cost / Benefits of Reading Recovery Reading Recovery is an expensive option for at-risk students and the cost/benefits have been seriously questioned (Center, 1995; McGuinness, 1997; Pressley, 1998; Snow et al., 1998; Spear-Swerling & Sternberg, 1996), especially when compared with other programmes which may have similar, or even more promising results (Invernizzi, et al., 1997; Juel, 1996; Pikulski, 1994; Shanahan & Barr, 1995; Wasik & Slavin, 1993). Pikulski (1994) contends that preventing reading difficulties in the early years may at first appear expensive, but successful programmes can be very cost-effective when compared to later remediation.

In the United States, the estimated cost of Reading Recovery amounts to approximately \$US 4,600 per child in addition to the \$US 5,938 the taxpayer already pays for a child's education; with the average Reading Recovery teacher training 10 children per year, and 30% failing to benefit from the programme (Snow et al., 1998). Those who do well often enter the programme already possessing enough phoneme awareness skills necessary in order to succeed (Iversen & Tunmer, 1993; Nicholson, 1999; Snow et al., 1998;).

Although one-on-one teacher tutoring is considered the most effective by some (Juel, 1996; Pikulski, 1994), well designed small group interventions which are less expensive can be just as effective (Heibert et al., 1992; Spear-Swerling & Sternberg, 1996). Spear-Swerling and Sternberg (1996) suggest that "Reading Recovery may not be a way to utilize limited funds", especially in schools where many children need extra assistance (p.285).

New Zealand has recently raised concerns regarding the achievement of Maori and Pacific Island children (Ministry of Education, 1999a). If Maori children, on average, spend a much longer time on the Reading Recovery Programme than non-Maori (McCormack, 1990), one must question not only the cost, but also the overall effectiveness of the programme for this group of children.

**Deficiencies of Current Programmes** Most teachers do not teach phoneme awareness because they are not aware of what it is and how they can develop it in children (Pressley, 1998). Many whole-language programmes taught in classrooms offer no organized or sequenced instruction in phoneme awareness or letter-sound relationships (Honig, 1996). Well designed materials, teaching guides and inservice teacher training are not available, and new teachers and many instructional leaders do not have the knowledge in these research-grounded practices (Moats, 1994).

A number of well intentioned teachers are trying to teach the alphabet code under the guise of phonics by teaching children "the sounds of the letters" (McGuinness, 1997). Most teachers themselves do not know enough about the linguistic structure of language to be able to teach anyone else (McGuinness, 1997; Moats, 1994;), and poor instruction in phonics classrooms can be detrimental for those students at risk (McGuinness, 1997).

Without appropriate knowledge or training, teachers may tend to follow misleading advice offered by reading manuals or publishers who have aligned themselves with a specific philosophy which may not necessarily be based on current research. Well designed materials may not be used adequately if teachers have not been given an opportunity to learn how to use them (Snow et al., 1998). Snow et al. (1998) suggest that long-lasting changes regarding new instructional strategies can only be made by building strong collaborative teacher-researcher partnerships.

## **Teacher Education**

The ability to understand why children may have difficulties with phonological processing skills which impede reading progress requires knowledge and insight on the part of the teacher (Blachman, 1997). Teacher training programmes have been blamed for not providing adequate information and training in the linguistic structure of language that supports current research on reading and writing instruction (Moats, 1994; Pressley, 1998). Some states in the United States are now changing policies regarding current teaching practice competencies. California, for example, has made a major commitment to improve the basic reading skills of all primary and secondary students by implementing a state-mandated Reading Instruction Competence Assessment (RICA), an exam which must be passed by all incoming teachers prior to registration. This exam tests a teacher's knowledge of current research practices in literacy learning including phonemic awareness, systematic phonics instruction, reading comprehension, spelling instruction, oral language development and linguistic knowledge (California Association of Resource Specialists and Special Education Teachers, 1999).

In New Zealand, teacher educators within colleges of education have also been highly criticised for not providing teachers with adequate skills to teach reading,

imparting non-research-based practices, and for not providing a more balanced approach to reading instruction (Coddington, 2001; Partington, 1997). In his report, Partington (1997) expresses a number of concerns, including the “one-sided approach” which dominates New Zealand’s colleges of education, basic language weaknesses of new teachers and the effects that these will have on students, and the lack of skills graduating teachers possess in order to teach reading to children (p. 93).

## **Evaluating Programme Effectiveness**

Evaluation has been defined as “a systematic process designed to describe and judge the overall impact and value of an intervention for purposes of making decisions and advancing knowledge” (Adelman & Taylor, 1993, p. 74).

Effectiveness, in terms of positive outcomes, can be measured by comparing a specified goal with what actually happens. Evaluating the effectiveness of a programme usually involves testing measures, interviews, and systematic observations. However, many of these measures may not be considered reliable or valid, and decisions regarding what and how to evaluate are most often made by programme fund holders who may be influenced by their own values and beliefs (Adelman & Taylor, 1993). Although the process of evaluation is a complex one, it continues to be necessary in order for professionals to improve practices and be held accountable for student progress (Adelman & Taylor, 1993).

**Effectiveness of Early Literacy Programmes** Snow et al. (1998) lists criteria for successful supplementary interventions, including:

- daily lessons for most of the school year
- reading of continuous interesting text, along with specific strategies for decoding words
- systematic writing instruction
- carefully planned assessment and monitoring procedures
- professional development of teachers, teacher aides and volunteers involved with the programme
- preparation and supervision of those tutoring the children

Greaney et al. (1997b) lists three assumptions which guided instruction during research on rime-based analogy training. These following assumptions could also be considered positive outcomes of any effective beginning reading intervention:

- that children become active problem solvers
- that children are able to apply newly acquired decoding strategies to unknown words while reading connected text
- that children are made aware that successful attempts at decoding are directly related to the application of newly taught skills and strategies (p. 339).

## **Summary**

Learning how to read is a highly complex process which can be influenced by many factors. It is clear from research conducted over the past 30 years that phonological processing abilities in general, and phoneme awareness specifically are essential for learning how to read. This knowledge is very important when designing appropriate interventions for beginning readers. Moats (1996) believes that reading failure can be prevented for all but a small percentage of students, but research-based practices are not employed broadly enough to make a difference to many

children. Direct, systematic instruction of the alphabet code may be “the most powerful weapon in the fight against illiteracy”. However, this type of instruction is not routinely provided during the first two years of school (Blachman, 1996).

Budgetary constraints have prevented many schools from hiring specialist teachers or implementing the programmes needed in order to cope with the numbers of at-risk children. Inclusionary practices have also limited the programme options for those needing specialist help. As an alternative, teacher aides/paraprofessionals are being hired as a cheaper option and support for these children, only compounding the problem by providing inadequate literacy instruction.

New Zealand is barely scratching the surface with its limited range of adequate intervention programmes and services to those at risk of reading failure. A concern of The Literacy Taskforce Report prepared for the Ministry of Education (1999a) is that too many schools in New Zealand may be using literacy programmes without knowing enough about their effectiveness: “Effective intervention programmes are still needed for children who will benefit from more intensive, specialised teaching” (p. 21). Recommendations have been put forward to evaluate the adequacy of teacher training in literacy instruction, as well as addressing the need for specialist training for those who work directly with students who have literacy needs (Ministry of Education, 1999b).

In the United States, Reading Recovery has undergone independent evaluations which suggest that this approach may not be the most effective intervention for some children. In New Zealand, Reading Recovery continues to remain the sole accepted intervention for young children at risk. Current New Zealand reading research has now drawn similar conclusions to research overseas concerning its effectiveness (Tunmer et al., 1998), and recommendations have been made regarding modifications of its current programme (Ministry of Education, 1999a).

In a document on literacy in New Zealand schools, the Education Review Office (1997) reports that in about half of the 283 schools they reviewed, literacy education was managed in a “patchy or uneven fashion” (p. 11). Schools providing extra literacy assistance did not have any way to show whether the extra help or programmes were effective. In a current document on assessment practices in New Zealand primary schools, the Education Review Office (1999) reports that teachers “had relatively little information about phonetic knowledge of their students” which they could use for planning appropriate instruction (p. 20). “Many schools have not responded effectively to the needs of students who reach the age of eight to ten years without having learned to decode text efficiently” (Education Review Office, 1997 p. 40).

### **The Aims of This Study**

In view of these considerations, the major aims of this study were to:

- examine the sound awareness skills of 6 and 7-year-olds
- initially identify students who appear to be at risk of difficulty in acquiring beginning reading skills
- investigate a cost-effective programme that aims to enhance the literacy skills of children in that age group.

Based on the evidence in the literature, it was predicted that a teacher aide could provide training to a group of 6 and 7-year-old beginning readers which would result in improved phoneme awareness and decoding skills, leading to higher achievement on measures of word recognition, reading accuracy and comprehension. It was also hoped that several spin-off benefits would incur as a result of a teacher aide running this programme, including:

- on-the-job training
- knowledge of the latest research trends in literacy learning
- early identification and monitoring of a specific group of at-risk children who would not otherwise get assistance
- generating teacher interest which may influence their own teaching practices

## Chapter 3

### Method

#### Participants

**The Children** The participants in the study included 17 boys and seven girls who were between the ages of 6 years 2 months and 7 years 5 months on March 20, 1998. From March 1 to March 20, a total of 64 native English-speaking children between the ages of 6 years 0 months and 7 years 6 months were tested in a New Zealand public school using the Burt Word Recognition Test (Gilmore, Croft, & Reid, 1981). Twelve closely matched pairs were chosen from the lowest raw scores, with the children of each pair assigned to the intervention or control groups on a random basis. These 24 children were then given a battery of tests which measured various aspects of reading behaviour. Excluded from the intervention and control group were children who were receiving support services such as Resource Teacher of Special Needs (now referred to as Resource Teachers of Learning and Behaviour) or Resource Teacher of Reading, and those who were on, or likely to get on, the Reading Recovery roll prior to September of that same year. This eliminated eight children, five of whom were selected for Reading Recovery. In all but four cases, the Burt Word Recognition raw scores were corroborated by low performance on reading tasks within the classroom setting. In other words, the majority of these children had already been identified as low readers and had been placed in the

lowest reading groups by their teachers. Only one child (in the control group) began receiving support services through a Resource Teacher of Reading during the intervention.

All of the children involved were drawn from four separate Year 1, 2 and 3 classrooms and were representative of both middle and low socioeconomic groups. Of the 24 children included in the intervention and control groups, six were Maori (three in the intervention group, three in the control group) and 18 were European. Three of the children had previously received Reading Recovery and 11 were identified on Six Year Net Testing as “needing to apply letter-sound knowledge to reading”, “relying too heavily on picture cues”, “lacking confidence”, “not attending to print” or “capable of doing better”.

**The Teachers** Each of the teachers in the four classrooms employed a mixture of what they described as both “whole language” and phonics approaches. The researcher’s observation within each classroom during both reading and writing tasks identified the teachers as embracing a primarily whole-language philosophy combined with what Chall (1983, cited in Pressley, 1998) describes as analytic phonics. In other words, phonics skills were taught within the context of the reading lesson, and not as an isolated skill.

The children were instructed in ability groups based on the Reading Recovery coloured book levels. The Pause, Prompt and Praise (Glynn, 1994) technique was employed by all four teachers. Any “sounding-out” as a word level strategy when encountering unknown text was not encouraged. All teachers prompted the children to “read-on” and “go back to the beginning” as the primary reading strategies. Attending only to the first letter or blend was encouraged as a last resort during reading instruction. However, phonological skills were encouraged by all four teachers through children’s daily writing. All children had easy access to alphabet

charts as well as essential word lists for spelling. For those children having difficulty mastering sound-to-letter relationships, the teachers would voluntarily model a particular spelling by saying a word slowly to the child, encouraging them to hear all of the sounds. The children themselves were not encouraged to say the spelling word in question. Spelling approximations (invented spellings) were seen as a positive sign by the teachers that children were mastering letter-sound relationships. All but one of the teachers involved had had at least 20 or more years teaching experience. The least experienced teacher was a recent graduate of a New Zealand College of Education, and had only been teaching for a year and a half.

**The Teacher Aide** The teacher aide involved in the intervention had been working within the school. Although she was familiar with most of the children involved in the study, she was not aware of their academic abilities. Other than completing a module on reading in order to gain a teacher aide certificate through a local polytechnic, she had no credentials or prior training related to teaching children.

## The School

**Description** This study took place in a rural community in the lower North Island of New Zealand. The primary school participating in the study was centrally located in the town and had a student population of 264, comprising 64% European, 34% Maori, 1% Pacific Islander and 1% Chinese. It had been awarded a decile rating of three, possibly reflecting an overall low socioeconomic status, high unemployment rate, and transient roll. Many of the students were related and the parent involvement was described as low. Most children came from the surrounding

neighborhood, although a school bus provided transportation services for those who lived in the greater community.

In addition to the 10 classroom teachers employed by the school, there were also four itinerant teachers based at the site who provided services to local schools. These were an Itinerant Teacher of the Deaf, a Resource Teacher of Reading, and two Resource Teachers of Special Needs (now known in New Zealand as Resource Teachers of Learning and Behaviour). The school also employed a part-time Reading Recovery teacher.

**School Access** Gaining entry to the school was not difficult as the researcher was also one of the Resource Teachers of Special Needs already mentioned. Being an inside researcher proved advantageous in that the politics of the school was known. In addition, the researcher's colleagues were more open and less threatened by someone whom they knew and trusted. Objectivity was difficult to attain, however, which may be reflected in the teacher's interviews and classroom observations.

Towards the end of the 1997 school year, the school principal was approached, and through an informal meeting in which the intent of the research was discussed, permission to conduct research was granted by the school's Board of Trustees and Principal. This researcher was servicing four special needs children based at the above site during the study, none of whom were involved in any aspect of the research. Although the researcher had been based at the school site for four years, she was not familiar with any of the children who were participating as it was not customary at that time for a Resource Teacher of Special Needs to be involved with children younger than eight years old unless "obvious" special needs were an issue.

**Permission to Participate** All parents of participants were given an overall description of the study and a consent form to sign prior to any testing or intervention (see Appendix A). Parents of the intervention group were later informed that their children would be receiving extra reading assistance from a teacher aide. The four teachers involved were very willing to release the 12 students for the intervention but were unaware as to which children were in the control group. All four teachers had agreed to participate in an information session which familiarised them with the materials and described the rationale behind the intervention. The parents of those children involved in the intervention were also invited to participate in a similar meeting.

## Design

The investigation was a between-subjects comparison designed to examine the effects that explicit, structured lessons in decoding and phonemic awareness would have on children's word recognition skills and beginning literacy achievement. It was an intervention study designed to determine whether or not junior children, under teacher aide instruction, would significantly improve their word recognition skills, leading to improved reading achievement, when compared with a matched control group with no explicit instruction. Pre and posttesting gains were the primary source of data collection. Pretests were used in order to identify specific literacy needs, in addition to providing a source of data from which to measure progress. Post tests were used as an indicator of the extent to which students had gained skills or concepts taught in the intervention. Questionnaires, interviews and informal observational data were also used as a means of converging information for the purpose of programme evaluation, and were used in an attempt to corroborate any gains observed through pre and posttest results.

This design enabled the researcher to collect data on a range of literacy skills in order to appropriately identify a specific group of children who may not otherwise get assistance. It also provided opportunities to evaluate the effectiveness of a cost-effective programme which aimed to enhance the literacy skills of those identified children.

## Testing

Using the Burt Word Recognition Test (Gilmore, Croft & Reid; 1981), individual raw scores were determined for the purpose of forming 12 closely matched pairs from the lowest-performing children of the original sample of 64 children. Due to number restrictions and time availability, it was impossible for the researcher to perfectly match raw scores on the Burt Word Recognition Test. Care was taken, however, so that no two matched raw scores on the Burt Word Test were greater than two points apart. In order to eliminate any bias, each student was given a number. A simple coin toss by an impartial party determined which 12 children would be in the intervention group. The remaining 12 children were to receive no intervention. The children were then individually tested using a range of materials in order to measure phonological awareness (Phonological Awareness Test, Robertson & Salter, 1997), decoding skills (Pseudoword Naming Task, Richardson & Di Benedetto, 1985) and reading connected text (Neale, 1988). Although all children were matched initially on context-free word recognition skills (i.e., Burt Test), this also resulted in close matches in reading accuracy (i.e., word recognition in connected text) and comprehension as measured by the subtests from the Neale Analysis of Reading Ability-Revised (Neale, 1988). The means and standard deviations for age and the three reading measures (raw scores) for the intervention and control groups are presented in Table 1. As expected, *t*-tests of differences

between the means of the two groups for each of these variables revealed no significant differences,  $t(22) < 1.0$ ,  $p > .05$ .

**Table 1**

**Means and Standard Deviations for Age and the Three Pretest Reading Measures (raw scores) for the Intervention and Control Groups**

Group	Age (months)		Burt Test (raw score)		Neale Accuracy (raw score)		Neale Comprehension (raw score)	
	M	SD	M	SD	M	SD	M	SD
Intervention n (n=12)	80.00	5.12	15.83	7.91	10.00	6.81	4.67	2.10
Control (n=12)	80.75	3.89	16.17	7.69	8.33	5.21	4.17	3.66
Maximum Scores			110		100		44	

**Testing Materials** The Burt Word Recognition Test was used as the primary comparative measure, although other tests which reflect a wide range of early literacy skills were also used, including a Pseudoword Naming Task (Richardson & Di Benedetto, 1985), six subtests from The Phonological Awareness Test (Robertson & Salter, 1997), and the Accuracy and Comprehension subtests of the Neale Analysis of Reading Ability-Revised (Neale, 1988). Examples of tests used in this study are presented in Appendix B.

**Test Descriptions** Below is a detailed description of tests used in this study:

- **Burt Word Recognition Test (Gilmore, Croft & Reid, 1981)**

The New Zealand revision of the Burt Word Recognition Test was individually administered and provided a measure of context-free word recognition ability. In this test, the children are asked to read a list of words from a test card, printed in differing sizes of type, and graded in approximate order of difficulty, each word representing a portion of a year's growth (i.e., one month). Testing is discontinued when the children are unable to read 10 consecutive words correctly. Raw scores are derived from the number of words read, and can then be converted to Equivalent Age Bands.

It should be noted that the authors of this test found significant differences between the performance of boys and girls when computing norms, with girls consistently scoring higher than boys. It is for this reason that norms for the Equivalent Age Band are reported for both boys and girls separately and/or combined. For the purpose of this research, combined boys and girls norms were reported in an attempt to remain consistent with schools using this measure. Age norms were reported, however, only when the children's raw scores were high enough to be converted to age scores.

- **Pseudoword Naming Task (Richardson & Di Benedetto, 1985)**

This pseudoword reading test was used to measure knowledge of letter/sound patterns and provided information on each child's decoding ability, as literature indicates there is a positive predictive correlation between this ability and future literacy achievement. "Naming pseudowords is one of the tasks that most clearly differentiates good from poor comprehenders of text, especially in the beginning stages of learning to read" (Iversen & Tunmer, 1993, p. 114).

A list of 30 single-syllable nonsense words were presented in order of increasing difficulty, beginning with simple consonant-short vowel-consonant (e.g., 'jit') spelling patterns increasing in difficulty to consonant-consonant-vowel-vowel-consonant-consonant (e.g., "spound"). Before being asked to read the list aloud, each child was told that the pseudowords were names of children from a far-away land and were encouraged to read the names by sounding them out. Two practice items were given with corrective feedback prior to administering the test. Scoring is based on the number of nonsense words read correctly.

- **Neale Analysis of Reading Ability-Revised (Neale, 1988)**

The Accuracy subtest of this instrument was used as it provided a measure of recognising words in context, and gave the researcher an age-related measure in which to test whether there had been a transfer of learning from explicit instruction in decoding and phonemic awareness skills to reading actual text. These scores were also used to compare age-related scores from Burt during posttesting.

In this test, the children are asked to read aloud a series of short, graded passages. All miscues are noted, and a ceiling is reached after a child makes 16 errors in any one passage. Raw scores were also derived from the Comprehension subtest, in which questions were asked of each passage to ensure that the children had derived meaning from what they had read.

- **The Phonological Awareness Test (Robertson & Salter, 1997)**

Six subtests from this instrument were used in order to measure awareness of sound components in oral language. The high correlation between phonemic awareness and reading success is established by research (Bradley & Bryant, 1983; Byrne & Fielding-Barnsley, 1995; Fletcher et al, 1994; Hurford et al, 1994; Lundberg et al, 1988) and is well documented in a variety of current sources (Adams, 1996; McGuinness, 1997; Nicholson, 1999; Pressley, 1998; Snow et al, 1998; Spear-Swerling & Sternberg, 1996). Blachman (1997) states that although there appears

to be a hierarchy of phonemic awareness skills, there seems to be some uncertainty as to the extent that each skill contributes. These subtests were chosen as they represent the range of phonemic awareness skills that may be a necessary prerequisite for success in early reading and spelling, but are not specifically targeted in the children's classroom reading programmes. All subtests were given in an attempt to determine the extent that each skill contributes to the acquisition of literacy skills. Raw scores on all subtests are out of 10 possible and were used rather than age-related scores as almost all children were unable to reach basal levels of performance on at least one subtest.

The following four subtests from The Test of Phonological Awareness (Robertson & Salter, 1997) were used to measure specific phoneme awareness skills:

Phoneme Segmentation The child is presented with a word and asked to break it up into individual phonemes (i.e., "Tell me each sound in *cat*").

Phoneme Blending The child is asked to blend individual phonemes to make a real word when presented with isolated phonemes by the tester (i.e., "What word is this? /p-o-p/).

Phoneme Deletion In this task, a child is asked to repeat a word presented by the tester and then say it again deleting one of its phonemes (i.e., "Say *cat*. Now say it again but don't say /k/").

Phoneme Substitution (without manipulatives) The child is asked to isolate a sound in a given word and then change the given sound to another, forming a new word (i.e., "Say *paint*. Change /p/ to /f/. What's the new word?").

The Rhyming Discrimination and Rhyming Production subtests were also given to the children. However, because the children tended to perform at ceiling levels,

these two subtests were dropped from the test battery. This is consistent with earlier research indicating that rhyming ability may not be associated with other phoneme awareness tasks (Yopp, 1988; McGuinness, 1997) and specific training may not assist in this skill (Lundberg et al, 1988).

**The Questionnaires** The questionnaires were designed for the parents of the children in the intervention, the four classroom teachers involved, and the children in both the treatment and control groups. These questionnaires were written in an attempt to provide more than one method of data collection in order to seek convergence of results. They were used not only to provide feedback on the intervention, but also as a means of measuring variables by obtaining certain information on parent and teacher attitudes and/or support towards the teaching of literacy.

It is well established that teachers' attitudes and philosophies (Westwood, 1995), classroom instruction, and parental support all have a strong impact on student learning (Wang et al., 1994). Andrews and Lupart (1993) suggest that reading is the activity which provides the greatest direct involvement between parents and their school-age children, and participation in promoting school-based programmes at home can have positive effects. Opportunities provided at home for literacy acquisition can influence both motivation and attitudes towards literacy (Snow et al., 1998; Spear-Swerling & Sternberg, 1996).

Teachers' attitudes and philosophies can also influence outcomes of any new intervention. Reber (1995) defines the 'Hawthorne effect' as "the phenomenon resulting from the enthusiasm that participants feel toward any innovation and from the sense that the changes being introduced show that people are interested" (p. 317). Conversely, McGuinness (1997) implies that if teachers don't understand or believe in the rationale behind a new or different way of teaching, they may

unwittingly sabotage any efforts made by researchers or others who attempt to prove positive outcomes.

Names were not required on the parents' questionnaires, although all questionnaires were numbered to ensure full participation. A phone call was made prior to sending the parent questionnaires in order to inform participants that a questionnaire would be arriving in the mail. A letter of explanation accompanied each questionnaire (see Appendix C).

There were two parent questionnaires which were not returned in a timely manner. It was suspected that these parents had limited literacy skills themselves, so a follow-up phone call was made and the questionnaire was read over the phone, becoming a semi-structured interview which was completed by the researcher. In addition to the parents of the children in the intervention, the teachers, teacher aide, and students themselves were also given a questionnaire. The teacher aide completed the questionnaire on her own, whereas the four class teachers preferred to respond to the questions on an individual basis with the researcher who followed a semi-structured format.

Although complete objectivity is always the aim when developing research questionnaires, eliminating bias altogether was impossible as "human beings are not machines" (Bell, 1996, p. 95). This was especially the case when completing the face-to-face questionnaires with the teachers. The researcher is aware that question three on the Teacher Questionnaire (see Appendix C) is a leading and/or presuming question, and in hindsight, should have exercised greater caution in questionnaire development in order to ensure validity.

**The Interviews** As previously explained, some of the questionnaires followed a semi-structured interview format. Two parent questionnaires were discussed and

answered over the phone and completed by the researcher. All four teacher questionnaires became face-to-face semi-structured interviews which were also completed by the researcher. The student interview was also a structured questionnaire which consisted of two questions presented individually to the children in the intervention group towards the end of the intervention :

*“What do you like about going to Mrs. B’s reading group?”*

*“What don’t you like about going to Mrs. B’s reading group?”*

During posttesting, the intervention group and controls were all asked:

*“When you’re reading and come to a word that you don’t know, what do you do?”*

The former questions were asked in an attempt to discover whether the children participating in the intervention felt they had benefited. The last question was asked in an attempt to compare preferred reading strategies between the two groups, and to test whether the intervention children were choosing to apply word recognition strategies they had learned while reading. It was also an attempt to compare reading self-efficacy between groups, as those children who feel positive about reading tasks will have a tendency to persist at them (Chapman & Tunmer, 1995).

**Observations** Informal observations were conducted in the classroom in an attempt to be as unobtrusive and non-threatening as possible to both teacher and students. These observations were conducted in all four classrooms at the onset of the intervention in March and again in June and October. The purpose of the March observation was to get a general feel for each teacher’s style of teaching and to determine the extent to which the teachers provided phonics instruction within their whole-language curriculum. The June and October observations gave the researcher an opportunity to determine whether or not the children had been

applying new skills learned within the context of other mainstream reading activities, and whether the teacher was reinforcing and/or supporting the intervention within the classroom.

## Procedure

The study was carried out over a period of 24 weeks during the first three terms of a four-term school year. The children were tested individually in a quiet withdrawal room at the school. Prior to the intervention, the 24 students had been given the standardised tests previously mentioned (i.e., Burt, Neale), the Pseudoword Naming Task and the four phonological awareness subtests. Due to time constraints, the researcher was assisted by the teacher aide with pretesting. This exercise proved to be beneficial as the teacher aide was able to establish greater involvement, thus giving meaning to the intervention. The children were then retested after 24 weeks on the programme using all of the same measures as the pre-intervention testing. Approximately 12 weeks into the programme, the teacher aide, teachers and parents involved were given a questionnaire (see Appendix C). This was a means of recording views and concerns regarding the programme and its effectiveness.

The teacher aide was given very little initial training other than demonstrations on ways to introduce specific letter sounds and “spot checks” to ensure that she fully understood what phonemic awareness was and was producing sounds correctly. She had been informed by the researcher that she would be following daily lesson plans in order to carry out a supplementary reading programme with a total of 12 children, working with three at a time. Although feedback on the programme was welcomed, she was told not to diverge from the semi-scripted lesson plans without consultation with the researcher.

Meetings between the researcher and teacher aide were at irregular intervals and only occurred to clarify lesson plans, use of materials, or discuss any specific difficulties regarding the children involved. The researcher was available to model lessons when requested. This occurred on four occasions, during which time demonstrations of specific techniques were presented.

In October 2000, two years after the teacher aide intervention, 21 of the original 24 children in the study were located and retested using the Burt Word Recognition Test and the Accuracy subtest of the Neale Analysis of Reading Ability-Revised. Of the 21 children located, 20 were able to be matched with their original partners. Testing was conducted by someone outside the school who had been trained to administer the test.

## The Intervention

**Rationale** McGuinness (1997) states that many children are having difficulties learning to read because they are unable to make the connection between their own speech and the letter representations. Observations from this researcher indicate that some children are aware that sounds and letters go together and will try and memorise these sounds, not realizing that the letters are merely representations of their own speech. Teachers may teach the sounds without providing enough opportunities for the children to practise independently.

The lessons in this intervention were an attempt to provide direct instruction to the children in order for them to make the connection between their own speech sounds and the corresponding letters. Consequently, the primary focus for the teacher aide

was to instruct from sound (phoneme) to letter representation (grapheme) as opposed to teaching “the sounds of the letters”. The overall goal of the intervention once this concept was established was to provide the children with word level reading strategies so they could become confident, independent readers.

**Programme Overview** At the end of March when all of the initial testing was complete, the intervention in the form of semi-scripted lessons was introduced to the 12 target children. The teacher aide began instructing by presenting the daily lessons to groups of three children. Each daily lesson presented could vary from 20 to 30 minutes each day, but typically lasted up to 25 minutes. This took place four days a week so each child had a total of one hour and 20 minutes of teacher aide directed small group instruction per week. This was in addition to regular class reading and written language instruction.

The lessons and materials used in the intervention were derived from activities, theories or research based on a variety of sources (Adams et al., 1998; Cunningham, 1998; Eldredge, 1995; Herman, 1993; McGuinness, 1997; O'Connor et al., 1998;) adapted to the New Zealand context. Each of the 56 semi-scripted lesson plans presented had a set format which included:

- materials required
- recap (a review of previously learned material)
- phonemic awareness exercises
- a main lesson
- activity
- reading connected text (phonetically controlled readers).

Fifteen of the 56 lessons are included in Appendix D.

**Materials** The materials used in the intervention included 29 grapheme and phoneme flash cards, an alphabet chart with picture cues representing 35 phonemes and their corresponding graphemes, 41 phoneme counting picture cards, and 68 rhyming picture cards. Hand-held mirrors, dry erase boards, sound mats and letter tiles, 147 word cards, 24 word slides, 18 bingo cards and various worksheets were used.

Phonetically controlled storybooks (Modern Curriculum Press, 1986; Steck-Vaughn Company, 1991; Educators Publishing Service, 1995) were also used once the children were able to decode simple words. These books consisted of individual stories written in highly decodable text, thus giving the children practice in both decoding and reading connected text.

- **Alphabet Chart**

Letters on this chart were always displayed after each new sound is taught. The chart included individual key pictures and the corresponding letter(s) for the sound. Thirty-five phonemes were represented on the chart, including both long and short vowel sounds (i.e., the sun picture has an 's' beside it; the apple picture has an 'a'; the oats picture has the graphemes oa as in oat, o\_e as in hole, ow as in mow, and o as in so). This alphabet chart had a smaller matching set of flash cards (called letter cards) with the picture on one side and the corresponding letter on the back. The letter cards were used in every lesson to teach, reinforce, and review the letters and sounds.

- **Purple Syllable Cards**

These were 11 cards used in the first few lessons. They included pictures of six, three-syllable words (e.g., butterfly), five, four-syllable words, and one challenging five-syllable word (e.g., hippopotamus).

- **Yellow Rhyming Cards**

These included pictures of 34 rhyming pairs (e.g., clock/lock, box/fox, sun/run).

- **Blue Phoneme Cards**

These were picture cards designed to identify and count phonemes in words. Cards one through 12 included pictures of two phoneme words (e.g., pea, bow, hay). Cards 13 through 21 included three phoneme words (e.g., leaf, bat, fish). Cards 22 through 30 included beginning and ending consonant clusters (e.g., lamp, snail, mask). Cards 31 through 41 were the most challenging and included four and five phoneme words, in addition to /er/ (e.g., tiger, peanut).

- **Sound Mats and Letter Tiles**

This concept was adapted from Elkonin (1973).

These were small mats with three or four squares drawn in a row. They were primarily used with the letter tiles in the dictation exercises, whereby the teacher aide dictated a word and the children spelled the three or four phoneme word with their letter tiles.

- **Green Picture Cards**

These were 72 unnumbered picture cards representing CVC (consonant, short vowel, consonant) words. Children used the cards to independently spell CVC words with their letter tiles on the sound mats.

- **Little Picture Cards**

These were used when introducing new sounds and letters. Three little picture cards are used when introducing the first 25 phonemes, including /a/. See Lesson 9 in Appendix D for an example of this.

- **Word Slides and Word Lists**

Twenty-four CVC, CCVC and CVCC word lists and their corresponding word slide for each vowel sound were available for the children to quickly decode. For example, a word list with short 'e' words would be introduced into the corresponding slide with the picture of the egg. These were introduced in Lesson 22 (see

Appendix D) and were words that the children may have already read in previous lessons, with the main differences being that they were written in smaller type, the words on each list had the same vowel sound, and the children were encouraged to decode in their heads, as opposed to sound-blending out loud. The primary goal when using the lists and slides was to increase speed and accuracy when decoding.

- **Bingo Cards**

Playing bingo was a reinforcement activity played in several different ways. Each child was given a Bingo Card with graphemes on it. The teacher aide calls out a sound or shows a picture from the numerous picture cards available. She then identified whether she wanted the focus to be on the beginning or ending sound. The child named the picture, and from their letter choices on the bingo card, determined what the grapheme representation of the sound was, placing a token on the letter(s).

- **Worksheets**

Silly sentence worksheets were introduced as an individual activity to assess decoding and comprehension. The four worksheets contained a “yes” or “no” answer to a silly question, for example, “Can a bug kick a duck?”. There were eight to 10 questions on each worksheet. A further 13 worksheets were available and designed to use with the long vowel lessons 48 through 56. These word worksheets contained four rows of regularly spelled words which were individually read by the student. An example of this is in Lesson 48 (see Appendix D), when /a/ as in acorn is introduced. The words on the worksheets were then sorted and written down according to their spelling pattern (i.e., all of the ‘a\_\_e’ words go in the a\_\_e column; ‘eigh’ words go in the ‘eigh’ column, etc.).

- **Phonetic Storybooks**

Upon completion of Lesson 28 (see Appendix D) when the children had mastered sounds in isolation and practised blending those sounds together, phonetic

storybooks were introduced in order of vowel sound mastered (i.e., children begin reading the short 'a' books first, short 'o' next, etc). These books are commercially available and were read at least two times a week between lessons.

**Lesson Overview** Each lesson presented by the teacher aide had the following format:

- **Phoneme Awareness Exercises**

The phoneme awareness exercises in these lessons were primarily oral activities which included tasks of rhyming, phoneme isolation, segmentation, blending, deletion and substitution (e.g., Say 'man'. Is there a /m/ sound in 'man'? - not letter name. Is it at the beginning, middle or end of the word? Say 'man' without the /m/). This portion of the lesson comprised about five minutes.

- **The Lesson**

The main lesson typically introduced a new phoneme and its letter representation, but also included reinforcement activities such as letter writing and/or simple word dictation or "chaining" exercises using letter tiles (adapted from McGuinness, 1997). Children would use their sound mats and tiles to make the word dictated, followed by: "If that is \_\_\_\_, then show me \_\_\_\_". An example of this is provided in Lesson 8 (Appendix D), after sound blending is introduced. This portion of the lesson comprised approximately 10-15 minutes.

- **The Activity**

During the activity portion of the lesson, the children usually made their own individual flash cards or made use of the numerous rhyming or phoneme picture cards in a group or individual game. This usually took place during the last five minutes of the lesson.

- **Reading Connected Text**

After the children had completed a set number of lessons and had mastered the appropriate letter/sound relationships they were introduced to the decodable stories. These books were read individually by the children as a way of encouraging them to use word level reading strategies, instead of relying on picture or context cues only. As previously mentioned, the lessons which the teacher aide followed were semi-scripted, which meant that everything she needed to say was written down (in each lesson this was represented by bold type). This was important, especially in the initial stages of the intervention, because it not only guided the children's thinking about sounds in language but also became a tutor for the teacher aide.

**Additional Materials and Underlying Assumptions** The use of physical objects had been built into particular lessons to assist in the understanding of specific concepts, for example:

- toy microphones were used to "sing" the sounds together
- stretch toys were used to "stretch" out individual sounds
- hand gestures were used under the chin to separate sounds
- mirrors were used in order for the children to observe what their mouths were doing when they said sounds, and to help with sequencing sounds during the dictation exercises (these were the chaining exercises described previously)

The individual lessons in this intervention stressed the following concepts:

- The encouragement of sensory cues to develop phonological awareness (e.g., the use of hand-held mirrors so students are able to observe their own speech) (Spear-Swerling & Sternberg, 1996).

- Letters don't have sounds. Speech has sounds, and letters represent speech sounds (McGuinness, 1997). The teacher aide stressed to the children in the intervention that they already knew the sounds, they just needed to remember the letters that the sounds go with.
- Letter names were not taught, as children may confuse names with sounds (McGuinness, 1997). These lessons constantly stressed sounds, not letter names.
- Picture cues were given to unlock the sound. Children in the intervention said the name of the picture and were then asked: "What's the first sound that comes out of your mouth when you say \_\_\_\_\_?" (adapted from Herman, 1993).
- Picture cues used were simple, attempted to represent the purest form of the sound (e.g., vowels) and were easily spelled phonetically (e.g., lamp for /l/; sun for /s/ and net for /n/).
- Children were introduced first to a limited number of graphemes (e.g., m, s, r, f, a, n, t, p), and then immediately began reading and spelling words containing those sounds (adapted from Herman, 1993). These first six graphemes are "continuant sounds" and are introduced first because they are easy to stretch (Griffith & Olson, 1992).
- New letters were introduced slowly, while old letters were continuously being reviewed. "Tricky" sounds/letters such as /y/ and /qu/ in Lesson 23 (see Appendix D) were given special attention.
- Reading and writing were recognised as a reciprocal process, with one reinforcing the other. The handwriting component of the programme taught correct letter formation and encouraged the children to say the sound as they wrote the letter (adapted from Herman, 1993). Particular attention is paid to the letters 'd' and 'b' in an attempt to eliminate any confusion or potential reversals (see Lesson 20 in Appendix D).

## Programme Completion

Although the intervention originally included more than 63 lessons, due to time and budgetary constraints, the teacher aide was only able to complete 56 of these lessons. It was believed, however, that the children had acquired sufficient skills to be able to connect their own speech with letters and to enable enough "bootstrapping" (Nicholson, 1999; Stanovich, 1986; Tunmer & Chapman, 1996) to occur. In other words, these children had developed sufficient skills in decoding and word recognition to enable them to continue to apply these strategies while practising reading, which further enhanced their skills. The children were all retested using the measures previously mentioned. Upon completion of the programme, all parents of children involved in the intervention received a full written report of progress, including pre and posttesting results along with recommendations.

## Chapter 4

### Results and Discussion

**Pre and Posttest Results** The pre and posttest means of the intervention and control groups on all measures are shown on Table 2 (the phoneme awareness total score is based on the summation of the four phoneme awareness subtest scores). Although gains were made by both groups, the intervention group outperformed the control group at posttest on all measures (see Figures 1 through 5). A 2(group) x 2 (time) ANOVA was performed on the data for the following measures: Burt raw score, Neale Accuracy raw score, Neale Comprehension raw score, pseudoword decoding and phonological awareness (total score). Of particular interest were the significant Group x Time interaction effects found for the Burt Test,  $F(1, 22) = 13.95, p < .001$ ; pseudoword decoding,  $F(1, 22) = 581.02, p < .001$ ; and phonological awareness (total score),  $F(1, 22) = 60.76, p < .001$ . The results suggest that the intervention programme was a particularly effective procedure for improving low-performing readers' context-free word identification skills, decoding ability, and phonemic awareness skills. The Group x Time interaction effect found for the Neale Comprehension approached, but did not quite reach, statistical significance,  $F(1, 22) = 17.52, p = .073$ . This suggests that there was a tendency for the positive effects of the intervention programme to generalise

Table 2

Pre and Posttest Means and Standard Deviations for Control and Intervention Groups on All Measures

Measure	Maximum Score	Control group receiving no intervention (n=12)				Intervention group receiving teacher aide intervention (n=12)			
		Pretest		Posttest		Pretest		Posttest	
		M.	SD	M	SD	M	SD	M	SD
Burt raw score	110	16.17	7.69	26.17	8.00	15.83	7.91	33.58	7.93
Neale-Accuracy raw score	100	8.33	5.21	18.17	7.96	10.00	6.81	24.00	7.93
Neale-Comprehension raw score	44	4.17	3.66	7.67	2.90	4.67	2.10	10.58	2.35
Pseudoword reading	30	0.83	1.47	4.75	5.36	0.67	0.98	18.50	2.71
Phoneme Awareness Total Score	40	9.92	5.55	15.42	5.16	11.08	6.19	31.83	4.30
Phoneme segmentation	10	1.42	1.31	1.75	1.36	1.83	1.99	8.33	1.07
Phoneme deletion	10	5.00	2.83	6.50	2.11	5.08	2.68	8.25	1.76
Phoneme blending	10	2.75	2.67	5.17	3.24	3.00	2.41	9.58	0.67
Phoneme substitution	10	0.75	0.75	2.00	1.86	1.17	1.11	5.67	1.92

to reading comprehension performance, which is consistent with earlier findings which demonstrate the correlations between decoding accuracy and reading comprehension (Byrne et al., 1992; Juel et al., 1986; LaBerge & Samuels, 1974, cited in Pressley, 1998).

The Group x Time interaction effect for Neale Accuracy failed to reach significance. A possible explanation for this result is that the children in the control group were able to use compensatory strategies when reading words in connected text, a finding similar to that reported by Greaney, Tunmer and Chapman (1997).

Figure 1

Mean Number of Words Correctly Identified by Intervention and Control Groups for Burt Word Recognition Test at Different Points in Time

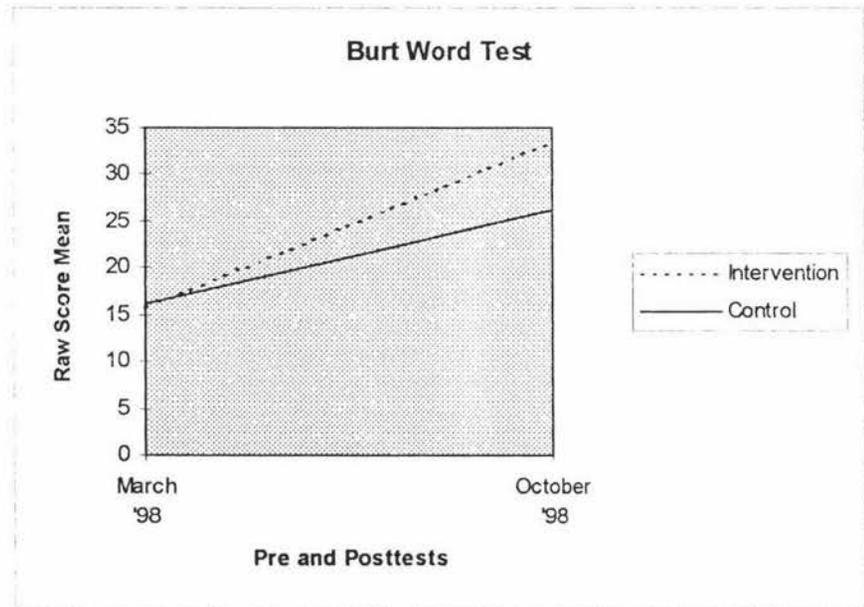


Figure 2

Mean Raw Scores Achieved by Intervention and Control Groups for Neale Analysis of Reading Ability-R (Reading Accuracy) at Different Points in Time

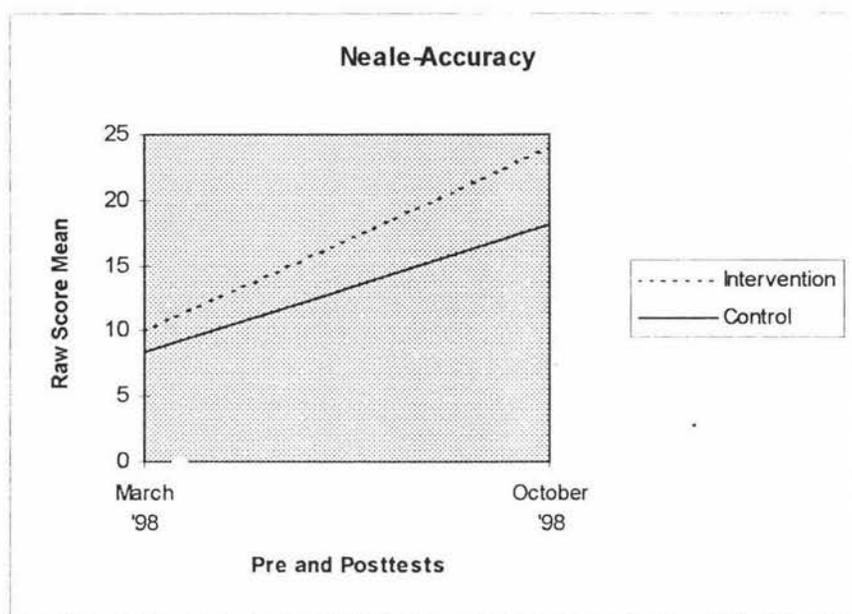


Figure 3

Mean Raw Scores Achieved by Intervention and Control Groups for Neale Analysis of Reading Ability-R (Reading Comprehension) at Different Points in Time

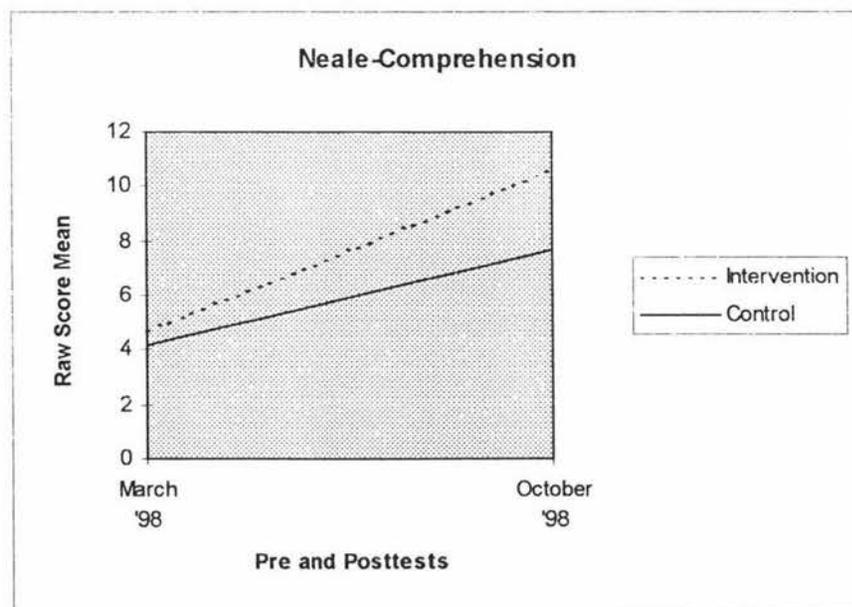


Figure 4

Mean Number of Pseudowords Correctly Identified on the Pseudoword Naming Task at Different Points in Time

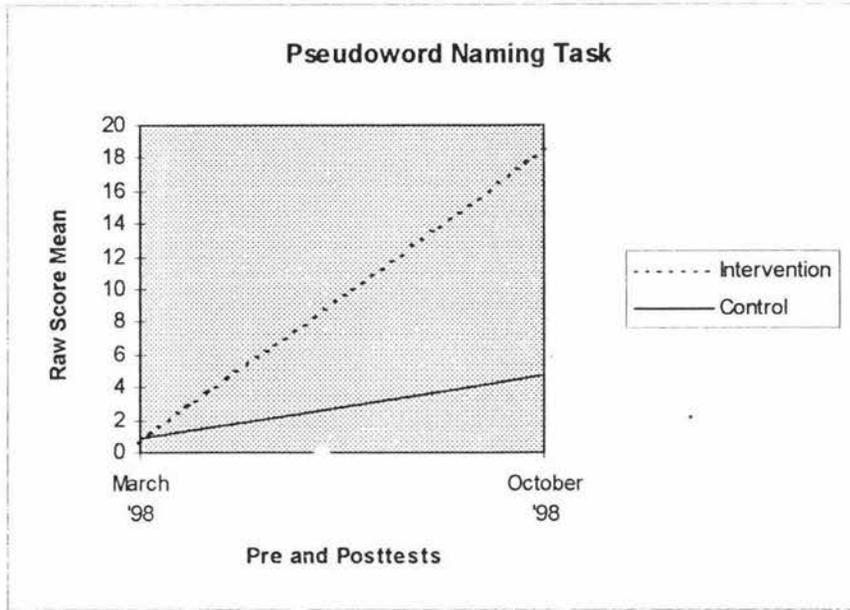
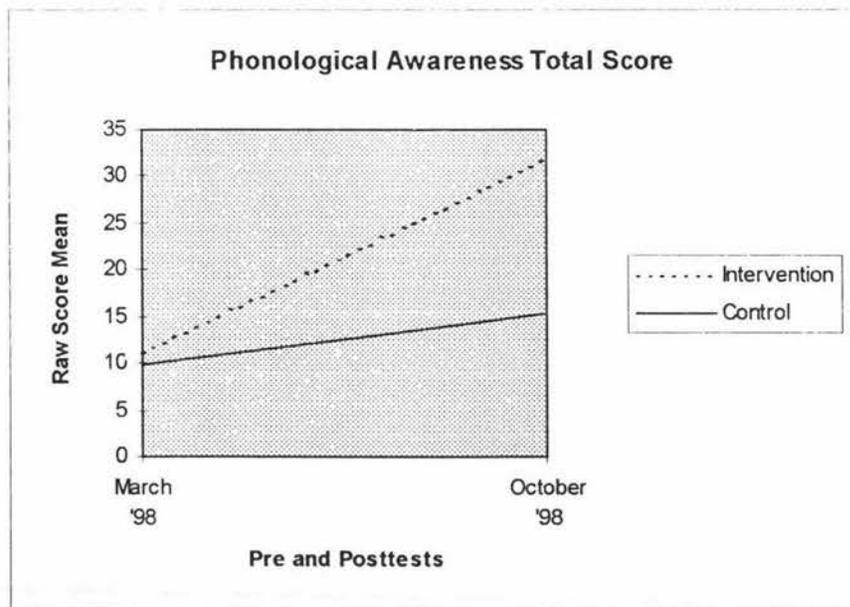


Figure 5

Mean Number of Items Correct on Combined Subtests (Segmentation, Deletion, Blending, Substitution) of The Phonological Awareness Test at Different Points in Time



Figures 6 through 9 represent gains made on each of the individual subtests of The Phonological Awareness Test (phoneme segmentation, phoneme deletion, phoneme blending, and phoneme substitution) by the intervention and control groups.

Figure 6

Mean Number of Items Correct on the Phoneme Segmentation Subtest of The Phonological Awareness Test at Different Points in Time

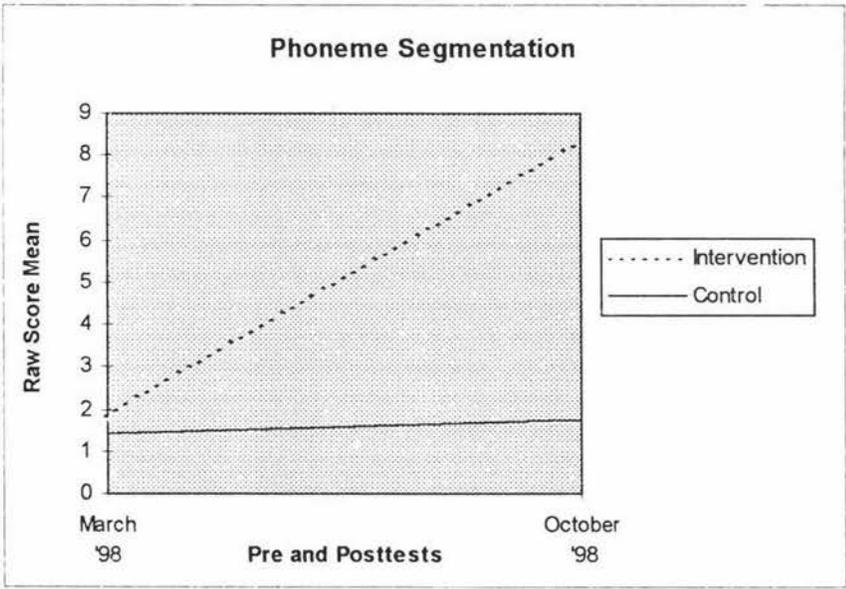


Figure 7

Mean Number of Items Correct on the Phoneme Deletion Subtest of The Phonological Awareness Test at Different Points in Time

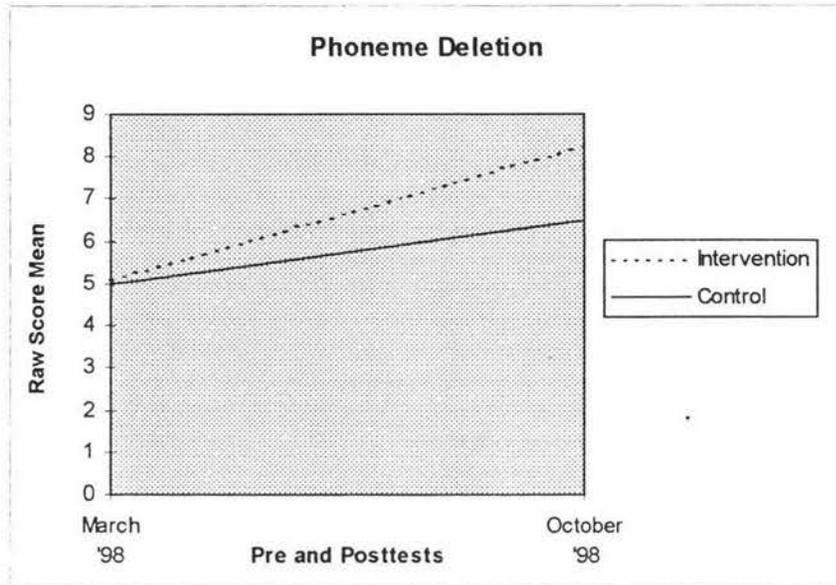


Figure 8

Mean Number of Items Correct on the Phoneme Blending Subtest of The Phonological Awareness Test at Different Points in Time

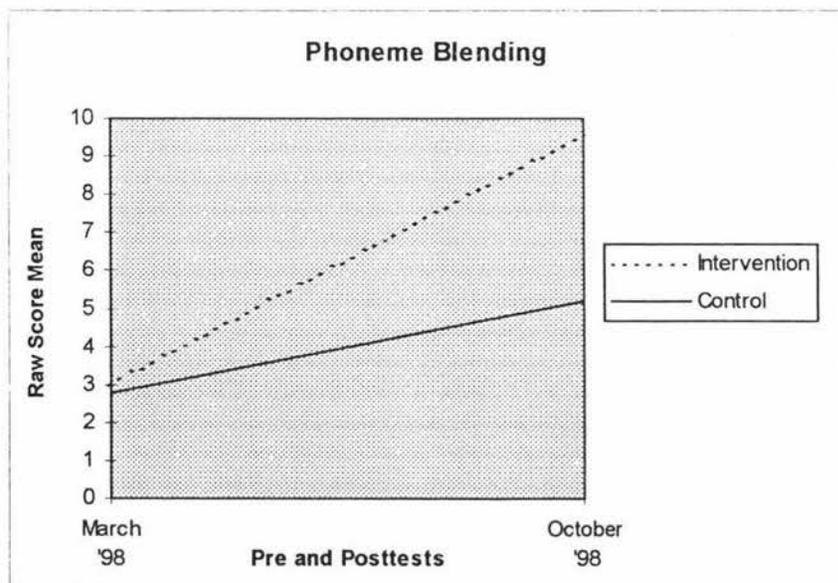
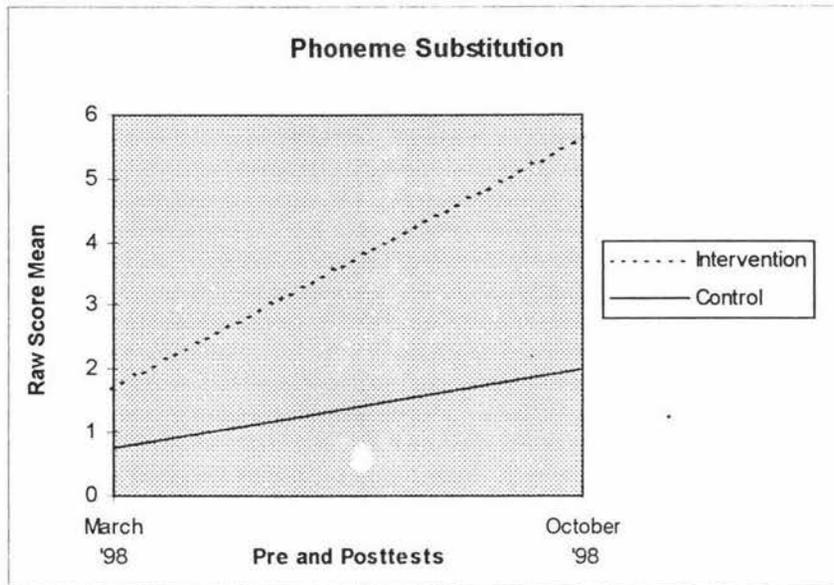


Figure 9

Mean Number of Items Correct on the Phoneme Substitution Subtest of The Phonological Awareness Test at Different Points in Time



Substantial gains were made by the intervention group compared with their controls on all four phoneme awareness tasks. Slight gains were noted by the control group on tasks involving deletion, blending, and substitution, even though they did not receive training. These findings are consistent with earlier research which supports the argument that some children are able to acquire some level of phonemic awareness without explicit instruction (Castle et al., 1994). There were practically no gains made by the control group on the segmentation tasks when compared with the intervention group. These findings are also consistent with research by Gough et al. (1993, cited in Nicholson, 2000) who argues that full segmentation skills are the key to understanding letter-sound relationships. Nicholson (2000) states that the ultimate aim is for children to learn to segment all the phonemes in a word as this is "the key to the door of reading" (p. 203). The comparative results of the phoneme awareness tasks suggest that the procedures in the teacher aide intervention improved all four phoneme awareness skills but was particularly effective for phoneme segmentation.

**Follow-up Measures after Two Years** Two years after the teacher aide intervention, follow-up testing was conducted on 10 of the original treatment children and their matched controls. Tests of significant differences between means of intervention and control groups on reading measures after two years are presented in Table 3. For both the Burt Test and Neale Accuracy subtest, the children in the intervention group significantly outperformed the children in the control group, indicating that the positive effects of the intervention programme were maintained. Figures 10 and 11 represent comparative gains on Neale reading accuracy and Burt word reading tests at three testing points. It is important to note that the Group x Time interaction effect for the Neale Accuracy posttest prior to follow-up testing failed to reach significance. This was not the case after the two-year follow-up testing. Examination of Figure 12 suggests that “bootstrapping” had occurred (Nicholson, 1999; Stanovich, 1986; Tunmer & Chapman, 1996). The children in the intervention were possibly motivated by their successful decoding of words which resulted in positive Matthew effects (Stanovich, 1986, cited in Nicholson, 2000).

Table 3

**Tests of Significant Differences Between Means of Treatment and Control Groups on Measures After Two Years**

<u>Measure</u>	<u>No intervention control (n=10)</u>		<u>Teacher-aide intervention (n=10)</u>		<u>t(18)</u>
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	
Burt raw score	43.70	9.45	52.70	13.82	1.7 *
Neale raw score-accuracy	35.60	11.24	47.40	15.69	1.9 *

\* $p < .05$

Figure 10

Mean Number of Words Correctly Identified by Intervention and Control Groups for Burt Word Recognition Test Over a Two-Year Period

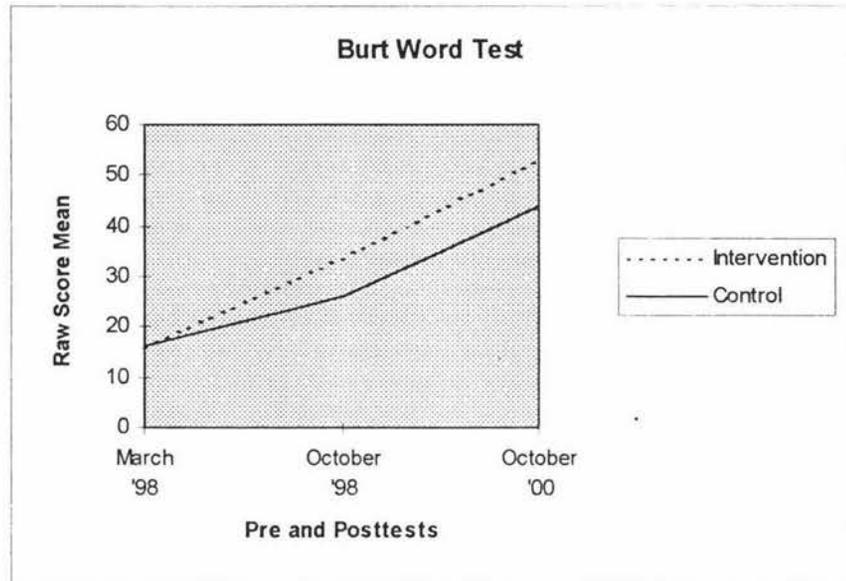
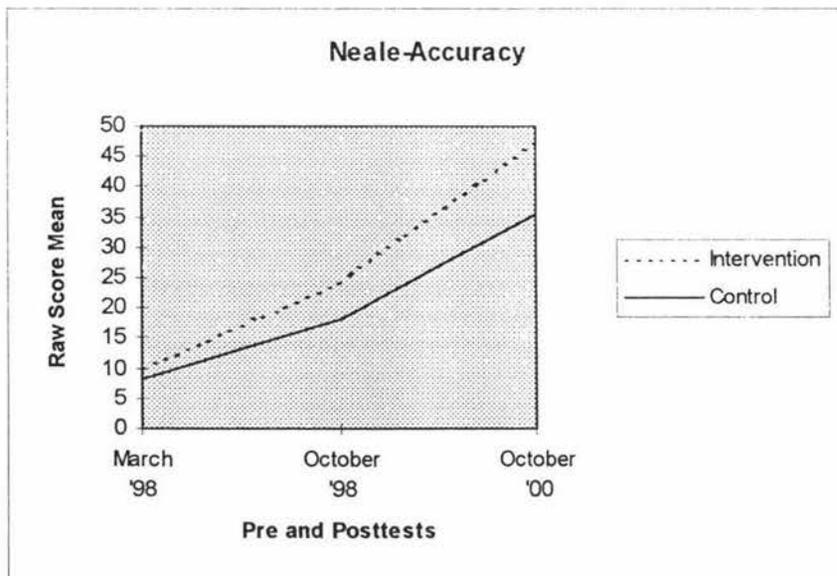


Figure 11

Mean Number of Words Correctly Identified by Intervention and Control Groups for Neale Analysis of Reading Ability-R (Reading Accuracy) Over a Two-Year Period



The mean chronological ages and reading ages of the intervention and control groups during follow-up testing are presented on Table 4.

Table 4

**Mean Chronological Ages and Reading Ages of Intervention and Control Groups for Burt Word Recognition Test and Neale Analysis of Reading Ability-R (Accuracy) After Two Years**

Group	Chronological Age in years and months	Burt Reading Age in years and months	Neale-Acc Reading Age in years and months
No intervention control group (n=10)	9;5	8;0	8;1
Treatment group with teacher aide intervention (n=10)	9;4	8;9	9;4

The difference in mean reading ages between the treatment group and their matched controls is 1 year and 3 months on reading accuracy as measured by Neale, and 9 months on word recognition as measured by Burt. The context-free word recognition skills of the intervention group was, on average, six months below their chronological age, but still within their Equivalent Age Band (8 years 6 months to 9 years 0 months). This group was reading at their chronological age when tested on reading accuracy. The control group, on average, was reading 1 year and 5 months below their chronological age as measured by Burt, which is below their Equivalent Age Band. The control group was also reading below their chronological age as measured by Neale (1 year and 4 months below average for their age).

**The Parent Questionnaires** A sample of the parent questionnaire is in Appendix C. These questionnaires were presented to the parents of the teacher

aide intervention group 12 weeks into the intervention in an attempt to assess views on their child's reading progress. All but one questionnaire was answered by the child's mother. Eleven out of 12 questionnaires were returned. No parent had negative feelings with respect to a teacher aide teaching reading skills to their child. Seven parents stated their child generally enjoys reading, and eight parents said their child reads at home regularly. Eight parents said their child used sounding out as a reading strategy most of the time. Only one parent did not encourage this strategy, even though it was the strategy of choice for their child. Ten parents stated the intervention was helping their child (one parent wasn't sure) and made comments such as, "knows more words now", "more confident", "doesn't guess the word", and "more willing to give a new word a try".

As previously stated, parental attitudes and support can have a strong impact on student learning, influencing both motivation and attitudes towards literacy (Andrews & Lupart, 1993; Snow et al., 1998; Spear-Swerling & Sternberg, 1996). The parents of the intervention children were all supportive of this programme, perhaps as a result of providing them with information about the intervention and including them in this part of the research.

**The Teacher Questionnaires** A sample of the teacher questionnaire is in the Appendix C. The three experienced teachers involved stated that the teacher training which they had received did not adequately prepare them to teach reading to children who were having difficulties, and believed "good' reading" instruction comes with experience. One teacher commented that, because teaching methods keep changing, most good teachers use bits of what they know work. The least experienced teacher stated her training was biased in favour of whole-language approaches and "the only phonics literature presented was written by anti-phonics authors". All four teachers believed they had an eclectic or balanced approach to reading instruction. When asked to describe ways in which they might directly teach phonics in the classroom, two teachers said they would teach by "bringing attention

to beginning, middle and ending sounds and double consonants". One teacher said she used worksheets and taught word families. Another teacher said she taught individual letter sounds and blends during story writing. All four teachers had a limited understanding of what phonemic awareness is and when asked the question, made statements such as, "It's knowing what different sounds letters make", "grouping letters to make words", "It's based on phonics but I really don't know what it is". "It's word building, like using sounds and syllables to make words".

The teachers believed that the teacher aide intervention was benefiting some or all of the children, and noticeable improvements were noted. One teacher said improvements were especially noticeable in the children's writing, and another commented that she has implemented what the children have learned to teach others in the class. All four teachers felt comfortable with a teacher aide teaching reading skills to children as long as training was provided by a qualified person. No teacher felt that inclusionary practices were being compromised by pulling groups of identified children from class for remedial-type reading instruction.

**Teacher Aide Questionnaire** The teacher aide involved in the intervention had completed a teacher aide certificate which included a reading module at an adult learning course. This reading module provided training which stressed the discussion of stories prior to reading as well as the Pause, Prompt, Praise reading strategy cited in the literature. Although she was initially nervous about teaching reading, she later stated: "This has been the most beneficial thing I have done for myself and the children I work with. The children have not only gained in confidence in reading, but also when spelling a word, they don't hesitate to have a go."

**Children's Questions** As previously mentioned, all of the children who participated were asked what they do when they come to a word they don't know while reading a story. The children in the intervention group were also asked what they liked and didn't like about going to the reading group. Six out of 12 students in the control group said that they tried to sound-out the word. One of these children

stated: "I sound it out, but it doesn't work too well". One child said they used a combination of sounding-out and looking at the picture. Two of the children read on to the end of the sentence. One child said they just look at the picture. One child goes back to the beginning of the sentence and reads it again, and another student said her teacher just tells her the word. Ten out of the 12 students in the treatment group said they sounded the word out. One student said they looked at the picture and then the word, and one student stated: "I start again because my teacher says to do that. When I'm at home, I sound the word out".

When interviewed about what they liked and didn't like about going to the reading group, the intervention children made comments such as: "I liked how Mrs. B told us ways to figure out a word", "I liked getting those little books where I could read the words", "I learned how to spell hard words", "It helped me to read words". Only one student stated that he didn't like going, and was not able to give a reason why. It was suspected by the teacher aide and classroom teacher that he didn't like going to the group because he didn't want to be seen as being different or having "difficulty" by his peers. This particular student, however, was always compliant during training sessions.

**Summary of Findings** The major findings of this study are that teacher aide directed reading instruction can be highly effective in terms of positive learning outcomes, provided the materials and lesson plans used are based on sound reading research. The study also demonstrated that problems in the early stages of reading acquisition can be attributed to word recognition as a result of poor phonological awareness and difficulties with letter-sound relationships. These children, if properly identified, are able to make significant gains in decoding skills if given direct and systematic instruction in phoneme awareness and the relationships between speech sounds and letters. As decoding skills improve, so do other reading-related skills.

The findings from this study are consistent with the overwhelming body of current reading research which discusses the relationship between phonological processing skills and reading acquisition (Blachman, 1996; Byrne & Fielding-Barnsley, 1995; Castle et al., 1994; Chafoulease et al., 1997; Davidson & Jenkins, 1994; Felton, 1993; Hatcher et al., 1994; MacDonald & Cornwall, 1995; Moats, 2000; Nicholson, 1999; Spector, 1995; Torgesen et al., 1994; Tunmer et al., 1998). These phonological processing skills are necessary for the development of accurate word recognition, and fast accurate word recognition is necessary for the development of higher-order reading comprehension (Spear-Swerling & Sternberg, 1996; Nicholson, 2000).

New Zealand has relied on the same intervention programme, Reading Recovery, for all children experiencing difficulties in acquiring reading skills (Ryan & Openshaw, 1996). However, this programme alone is deficient in teaching the phonological skills necessary for reading success (Iversen and Tunmer, 1993; Tunmer et al., 1998). Consistent also with the findings from this study are Spear-Swerling and Sternberg's (1996) examples whereby children encountering phonological processing deficits will undoubtedly do poorly and wander farther from the track if their instructional programmes do not stress phonological skills. Nicholson (2000) implies that it is possible for children to acquire phoneme awareness skills through whole-language based reading instruction such as Reading Recovery without being specifically taught, but stresses the importance for all children to "learn as quickly as possible how to become expert code-breakers" in order to ensure success (p. 276).

## Chapter 5

### Conclusions

It was hypothesised from this intervention study that a teacher aide could successfully provide training to a group of 6 and 7-year-old struggling readers which would result in improved phoneme awareness and decoding skills, leading to higher achievement on measures of word recognition, reading accuracy and comprehension.

The study sought answers to four questions posed in Chapter 3 and the following conclusions were drawn:

- An early literacy programme based on current reading research could be run successfully by a teacher aide who has had no prior training or experience with code-emphasis approaches.
- The activities presented by the teacher aide led to improvements in phoneme awareness and related reading achievement when compared with a non-treatment group.

- Reading achievements gained through this intervention can be sustained over time.
- This intervention could be a cost-effective alternative for children identified as being at risk of developing reading difficulties.

The results of the data analysed from the Burt Word Recognition Test, the Neale Analysis of Reading Ability-Revised, and tests of phonological processing provide evidence in support of the above hypothesis.

**Important Factors Involved** The successful results of this study were dependent on a number of factors:

- **The Teacher Aide**

The teacher aide involved in this study was considered highly competent by the principal and her teaching colleagues in that she could follow directions and make intelligent decisions. She was liked and respected by the children in the school and used her own initiative to further her education in order to acquire a teacher aide certificate. There was high motivation to become involved in this intervention as she believed the assistance she had given children in the past had not been effective. Complete semi-scripted lesson plans were written for her to follow so she was not left without direction to plan and teach. She also had the support of someone in a supervisory role who could guide her if necessary. Lastly, she had very good phonemic awareness and understood the rationale behind the programme.

- **Content of Lessons**

The lesson plans in this intervention emphasised word-level strategies. This code-emphasis approach led the children to a clearer understanding that their own speech is represented by individual letters and letter combinations. The lessons were highly sequenced, beginning with initial phonemes which could be easily

segmented. Oral segmenting and blending skills were practised daily. The children were introduced to a limited number of letters and then immediately began reading and spelling words with those sounds. This programme provided the children with constant reinforcement of previously learned material, and practice with reading connected text.

- **Parental Involvement**

The parents of the children had knowledge of the techniques used in the intervention and were equipped to reinforce those skills at home. These parents were appreciative of any extra help their child could get, especially in the area of reading, and supported the rationale behind the programme.

- **Self-Efficacy of the Children**

The children involved in the intervention believed that they had become better readers by going to the reading group. Initial successes at decoding individual words motivated the children and created a belief that if they tried harder, they would become even better. Most of the children in this group tended to apply newly acquired skills and strategies when reading text in their classroom. This motivated the children to further practise.

## **Educational Implications**

It is clear from the results from this intervention study that children identified as being at risk of developing reading difficulties show deficiencies in phoneme awareness and lack a clear understanding of how speech maps on to print. It is also clear that when identified early and given strategies through appropriate intervention, these children have a good chance of catching up to their peers before their problems become chronic. Conversely, those children who are beginning to slip behind their peers in reading may need direct and explicit instruction in both

phoneme awareness and letter-sound correspondences if they are to become successful readers. A number of educational implications with regards to literacy support, classroom instruction, assessment practices, teacher aide instruction and teacher training programmes have emerged as a result of this study.

### **Implications for Literacy Support Programmes in New Zealand**

Primary schools in New Zealand need to establish a range of intervention options for children identified as being at risk of reading failure, and not rely on the existing “one size fits all” approach. Appropriate screening tools need to be developed and implemented early to identify needs, and determine who may be at risk and for what reasons. Traditional programmes such as Reading Recovery and the Resource Teacher of Reading, although held in high regard, may not be the most appropriate intervention option(s) for those children who have low phonemic awareness skills and underdeveloped word-level strategies.

**Implications for Classroom Instruction** The importance of prevention and intervening early is well established and accepted by most educators. Teachers in junior classrooms may need to incorporate systematic code-emphasis instruction and phonemic awareness activities in their existing classroom programme so that all children can ‘crack the code’ as soon as possible. Small group instruction may be necessary for those students who are not receiving phonological awareness and word-level strategies in the classroom.

**Implications for Current Assessment Practices** There is a need to incorporate phonological awareness screening tools in existing assessments (i.e. 6 Year Net Testing) in order to identify specific problems which may lead to potential reading difficulties. Simple standardised reading measures which include comprehension of text are necessary for ongoing tracking purposes so no student slips through the cracks without literacy support.

**Implications for Teacher Aides** It is possible for a teacher aide to deliver effective literacy instruction to small groups of children at risk. Training and monitoring of non-certificated personnel in research-based literacy practices is essential, however, in order to ensure positive academic outcomes.

**Implications for School Administrators** Most schools do not have funds available to purchase 'quality specialist services', and vie for less expensive options in the way of teacher aide support for those students with literacy needs. Programmes that are cost-effective can be attractive to schools with tight budgets.

**Implications for Teacher Training Programmes** Teaching reading, writing, spelling, speaking and listening skills to children is the major responsibility of educators. However, many teachers themselves have not acquired knowledge of the linguistic structure of language that is sound enough to effectively teach the above literacy skills to children. There is a need for teacher training programmes to incorporate knowledge of phonology, orthography, morphology, syntax, semantics, and pragmatics in their programmes if newly trained teachers are to implement research-based practices in the area of literacy learning.

## **Limitations of the Study and Directions for Future Research**

Below are a number of suggestions if similar research is to be undertaken:

- As this was a very small-scaled study, it would be interesting to include a greater number of children. It would be worthwhile to trial a similar programme at several school sites with other teacher aides and compare results.

- It would be of interest to compare the achievement of the two groups of children after two years with those identified as having no phonological difficulties, and were average readers.
- The control group in this study did not have an intervention. A future study could include a comparison between two intervention groups, both receiving teacher aide (or teacher) instruction in small groups.
- It would be of interest to expose both treatment and control groups to the same materials to determine whether differences between groups were due to exposure of materials or actual direct instruction.

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## Appendix A

### Consent Forms

## Information Sheet for Parents

Your child is invited to participate as a subject in a research project titled "*Investigating the Literacy Skills of 6 and 7 Year Old Beginning Readers*". This research project is being carried out by Jan Ryder (Resource Teacher Special Needs - based at XXXXXXXX) as partial fulfillment of her Master's Degree in Education through Massey University.

The aims of the project are to:

1. Examine the sound awareness skills of children in the 6-8 age range.
2. Investigate a programme that aims to enhance the literacy skills of children in that age group.

Your child's involvement in this research project will involve him or her being tested by Jan on several occasions throughout the school year. Some of the testing will begin in early March 1998. These tests will involve measuring your child's awareness of the sounds in spoken language, in addition to assessing both reading and spelling skills. The tests are short, will take place at times convenient for both your child and the class teacher, and will be conducted at XXXXXXXX.

Some of the children tested may also be involved in a programme run by XXXXXXXXX (under Jan's supervision) who is a teacher aide at XXXXXXXXXX. This programme will not interfere in any way with the regular class programme. The parents of those children who are involved with the programme run by XXXXXXXXX will receive a written evaluation of progress upon completion.

This research project is fully supported by XXXXX, principal of XXXXX, and is being supervised from within the Department of Teaching and Learning at Massey University, College of Education.

Results of this project will be disclosed upon completion of the research. Should these results be published, you may be assured that all data gathered as part of this investigation will be held completely confidential in that the identity of your child will not be made public.

If you are happy for your child to participate in this research project, please sign the consent form below and return it to your child's class teacher.

Jan Ryder will be pleased to discuss questions or concerns you may have about your child's participation in this project. She can be reached XXXXXXXX.

Jan Ryder

## Consent Form

*"Investigating the Literacy Skills of 6 and 7 Year Old Beginning Readers"*

I have read the Information Sheet and understand the details of the research project outlined above. On this basis, I agree for my child to participate in this research project under the conditions set out in the Information Sheet. I understand that I have the right to withdraw from the project at any time and that my child's name will not be disclosed should the results of this project be published.

Signed \_\_\_\_\_

Date \_\_\_\_\_

## Appendix B

### Questionnaires

August 1998

Dear Parents,

As you already know, XXXXXXX has been taking your child in small groups (under my supervision) in order to test the effectiveness of a programme which may or may not enhance their literacy skills. Please take a few moments to answer the attached questions related to your child and this programme. Please be assured that the identity of the person answering this questionnaire will be kept confidential. The information supplied will be useful in helping me to assess your child's reading skills and to evaluate the programme. I have enclosed a self addressed stamped envelope so I can receive the completed questionnaire directly, or if you prefer, you may hand it in to XXXXX in XXXXXX office.

Thanks so much for your time and for making this project worthwhile. I will supply pre and post assessment results to you when I retest the children in October.

Sincerely,

Jan Ryder

## Literacy Programme Questionnaire

1. What is your relationship to the child in the programme (mother, father, caregiver, etc.)?
2. Does your child read regularly at home?
3. How does your child feel about reading?
4. Please circle one. I feel that my child is currently reading (a) below average (b) average (c) above average for his/her age.
5. Please circle one. When your child reads to you and comes to a word that they don't know, what do they do *most of the time*? (a) ask you what the word is (b) look at the picture (c) try to 'sound out' the word (d) look at the first letter (e) read on and guess what makes sense
- 6.
7. Which 'strategy' (see above) do *you* seem to encourage the most?
8. Although this programme is monitored by Jan, do you have any concerns about a teacher aide running it?
9. Do you feel that your child's progress in reading has been helped by this programme? If so, in what way?
10. On the reverse side of this paper, please feel free to express any comments or concerns regarding your child's reading and/or Jan's literacy programme.

## Teacher Questionnaire

Please take a few moments to answer the following questions related to my project. Your honesty will be important in helping me assess the programme that Karen has been running. Please be assured that your identity will be kept confidential. Thanks!! Jan

1. How many years have you been teaching?
2. Do you feel that the teacher training you received prepared you enough for teaching reading? Explain.
3. Most teachers might say they have an 'eclectic' approach to reading instruction (i.e. some phonics plus whole-language). Would this describe your teaching style?
4. Describe ways you might directly teach phonics in the classroom.
5. The term 'phonemic awareness' is coming up a lot lately with regards to the teaching of reading. What is your understanding of what 'phonemic awareness' is? Have you tried 'teaching' this in your classroom?
6. Do you feel that any specific child's reading progress has been helped by this programme? (i.e. do you notice them using any helpful strategies that may have come from the literacy group?) Explain.
7. As a classroom teacher, do you feel uncomfortable having a teacher aide teach reading skills?
8. How do you feel about children being pulled from your classroom for a programme like this?
9. Do you feel this programme compliments or hinders your regular programme? Explain.
10. Please make some brief comments about the general reading/spelling skills and progress of the individual children in your classroom who go to XXXXX for small group reading.

## Teacher Aide Questionnaire

Please take a few moments to answer the following questions. Your honesty will be important in helping me evaluate the programme you are currently running. Please be assured that your identity will be kept confidential. Thanks!! Jan

1. Have you gone through any teacher aide training?
2. In your training, what methods or strategies did they teach you to help children with reading?
3. Have you ever helped a child with reading using these sorts of methods or strategies before?
4. Have you enjoyed teaching the children using this programme? What have been the pitfalls so far?
5. Do you feel you know enough about the rationale behind the programme in order to teach effectively?
6. Do you feel that it benefits the children? If so, why?
7. Please express any comments or concern regarding the programme you have been running?

## Appendix C

### Tests

to is up for big  
he at one my sun

went girl boys day some  
his that of an wet

love water no just pot  
or now things told sad

carry village quickly nurse beware  
return scramble twisted journey luncheon

known shelves explorer tongue projecting  
terror serious belief events emergency

refrigerator steadiness obtain overwhelmed universal  
nourishment encyclopaedia commenced circumstances fringe

formulate motionless trudging theory destiny  
scarcely exhausted labourers urge atmosphere

apprehend binocular domineer melodrama economy  
ultimate reputation humanity excessively philosopher

autobiography contemptuous terminology mercenary glycerine  
unique microscopical perpetual efficiency influential

perambulating renown physician champagne exorbitant  
hypocritical atrocious constitutionally contagion palpable

melancholy eccentricity fatigue phlegmatic fallacious  
alienate poignancy phthisis ingratiating subtlety

Name: .....

Number correct:

School: ..... Sex: .....

Equivalent Age Band

Age: ..... years ..... months Class: .....

Norms Used  
(circle one)

Boys

Girls

Boys & Girls

to	is	up	for	big
he	at	one	my	sun
went	girl	boys	day	some
his	that	of	an	wet
love	water	no	just	pot
r	now	things	told	sad
carry	village	quickly	nurse	beware
return	scramble	twisted	journey	luncheon
known	shelves	explorer	tongue	projecting
terror	serious	belief	events	emergency
refrigerator	steadiness	obtain	overwhelmed	universal
nourishment	encyclopaedia	commenced	circumstances	fringe
formulate	motionless	trudging	theory	destiny
scarcely	exhausted	labourers	urge	atmosphere
apprehend	binocular	domineer	melodrama	economy
ultimate	reputation	humanity	excessively	philosopher
autobiography	contemptuous	terminology	mercenary	glycerine
unique	microscopical	perpetual	efficiency	influential
perambulating	renown	physician	champagne	exorbitant
hypocritical	atrocious	constitutionally	contagion	palpable
melancholy	eccentricity	fatigue	phlegmatic	falacious
alienate	poignancy	phthisis	ingratiating	subtlety

Comments:

### Instructions for Pseudoword Naming Task

"Today I'm going to show you some funny sounding names. These are the names of children who live in a far away land. Let's pretend that we are going to visit these children and want to learn to say their names the way they do. You can read their names only if you sound them out. Remember, do not try to make them into real words. Let's try this one." The tester presents the first practice item and encourages the child to sound it out. If the child fails to respond correctly, or fails to respond after 5 to 10 seconds, the tester demonstrates how to sound out the item. "This letter makes an e sound and this letter makes a z sound, so the name is e - z, ez." The tester presents the second practice item and, if necessary, demonstrates how to sound out the item. "OK, now let's see if you can play the game. I'm going to show you some names and I want to see if you can tell me how to say them." The tester encourages the child to sound out each name. If the child makes a real word response, the tester reminds him/her that the right answer cannot be a real word. If the child reads a name in syllables (e.g., *juh-i-tuh*), the tester says to the child: "OK, what name does that make?" Throughout the test session the tester gives positive feedback of a nonspecific nature when appropriate - "nice", "good job", etc. However, corrective feedback should not be given. If the child fails to attempt **any** item on two consecutive word lists, the session can be terminated. All remaining items are scored as incorrect.

When an item is incorrectly pronounced, the tester records the child's mispronunciation according to the following code:

PRONUNCIATION KEY					
Sound Symbol	Example	Sound Symbol	Example	Sound Symbol	Example
a	lag	o	tone	er	to <u>u</u> 'er
e	flesh	u	cute	k	cute
i	hit	oo	threw	z	vis'it
o	jog	oo	foot	s	pen'cil
u	nut	oi	choice	j	sau'sage
a	fake	ou	loud	th	thin
e	prgach	o	raw	th	then
i	hide	a	a woké	ks	ex plode'

NOTE: Common consonant sounds are represented by the letters themselves (e.g., n as in nut; f as in fed).

The correct pronunciation(s) and common errors for each of the items of the pseudoword naming task are given below:

Word	Correct Pronunciation(s)	Common Errors
jit	jit	jit, jet
med	med	mid, met
dut	dut	dōōt
wob	wob	wub, wod
pag	pag	peg, páj
thut	thut, thut	thōōt, thrut
sath	sath, sath	sáth, sat
glick	glik	klik
blesh	blesh	blish, bles
brop	brop	bróp, prop
mide	míd	mid
fute	fút, fōōt	fut, fōōt
voze	vóz	vó zè
pake	pák	pa ké
sone	són	swun, zón, sō nē
clave	kláv	kráv
chove	chóv	chōōv, shuv
grake	grák	krák
trobe	trób	throb, tróib
drime	drim	drem, dim
roud	roud	rōund, rōōd
zoín	zoín	zón, zo in
taw	tó	tau, thó
woaf	wóf	wōōf
dail	dál	díl
prew	prōō	pōōt, prou
thrain	thrán	trán
froice	frois	fród, fōi sé
spound	spound	spoud
fleach	fletch, fletch	flesh, flēs

Two scoring procedures are used. The first is simply the total number of correct pronunciations. In the second procedure, each item is scored according to the number of sounds in the items that are correctly pronounced (the number in parentheses next to each item on the scoring sheet indicates the maximum possible points for each item). For example, if the child correctly pronounces the first item, s/he receives 3 points. However, if *jit* is pronounced *jet* or *jut* or *jid*, only 2 points are given. If *jit* is pronounced *jab*, *hid*, or *bat*, only 1 point is given.

## Pseudoword Naming Task

Student's Name: \_\_\_\_\_

Student number: \_\_\_\_\_

School: \_\_\_\_\_

Total correct: \_\_\_\_\_

Date tested: \_\_\_\_\_

Total points: \_\_\_\_\_

Tester: \_\_\_\_\_

	Response	Points		Response	Points
1.	jit (3)	_____	16.	clave (4)	_____
2.	med (3)	_____	17.	chove (3)	_____
3.	dut (3)	_____	18.	grake (4)	_____
4.	wob (3)	_____	19.	trobe (4)	_____
5.	pag (3)	_____	20.	drime (4)	_____
6.	thut (3)	_____	21.	roud (3)	_____
7.	sath (3)	_____	22.	zoin (3)	_____
8.	glick (4)	_____	23.	taw (2)	_____
9.	blesh (4)	_____	24.	woaf (3)	_____
10.	brop (4)	_____	25.	dail (3)	_____
11.	mide (3)	_____	26.	prew (3)	_____
12.	fute (3)	_____	27.	thrain (4)	_____
13.	voze (3)	_____	28.	froice (4)	_____
14.	pake (3)	_____	29.	spound (5)	_____
15.	sone (3)	_____	30.	fleach (4)	_____

Neale Analysis of Reading Ability — Revised **Individual Record Sheet**

Form 1

Name		Sex M/F	School		Teacher	Year	
Date of Birth	Date of Testing	Age at Testing		Examiner	Language(s) at Home		
<b>RAW SCORE SUMMARY</b>							
		RATE	ACCURACY		COMPREHENSION	TARGET WORDS	
Passage Level	Name	Cumulative Number of Words	Time (in secs) to read	Maximum Possible Score	Passage Score	Questions Correctly Answered	
1	<i>Bird</i>	[ 26]		16 -	=		
2	<i>Road Safety</i>	[ 78]		16 -	=		
3	<i>Ali</i>	[151]		16 -	=		
4	<i>Kells</i>	[247]		16 -	=		
5	<i>The Fox</i>	[364]		16 -	=		
6	<i>Migration</i>	[505]		20 -	=		
TOTAL TIME							
TOTAL RAW SCORES							
$\cdot \text{Words per min} = \frac{\text{WORDS}}{\text{TIME}} \times \frac{60}{1} = \text{---} \times \frac{60}{1} = \text{---}$							
<b>STANDARD SCORE SUMMARY</b>							
		RATE	ACCURACY		COMPREHENSION		
Reading Age							
Age Range							
Percentile Rank							
Stanine							
Neale Scaled Score							
<b>ERROR COUNT</b>							
	Mispronunciations	Substitutions	Refusals	Additions	Omissions	Reversals	Totals
Total count							
% of total count							
<p><b>Summary and Recommendations:</b></p>							

### Road Safety (Level 2)

Ken stopped on his way to school. In the middle of the traffic lay two children. Their bicycles had crashed into each other. Ken ran quickly to help. He saw that no-one was hurt. The children pointed to a television camera. "We are taking part in a road safety lesson," they said. [52 words]

#### QUESTIONS

- Where was Ken going?
- Why did Ken stop?
- What had happened to the bikes?
- How do you think Ken felt?
- What did Ken do?
- Were the children hurt?
- What were the children really doing?
- How did Ken find out what was happening?

						TOTAL
Mispronunciations	Substitutions	Refusals	Additions	Omissions	Reversals	Comprehension
						Errors
						Time

### Ali (Level 3)

As Ali sheltered in an old temple, his shoulder knocked a secret spring. Instantly, he was thrown into an underground room. In the darkness the walls seemed to be covered with jewels. Ali rested awhile. He knew that desert travellers often imagined strange things. Later, he explored the place for a way to escape. To his amazement, the jewels were still there. He had found a palace that had been buried long ago. [73 words]

#### QUESTIONS

- Why did Ali go into the temple?
- How did he find the secret spring?
- What happened when he touched the spring?
- What did he see there?
- Why did Ali not rush to look at the jewels?
- After he had rested, what did Ali try to find?
- Why was he so surprised?
- How had the jewels come to be there?

						TOTAL
Mispronunciations	Substitutions	Refusals	Additions	Omissions	Reversals	Comprehension
						Errors
						Time

### Kells (Level 4)

Skipper Kells buckled on his diving belt of metal weights and dropped from the launch. Jan supervised his air-hose to prevent tangling. Leo, following the bubbles, guided the dinghy above the diver as he searched the mysterious underwater world. Kells surfaced frequently clutching crayfish. The required number of specimens was almost obtained when the grey nurse shark advanced directly towards him. Kells retreated cautiously without signalling for assistance. The creature brushed by, ignoring him, as baby sharks emerged from some rocky grooves. Their welfare was more important to the shark than the diver's now motionless figure. [96 words]

#### QUESTIONS

- What equipment assisted Skipper Kells in his exploration under water?
- What did Jan do to help the Skipper?
- How did Leo know where the diver was?
- What do you think the Skipper was diving for?
- Why did it seem that the shark might attack him?
- How did the skipper avoid trouble with the shark?
- What kind of a home protected the baby sharks from enemies?
- Why was the shark not interested in the Skipper?

						TOTAL
Mispronunciations	Substitutions	Refusals	Additions	Omissions	Reversals	Comprehension
						Errors
						Time

Practice "X" 5-7 year-olds

I have a lot of toys. I have them in a box. I like to play with all of them. But, at bed-time I like my teddy bear best.

QUESTIONS

- 1 What was that story about?
- 2 Where did the little boy/girl keep his/her toys?
- 3 At night-time what was the little boy's/girl's favourite toy?
- 4 Why do you think teddy was the best toy at bed-time?

Practice "Y" above 7 year-olds

My friend and I made a tree-house. We like to hide in it. We climb up the rope and pull it up after us. Then no-one knows where we are. We play space-ships. At tea-time we slide down fast and we are always first for tea.

QUESTIONS

- 1 What would you say was the best name for that story?
- 2 Who built the house in the tree?
- 3 How did the boys/girls get up into the tree house?
- 4 How could the children's friends guess that they were playing up in the tree-house?
- 5 What game did the boys/girls play in the tree-house?
- 6 How did the boys/girls manage to be always first for tea?

Mispronunciations	Substitutions	Refusals	Additions	Omissions	Reversals	Total Errors	Comprehension

Do not include practice passages in formal scoring

FORMAL TESTING STARTS

Bird (Level 1)

A bird hopped up to my window. I gave her some bread. She made a nest in my garden. Now I look after her little ones. [26 words]

QUESTIONS

- 1 Where did the bird hop to?
- 2 What did the little boy/girl give the bird?
- 3 What did the bird do in the garden?
- 4 What does the little boy/girl do now for the bird?

						TOTAL
Mispronunciations	Substitutions	Refusals	Additions	Omissions	Reversals	Comprehension
						Errors
						Time

# The Phonological Awareness Test

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Name \_\_\_\_\_ Grade \_\_\_\_\_

School \_\_\_\_\_ Teacher \_\_\_\_\_

Examiner \_\_\_\_\_

Date of Administration \_\_\_\_\_  
Year \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_

Birthdate \_\_\_\_\_  
Year \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_

Chronological Age \_\_\_\_\_  
Year \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_

Rhyming	Raw Score	Age Equivalency	Percentile Rank	Standard Score
Discrimination	_____	_____	_____	_____
Production	_____	_____	_____	_____
	Raw Score Total			
Total	_____	_____	_____	_____
	AE	%	SS	

Blending	Raw Score	Age Equivalency	Percentile Rank	Standard Score
Syllables	_____	_____	_____	_____
Phonemes	_____	_____	_____	_____
	Raw Score Total			
Total	_____	_____	_____	_____
	AE	%	SS	

Segmentation	Raw Score	Age Equivalency	Percentile Rank	Standard Score
Sentences	_____	_____	_____	_____
Syllables	_____	_____	_____	_____
Phonemes	_____	_____	_____	_____
	Raw Score Total			
Total	_____	_____	_____	_____
	AE	%	SS	

Graphemes	Raw Score	Age Equivalency	Percentile Rank	Standard Score
Consonants	_____	_____	_____	_____
Long & Short Vowels	_____	_____	_____	_____
Consonant Blends	_____	_____	_____	_____
Consonant Digraphs	_____	_____	_____	_____
R-Controlled Vowels	_____	_____	_____	_____
Vowel Digraphs	_____	_____	_____	_____
Diphthongs	_____	_____	_____	_____
	Raw Score Total			
Total	_____	_____	_____	_____
	AE	%	SS	

Isolation	Raw Score	Age Equivalency	Percentile Rank	Standard Score
Initial	_____	_____	_____	_____
Final	_____	_____	_____	_____
Medial	_____	_____	_____	_____
	Raw Score Total			
Total	_____	_____	_____	_____
	AE	%	SS	

Decoding	Raw Score	Age Equivalency	Percentile Rank	Standard Score
VC Words	_____	_____	_____	_____
CVC Words	_____	_____	_____	_____
Consonant Digraphs	_____	_____	_____	_____
Consonant Blends	_____	_____	_____	_____
Vowel Digraphs	_____	_____	_____	_____
R-Controlled Vowels	_____	_____	_____	_____
CVCe Words	_____	_____	_____	_____
Diphthongs	_____	_____	_____	_____
	Raw Score Total			
Total	_____	_____	_____	_____
	AE	%	SS	

Deletion	Raw Score	Age Equivalency	Percentile Rank	Standard Score
Compounds & Syllables	_____	_____	_____	_____
Phonemes	_____	_____	_____	_____
	Raw Score Total			
Total	_____	_____	_____	_____
	AE	%	SS	

Substitution	Raw Score	Age Equivalency	Percentile Rank	Standard Score
With Manipulatives	_____	_____	_____	_____
Without Manipulatives	_____	_____	_____	_____
	Raw Score Total			
Total	_____	_____	_____	_____
	AE	%	SS	

Total Test	Raw Score	Age Equivalency	Percentile Rank	Standard Score
	_____	_____	_____	_____

# Segmentation

## Phonemes

This task may not be appropriate for most five-year-olds.

"I'm going to say a word, and then I'll say each sound in the word. Listen carefully. *Cat*." Say the individual sounds, pausing slightly between each one /c—a—t/.

Stimulus: "Tell me each sound in \_\_\_\_\_."

Item	Response	Score	Item	Response	Score	
1. off	/ɔ̄ - f/	1 0	6. plop	/p - l - o - p/	1 0	
2. me	/m - ē/	1 0	7. liver	/l - i - v - èr/	1 0	
3. fat	/f - a - t/	1 0	8. eyebrow	/ī - b - r - ou/	1 0	
4. rock	/r - o - k/	1 0	9. seashell	/s - ē - sh - e - l/	1 0	
5. brag	/b - r - a - g/	1 0	10. plant	/p - l - a - n - t/	1 0	
					TOTAL	_____

# Blending

## Phonemes

"I'll say the sounds of a word. You guess what the word is. What word is this? Pause for one second between sounds. /p - o - p/." (*pop*) If the child repeats the word by sounds, say, "Say it faster, like this, *pop*."

Stimulus: "What word is this? \_\_\_\_\_"

Item	Response	Score	Item	Response	Score	
1. /b - oi/	boy	1 0	6. /m - ou - s/	mouse	1 0	
2. /n - ē/	knee	1 0	7. /k - ī - n - d/	kind	1 0	
3. /p - ō/	paw	1 0	8. /s - n - a - p/	snap	1 0	
4. /s - i - t/	sit	1 0	9. /m - i - l - k/	milk	1 0	
5. /f - l - ī/	fly	1 0	10. /s - l - i - p - èr/	slipper	1 0	
					TOTAL	_____

## Phonemes

"I'm going to ask you to say a word and then to say it again without one of its sounds. Say *cat*." Student says *cat*. "Now say it again, but don't say /k/." (*at*)

Item		Response	Score
1. Say <i>pan</i> .	◆ Say it again, but don't say /p/.	an	1 0
2. Say <i>seat</i> .	◆ Say it again, but don't say /s/.	eat	1 0
3. Say <i>chair</i> .	◆ Say it again, but don't say /ch/.	air	1 0
4. Say <i>fox</i> .	◆ Say it again, but don't say /f/.	ox	1 0
5. Say <i>mane</i> .	◆ Say it again, but don't say /n/.	mā	1 0
6. Say <i>wise</i> .	◆ Say it again, but don't say /z/.	wī	1 0
7. Say <i>seal</i> .	◆ Say it again, but don't say /l/.	ɛ a	1 0
8. Say <i>boat</i> .	◆ Say it again, but don't say /t/.	bō	1 0
9. Say <i>sled</i> .	◆ Say it again, but don't say /s/.	led	1 0
10. Say <i>plane</i> .	◆ Say it again, but don't say /p/.	lān	1 0
TOTAL			_____

# Substitution

## Without Manipulatives

*This task may not be appropriate for most five-year-olds*

"I'm going to make one word into another word by changing one sound. Then, I'll ask you to do it. The word is *paint*. Listen while I change the /p/ to /f/. *Faint*."

Item		Response	Score
1. Say <i>cow</i> .	◆ Change /k/ to /h/.	how	1 0
2. Say <i>out</i> .	◆ Change /ou/ to /a/.	at	1 0
3. Say <i>mouse</i> .	◆ Change /s/ to /th/.	mouth	1 0
4. Say <i>pile</i> .	◆ Change /T/ to /ā/.	pail	1 0
5. Say <i>drain</i> .	◆ Change /d/ to /t/.	train	1 0
6. Say <i>sheep</i> .	◆ Change /ē/ to /i/.	ship	1 0
7. Say <i>peach</i> .	◆ Change /ch/ to /s/.	peace	1 0
8. Say <i>whale</i> .	◆ Change /ā/ to /ē/.	wheel	1 0
9. Say <i>block</i> .	◆ Change /b/ to /k/.	clock	1 0
10. Say <i>skip</i> .	◆ Change /k/ to /l/.	slip	1 0
TOTAL			_____

## **Appendix D**

### **Examples of Intervention Lesson Plans**

## Lesson 1 - Introduce the concept of sounds in words

### Materials Required

mirrors  
white board and pen  
Purple Syllable Cards

### Introduction

***What happens to your mouth when you say words?*** After responding to the question, have each child say their name slowly into the mirror and describe what their mouth is doing. Say the child's name slowly and exaggerate the sounds in the child's name to demonstrate how the lips and tongue articulate. Compare the likeness and differences in the way each child's name sounds. Encourage them to exaggerate the sounds in their name by saying their names very slowly. Tell them that they are aliens from space and that everything they do is in "slow motion". Discuss what their mouth is doing as they begin to say their name. Have each child demonstrate the sound at the beginning of their name by talking slow motion like aliens, only this time "put the brakes on", stretching the beginning sound only (some children may already understand the concept of beginning sounds). Write each child's name on the white board and point out that the first thing their mouth does when they say their name represents the first letter in their names. (For those children who may have 2 letters representing the first sound in their name, point out that sometimes 1 sound can have 2 letters, etc. Avoid dwelling on this however, as it may cause confusions at this point.)

### Lesson

***Let's say the name 'Michael' in slow motion alien talk. Now let's say 'Michael' stretching the beginning part.*** Demonstrate both slow motion alien talk and beginning sound stretching, using the name Michael as the example. ***Now let's say our names the regular way and clap to the parts. When you clap 'Michael' it goes like*** (clap the syllables in Mi - chael). Each child practices clapping their own name to the correct syllable pattern. For those who are having difficulty, assist by clapping their hands for them while saying their name. Have each child clap each other name.

**Note:** Throughout these lessons, the letter name will be represented by m and the sound will be represented by /m/. Whenever possible, refer to the letter by the speech sound (phoneme) rather than the letter name (there is no direct association between learning the names of letters and reading. This is important to remember as children may confuse letter names with trying to sound-out words). If the children have a hard time "stretching" sounds, the stretch toy available in the sound box may help.

### Activity

Have children take turns choosing a Purple Syllable Card, say the picture, and then clap the syllable. Begin with the first six 3-syllable words, then four syllable, etc.

## Lesson 2 - Introduce consonant letters - one letter/one sound (phoneme)

man /m/ sun /s/

### Materials Required

letter cards 1-6  
picture cards for /m/ and /s/  
blank flash cards  
coloured pencils  
black marking pen  
rings to keep flash cards together  
small hand held mirrors  
white board and pen  
several blank tiles

### Recap

*Yesterday we talked about our names and how our mouth and lips and tongue feel when we say our names. We also practiced saying our names very, very slowly, like aliens. Who can show us how their name sounds when we talk like aliens?* Make sure that the children say their complete name in slow motion, not just the beginning part, stretching each sound as they say it. This is practice for when they begin to blend sounds together. *Now, who can just say the beginning part?* Practice exaggerating the beginning sound only.

### Phonemic Awareness Exercise

Practice clapping the parts (syllables) in each child's name, only this time, place a blank tile on the table for each syllable. Point to each tile (syllable) as the child says their name. *Who has a two tile name? A name with only one tile, etc.?*

### Lesson

*Some of you already know a lot about the alphabet. You may already know about these letters. Let's see who knows what these letters are.* Spread the first 6 letter cards on the table and have the children discuss them. This should give you an idea of what the children in your group already know about the alphabet. Chances are, they will be able to tell you the letter names. Respond by saying... *We've been talking about the names of some of the letters in the alphabet. Letters do have names, but they also represent sounds when you talk. In our group, we are going to be talking a lot about speaking sounds. It's important to know the names of the letters in the alphabet, but for now, we are only going to concentrate on the sounds.*

*When we talk, lots of different sounds come out of our mouth. These sounds have letters that go with them. These are some of the letters go with the sounds when we say words* (refer to the letters on the table).

**Note:** It's important to remind the children that letters represent their speech. Try to focus on the fact that speech (rather than a letter) has sounds.

**Today we are going to learn about two sounds. Because it might be hard to remember a sound all by itself, I'm going to give you a special key word that will unlock the sound, just like a house key unlocks a door.** Place m picture cards on the table, including the picture on the m letter card. Stretch the /m/ sound as you say the following words: /m/ ushroom /m/ oon /m/ onkey /m/ an. Hold up the /m/ card. **This letter represents the /m/ sound. The key word for this letter is man. Say man in your slow motion alien voice. What is the first thing your mouth and lips do when you begin to say man? Do you feel your lips pressing together?** Have the children practice saying the /m/ in man slowly into the mirror and describe what their mouth is doing at the very beginning of the word. **Do you see your lips pressing together?** Have each child demonstrate the /m/ sound and do not proceed until they understand how to produce the sound correctly. Name several other items that have the beginning /m/ sound, exaggerating the /m/ at the beginning. **Can anyone tell me other things that have the same beginning speaking sound as man?**

**Note:** Some children may have learned to add vowel sounds to consonant sounds when saying letter sounds in isolation. This can be very confusing as saying 'muh' instead of /m/ actually represents two sounds, not one. If a child is saying 'muh' instead of /m/, teach her to 'put the brakes on' before adding the extra vowel to the sound /m/. Also, demonstrate that they must not move their mouth or lips from their initial position or they will be saying two sounds. The more emphasis you place on the way the child's mouth must look and feel as she produces this sound now, the less confusion there will be when learning other letter sounds (these first introductory sounds can be easily extended without the 'uh').

Place s picture cards on the table, including the picture on the s letter card. Stretch the /s/ sound as you say the following words: /s/ nake /s/ ock /s/ lipper /s/ un. Hold up the s card. **This letter represents the /s/ sound. The key word for this letter is sun. Say sun in your slow motion alien voices. What is the first sound that comes out of your mouth when you begin to say sun?** Have the children practice this sound into their mirrors. **Who can tell me what their mouth is doing when they start saying sun in their alien voice? Who can show me how to say the sound of this letter all by itself? What other things have the same beginning sound as sun?**

### **Activity**

Hand each child two blank flash cards with a ring. Write a lowercase m and s on each card with a black marking pen. On the reverse side, the child can draw the key word. Ring the cards together. Have each child demonstrate their ability to produce each letter sound in isolation. If they have trouble remembering the correct sound,

have them look at their picture. Encourage the child to say the sound by themselves as much as possible, rather than demonstrating for them. This will help them learn the sound on their own rather than relying on a teacher, and also takes into account variations in dialects. These personal flash cards can be taken back to the classroom for extra practice and to communicate to the teacher what sounds have been introduced to the child.

**Revision**

Write a lowercase m on the white board. ***What speech sound do you say when you see this letter?*** Write an s. ***What sound goes with this letter?***

### Lesson 3 Consonant sounds

rat /r/ fish /f/

#### Materials Required

letter cards 1-4

picture cards for /r/ /f/ /m/ /s/

mirrors

white board and pen

#### Recap

Drill children on the first two letter cards. **Yesterday we learned two sounds and the letters that go with them. Let's see who remembers what the sounds are.** Hold the letter card up as the child says the sound. If the child has forgotten the sound in isolation, show them the back of the letter card to reveal the key picture. Ensure each child has mastered the correct sound of these two letters before going on.

#### Phonemic Awareness Exercise

**Listen to this word - man - Is there a /m/ in man? Where do you hear the /m/ in man? Is it at the beginning? Middle? End? Do the words man and sun begin with the same sound? Can you say sun without the /s/? Who can say man without the /m/?**

#### Lesson

Introduce the key words and sounds of /r/ and /f/ by following the same procedure as the other letters. Once again, make sure that 'uh' is not added **to the /r/ or /f/** sounds. **Today we are going to learn two new sounds.** Place /r/ picture cards on the table, including the picture on the r letter card. Stretch the /r/ sound as you say the following words: /r/ ope /r/ ake /r/ ing /r/ at. Hold up the r card. **This letter represents the /r/ sound. The key word for this letter is rat. Say rat in your alien voices. What is the first sound that comes out of your mouth when you begin to say rat?** Have children practice saying rat in their mirrors and describe what their mouth, tongue and lips are doing. **What is the very first thing your mouth does when you say rat?** Have each child demonstrate the /r/ sound. **Can you tell me something else that has the same beginning /r/ sound as rat?**

Place /f/ picture cards on the table, including the picture on the f letter card. Stretch the /f/ sound as you say the following words: /f/ eet /f/ an /f/ ire /f/ ish. Hold up the f letter card. **This letter represents the /f/ sound. The key word for this letter is fish. To remember the sound of this letter, use your alien voice to say fish. Think about what your mouth is doing when you start to say fish.** Have each child practice saying /f/ into their mirrors. Describe what their lips are doing. **Can you see your teeth when you say /f/?**

### **Activity**

Place m, r, s, f letter cards on the table or floor. Have each child take turns matching the picture cards for m, r, s, f with the corresponding letter cards.

### **Revision**

Write a lowercase m on the white board. ***What sound do you say when you see this letter?*** Write an f. ***What about this letter?*** Proceed with s and r in a similar fashion, taking turns until everyone has had a turn.

## Lesson 4 - Writing letters and dictation

### Materials Required

Letter cards 1-4

m, s, r, f picture cards

white boards/pens

sounds 1-4 of alphabet chart

blank flash cards

black marking pen

coloured pencils

\* other materials may be required during this lesson (see below)

### Phonemic Awareness Exercises

***Who can say fish without the /f/? What's the first thing our mouth does when we say sun? What speech sound is that? Do rat and man sound the same?***

Put two white boards (face down) on the table, one with one tile in, and the other with two tiles. Each child in turn chooses a card from the picture card pile used thus far, claps it, and decides whether it belongs on the one or two tile white board, depending on the number of syllables.

### Recap

Present letter cards 1-4 one by one. ***Who thinks they can say the sounds when I show them the letters?*** Present the cards in flash card format, round robin style, positively correcting each child if they don't say the sound correctly. See if each child can say all of the sounds when presented with the letter cards, one at a time. ***Now I'm going to say the key word behind your back and see if you can tell me the sound of the letter.*** This may be difficult at first. You may need to repeat the key word again, stressing the initial sound. If the student doesn't know, show them the letter, repeat the key word, and exaggerate the sound.

### Lesson

Hand out white boards and pens. ***So far we have learned how to say four sounds. Let's see how many of these sounds we know how to write.*** This will be a very informal assessment at this point to see who can write m, s, r, f. Say the key word and sound - man /m/ The child repeats the sound as they write the letter on individual white boards. Repeat this process with the remaining three letters. Pay close attention to pen grip and letter formation. All letters should be formed in one continuous movement, from top down, and counter clockwise. Have children use whole arm movements to write letters. It may be necessary to spend an extra lesson on writing practice. If so, below are ideas on helping children form the letters correctly:

- Stand behind each child, guiding their movements until they can do it on their own.
- Have a play in the sand pit, writing each letter with their fingers (or feet!) as they say the sound.
- Paint the letter(s) with water on the side of the building with a fat paintbrush.
- Write the letters with fingers in a thin layer of shaving cream, outside of course (messy but fun!).
- Use the top of a shoe box or a cookie sheet with cornmeal (not as dirty as sand) to write letters with fingers.
- Dictate the sound of a letter, child writes it on the chalkboard.
- Blindfold the children. Provide blank sheets of paper and crayons. The child attempts to write the letter dictated without visual feedback. Remind them that they are not to pick their hand up, but to write the letter 'all in one go'.

### **Activity**

Have children make their flash cards for rat /r/ and fish /f/.

### **Revision**

Display alphabet chart sounds learned thus far. Discuss.

## Lesson 5 - Introduction of a vowel sound (sticky letter)

apple /a/

### Materials Required

letter cards 1-5  
coloured pencils  
blank flash cards  
white boards and pens  
red marking pen

### Phonemic Awareness Exercise

*Listen to this word - man - Is there a /m/ in man? Do fish and sun begin with the same sound? Do rat and run begin the same? Can you say rat without the /r/? I'm thinking of a word that sounds like man but begins like /r/.*

### Recap

*So far we've learned four sounds. Let's see who can remember all of the sounds.* Hold up letter cards m, s, f, r and drill the children flash card style. If a sound is forgotten, show the picture on the reverse side and remind the child about saying the key word like an alien. The first sound that comes out of the child's mouth is the sound of the letter. Demonstrate the sound to the child only after they have been unsuccessful at producing the sound correctly.

### Lesson

Stretch the /a/ sound as you say the following words and present the picture cards: /a/ x, /a/ nt, /a/ strouaut, /a/ pple. Hold up the /a/ letter card. ***This letter represents the /a/ sound. The key word for this letter is apple. Can you hear the /a/ at the beginning of these words?*** Point to the picture cards. ***Today we are going to learn how to say the /a/ sound. Who would like to try saying this sound? Before you try, first think about the key word. To help you, begin saying the key word in your alien voices and then "put the brakes on".*** Pass mirrors out and listen to each student produce the sound correctly. Discuss what their mouths are doing. ***Is your mouth open or closed when you say /a/? Where is your tongue? Can you see a big smile when you say this speech sound? Sometimes this is called the "smiley" sound.***

**Note:** As some accents may vary with vowel sounds, make sure that the child is saying the sound as they would if they were saying the word apple. To check, have the child first say apple slowly and then produce the /a/ in isolation. Their beginning pronunciation and their isolated /a/ sound should match. As vowel sounds are harder to learn than consonant sounds, it may also be helpful for some students to say the key word apple first, and then pretend as if they are saying apple again, only this time they "put the brakes on".

### **Activity**

Write a lower case a on the blank flash card with red marking pen. Child draws an apple on the reverse. The child can add this to their existing cards.

**Note:** At this point, you may want to discuss with the children the fact that there are two ways the letter a can look. Explain that when we write a it looks like this - **a**, and when we see it in a book, it often looks like this - **a**. The children may also be curious as to why this letter is written in red. Tell them that some letters will be in red to help them remember that they are the “sticky” letters. They are the letters that help stick the other letters together to make words. All words have sticky letters. Also, many children may be tempted to say ‘uh’ for this sound as it has already been taught as a sight word. If this is the case, explain that this letter is a word (‘uh’) but it is also a sound (/a/). You may need to give examples of how ‘a’ can be used as a word (i.e. He has a big dog).

### **Revision**

Hold up a letter card. ***Who knows what the speech sound for this letter is?*** Listen carefully to each child individually to make sure they are able to produce the sound clearly. The play microphone can be ideal for “singing” vowel sounds. Display the a alphabet card with the existing alphabet cards.

## Lesson 6 Consonant sounds and dictation practice

net /n/

### Materials Required

letter cards 1-6  
picture cards for /n/  
blank flash cards  
coloured pencils  
black marking pen  
mirrors  
white boards and pens

### Phonemic Awareness Exercises

*Where is /a/ in the word apple - is it at the beginning, middle, or end? Man and fan are two words that rhyme. When words rhyme, it means that they sound like each other but they don't begin the same. Everyone says man - fan. Can you tell me another word that rhymes with man? I'm going to tell you three words - listen carefully - sun - boy - fun. What two words go together (rhyme)?*

### Recap

Use letter cards 1-5 as flash card drill 'round robin' style for sound practice. Have the children try and say the sounds in isolation when presented with the cards. Remind them not to guess at the sound, but to say the key word in their heads first before vocalizing. Pay attention to the /a/ sound just learned.

### Lesson

Place /n/ picture cards on the table, including the picture on the /n/ letter card. Stretch the /n/ sound as you say the following words: /n/ eedle /n/ ose /n/ ecklace /n/ et. Hold up the /n/ card. ***This represents the /n/ sound. The key word for this letter is net. Say net in your slow motion alien voice. What is the first thing your tongue does when you begin to say net? Do you feel it press against the roof of your mouth?*** Assess each child by listening to their /n/ sound individually.

**Note:** Some children may have difficulty distinguishing between the /m/ and /n/ sounds. Discuss the differences in the way the mouth feels when they say these two sounds. Compare these two sounds in the mirror.

Practice writing /m/ and /n/ on the white boards. Discuss how these two letters look alike, and how they look different. Have the children say the sound when writing each letter. Pay attention to letter formation. These letters should be formed from top to bottom, left to right, and in one continuous movement.

If the children are comfortable writing the letters learned so far, begin a dictation exercise. On their white boards, dictate each letter sound. The child repeats the sound and writes the letter. Positively correct each child as you go. If they make an error, say "good try... you wrote an /m/, I wanted you to write an /n/", etc. If the child doesn't remember how to write the letter, show the correct letter card while exaggerating the sound. Using the picture cards only (no letters) have the children say the word and then write the first sound.

### **Activity**

Place /m/ and /n/ letter cards, picture side up, on the table. Place the picture cards from /m/ and /n/ face down on the table. Have one child at a time choose an /m/ or /n/ card from the letter pile, say the word, and place it under the picture with the same sound. Make /n/ flash card cards to add to the others.

### **Revision**

Display alphabet chart sounds learned thus far. See who can point to the letter and say the sound in isolation.

## Lesson 7 Introduce sound mats and letter tiles

### Materials Required

letter cards 1-6  
white board/pens  
mirrors  
picture cards for letters 1-6  
sound mats  
letter tiles for sounds 1-6

### Phonemic Awareness Exercises

*What is the sound at the beginning of net? How about man? If children say the letter name, say, "that's correct, man does begin with an m. M is the name of the letter. Can you tell me what the sound is?" Who can tell me what sound the word newspaper begins with? Is it the same as net? Remember when we clapped the parts in our names? Let's try that again, only this time I'll tell you the words to clap. Can you clap the parts in the word newspaper? How about needle? Who can say newspaper without saying news? Who can say newspaper without saying paper? Have children use their own examples, 'round robin' style. Use blank tiles as in Lesson 3 to represent the syllables.*

### Recap

*Let's see who remembers all of the sounds we've learned so far.* Use letter cards 1-6 as flash card drill, 'round robin' style. Hand out white boards and pens. *Let's see who can write /m/. How about /s/, /a/, etc.* Dictate all of the sounds learned thus far for children to practice. Remind the children to say the sound as they write each letter.

### Lesson

Introduce sound mats. Give each child their personal set of sound tiles for letters 1-6. Spread the sound tiles above the squares on the mat. *I'm going to say a sound. I want you to repeat that sound, and put it in the first box.* Say the sound for each letter card 1-6 individually, providing enough time for each child to follow the directions. *Good, now what sound is that again?* Listen to each child individually to ensure correct pronunciation. Repeat with all of the sounds learned thus far. Repeat this exercise, only this time say the key word beginning with one of the sounds learned. The child repeats the word in their mirror, focusing on what their mouth is doing when they first begin to say the word. The child places the beginning sound tile in the first box.

### Activity

Spread picture cards for the first six sounds on the floor. As a group, have the children sort the pictures according to beginning sounds /m/ /s/ /r/ /f/ /a/ /n/ by placing the pictures under the appropriate key word on the letter card. Turn the pictures over to reveal the letter. Discuss.

### Revision

Have children go over personal flash cards.

## Lesson 8 Introduce sound blending

### Materials Required

letter cards 1-6  
mirrors  
white boards and pens  
Sound Tiles for sounds 1-6  
Sound Mats

### Phonemic Awareness Exercises

*I'm going to say 2 sounds and I want you to tell me what word I am trying to say. /a/ /m/ (wait about 1 second in between each sound). **That's right. The word is am, like in the sentence, I am very happy. Now what word am I trying to say /m/ /a/ /n/? How about /r/ /a/ /m/?** Make sure each child has been given the opportunity to have a go individually. **Now I'm going to tell you a word and I want you to tell me how many sounds are in that word.** Choose a word from the alphabet chart - saying it slowly to exaggerate the sounds. Use the hand gesture under your chin to demonstrate how the sounds change within the word. Encourage each child to say the word into their mirrors and notice how their mouths change position each time there is a sound change.*

### Recap

Use letter cards 1-6 and drill round-robin style. Pass out white boards for dictation drill. Hold up a picture card from sounds 1-6 and have the children write the beginning sound. Remind them to say the sound as they are writing the letter. Pay attention to letter formation. Corrections need to be made now before bad habits are formed which may be harder to correct later.

### Lesson

Hand out sound mats and sound tiles. Have the children spread the tiles for sounds 1-6 on their mats. **Today we are going to practice putting sounds together. Most of the time when we put sounds together we make real words, but sometimes we can put sounds together and make up silly words that may not mean anything. First I'm going to say real words and let you see if you can put the sounds of that word in the correct order on your mat. Say man. Say it again slowly and see if you can find the first sound. Now say it again. What sound comes after /m/?** It may be helpful at this point to point to the first tile box on someone's mat as you say the first sound (to demonstrate), then say the word again slowly and as you get to the /a/ move the /a/ tile in the middle box. Repeat this again with the last sound, pointing to the last box as you say the last sound. Once everyone has written man with their tiles, have them point to the sounds as they say man slowly. **Who can change man to fan? What sound did you change? Now change fan to ran? How many sounds does the word am have?** Demonstrate by saying the word slowly using the hand gesture under your chin. **Everyone say the word "am"**

**and show it to me with your tiles.** Repeat with the words Sam, ram and an. You may need to use these words in a sentence.

**Note:** If you need to correct a child who writes a word incorrectly with her tiles, say “*you showed me \_\_\_\_\_ . I wanted you to show me \_\_\_\_\_ .*” Point out that the sticky /a/ was in every “real” word.

**Activity**

Have the children invent their own words with their sound tiles and read them back to you.

## Lesson 9 Introduce /t/ and /p/

### Materials Required

letter cards 1-8  
picture cards for /t/ and /p/  
blank flash cards  
coloured pencils  
black marker  
mirrors  
white boards/pens

### Phonemic Awareness Exercises

***What's the beginning sound in television? How about the ending sound in cute? What's the very middle sound in the word fan? How about the beginning, middle and ending sound in the word pop? How many sounds are in the word pop? Can you say each sound by itself?***

### Lesson

Show letter card 7 and picture cards for /t/. ***Tap - teddy - tie - tent. Can you hear the /t/ at the beginning of these words? This letter represents the /t/ sound. The key word for this letter is tap. Can you practice the /t/ sound in your mirrors. Tell me what your mouth is doing when you say /t/? Where is your tongue? Put your hand on your chin and make sure your chin doesn't move when you say /t/.*** If the chin moves, the child may be trying to add the /uh/ after the /t/ and /p/ sounds as discussed earlier. Have the children look in the mirror and say /t/, holding their chin to make sure it doesn't move. It is also harder to hold on to the initial /t/ sound when saying it in isolation, unlike the sounds learned so far. You may need to explain this to the children. Have them put their hands on their voice box and compare the difference between 'tuh' and /t/.

Hold up the picture on the /p/ card. ***Peg - pumpkin - paint - pan. Can you hear the /p/ at the beginning of these words? Hold up the letter /p/. This represents the /p/ sound. Can you feel the puff of air as you say /p/. Look in your mirror and describe what your mouth is doing when you say /p/. Put your hand on your voice box as you say /p/. You shouldn't feel your voice vibrate.*** They should not be using their 'voice' when they say the /t/ and /p/ sounds.

### Activity

Put picture cards for the sounds learned so far in a box. Have children take turns choosing a picture, saying what's on the picture, and having the others write that sound on their white boards. Make flash cards for /p/ and /t/. Go over all of the sounds on their personal flash cards. Revision. Display new alphabet chart sounds.

## Lesson 10 Introduce /o/ and chaining exercises

### Materials Required

Letter cards 1-9  
blank flash cards  
coloured pencils  
black and red marking pen  
mirrors  
white boards and pens  
letter tiles for sounds 1-9  
mirrors  
sound mats

### Phonemic Awareness Exercises

In round robin style, have each child say the following. **Say tap. Say it again, but don't say /t/ (ap). Say man. Say it again but don't say /m/ (an). Say rat. Say it again but don't say /r/ (a ). What word am I trying to say p - a - n? How about f - i - x? b - o - x?**

### Lesson

Introduce the sticky sound /o/ by showing the octopus on letter card 9. **This is another sticky sound. Remember we said that all words have at least one sticky sound for them to be real words. The key word for this letter is octopus. When you say octopus very slowly, the first sound that comes out of your mouth is /o/. Hand out microphones. This is a fun opera sound that can be stretched for a very long time.** Demonstrate the /o/ into the microphone. Have everyone say /o/ into the microphone.

Hand out white boards and practice writing the /t/, /p/ and /o/ sounds. O should be written counterclockwise. The children should say the sound as they write the letter. Go through all of the sounds learned thus far, flash card style. Hand out sound mats and letter tiles. **I'm going to say a word and I want you to see if you can make that word with your tiles. Say fan. How many sounds do you hear when you say fan? Demonstrate the word slowly using your hand gesture under your chin. What's the first sound? That's right, it's /f/. What's the next sound that comes out of your mouth when you say fan? What's the last sound?, etc. I'm going to tell you to make another word. All you have to do is just change one sound.** (This process is called 'chaining'). **Change fan to pan.**

**Change pan to:**

- |        |        |        |
|--------|--------|--------|
| 1. pat | 4. nat | 7. tap |
| 2. pot | 5. nap | 8. top |
| 3. not | 6. map | 9. mop |

**Note:** If the children find this difficult, suggest to them the sound that they can change (e.g., **change /f/ to /p/ on that word. Now what word did you make?**).

Let children have fun by making up their own silly words and reading them back. You may need to help with sound-blending by pointing to each sound on the mat in order to sound-out the word.

### **Activity**

Make sound flash card for /o/. Don't forget to write the letter in red.

### **Revision**

Do the 'word behind the back' trick. Say a word beginning with a sound learned so far. Children write that word on the white board.

## Lesson 20 - More CVC reading and introduce /d/ and /v/

door /d/ volcano /v/

### Materials Required

letter cards 1-20  
picture cards for /d/ and /v/  
Blue Phoneme Cards 1-12  
Word Cards 36-63  
blank flash cards  
coloured pencils  
black marker  
mirrors  
white boards/ pens

### Recap

*Let's go through some of our word cards and see which ones we know.*  
Present word cards 36-63 round robin style.

### Phonemic Awareness Exercises

Present Blue Phoneme Cards 1-12 one at a time. Children are asked to say the picture, and using their hand gestures, tell how many sounds each picture has and what those sounds are (Cards 1-12 each have two phonemes - or sounds).

### Lesson

Hold up the picture on the /d/ card. Show the /d/ picture cards. **door - dog - duck - desk - dolphin.** *Can you hear the /d/ at the beginning of these words?* Hold up the letter d. *This letter represents the /d/ sound.* Hand out mirrors. *What is your tongue doing when you start to say door? Is it pressing against the roof of your mouth?*

Hold up the picture on the /v/ card. Show the /v/ picture cards. **Volcano - vacuum - violin - vegetables - valentine.** *Can you hear the /v/ at the beginning of these words?* Hold up the letter v. *This letter represents the /v/ sound.* Hand out mirrors. *Can you see your teeth when you say this sound? Can you make this sound stretch for a long time? Do your lips tickle?*

Practice the proper letter formation on the white boards. To avoid b/d reversals, tell the children that to make a /d/ properly, they need to think about the picture (door) and turn the knob (make the circle) before they go into the door (line). Demonstrate this concept on the white board. Have the children practice writing /b/ and /d/ on the white board as you dictate each sound. Remind them about the bat and ball when forming the /b/ (you need the bat before you can hit the ball).

Dictate the following words for the children to spell on their white boards:

bad - bid - did - dad - mad - mob - dot - bit - dim - rad - dab - dud - bud

**Note:** Some children may need extra help in hearing the difference between /f/ and /v/. Extra practice on this may be necessary. As the children say the two sounds in the mirror, ask them to tell you what differences they feel. Explain that they will use their voices when they say /v/, and the /f/ is "voiceless".

Practice writing /v/ by dictating the following words:  
van - vim - fin - fan - fun

**Activity**

Make flash cards.

**Revision**

Display all alphabet chart sounds. Go over all sounds.

## Lesson 22 - Introduce word lists and slides

### Materials Required

letter cards 1-20  
mirrors  
white boards/ pens  
word lists 1-3  
word slides for /a/ /o/ /i/

### Phonemic Awareness Exercises

***I'm going to say some words. I want you to tell me if you hear the /b/ at the beginning, middle or end.*** Say each word slowly, one at a time:

***big - cabbage - rib - robot - banana - crab***

***Now let's think about /d/. Where do you hear /d/ in these words? Beginning, middle or end?:***

***mud - dad - poodle - middle - nerds - video***

### Recap

***Let's do our sounds behind the back today. I'll give you the sound, and without looking at the alphabet chart, I want you to write the letter that goes with each sound on your white board.*** Go through cards 1-21, saying each sound behind the childrens' backs. The children say the sound as they write the letter.

### Lesson

Introduce the word slides. Tell the children that they will be reading words that they already know, the only difference is that they are written smaller. Tell them that you don't want to *hear* them sound-out the words, and that they are to do that in their heads quietly before they say what the word is. Each word list goes with the corresponding vowel slide.

**Note:** A very effective way to manage this activity is to give each child a word list with a slide. They all move their list to the top word, and one at a time, read their word to the teacher. This can be done round robin style. When the child has finished their list, they can trade until each child has read all three lists.

### Activity

The children can say sounds from their individual flash cards.

## Lesson 23 Introduce /y/ and /qu/ - Sound Man Sam

yellow /y/ queen /qu/

### Materials Required

letter cards 1-22  
picture cards for /y/ and /qu/  
blank flash cards  
coloured pencils  
black marker  
mirrors  
white boards/ pens  
Sound Man Sam/letter cards

### Phonemic Awareness Exercises

**Which word doesn't belong?** Say the following word groups to the children:

- **sing - long - wing - king**
- **under - thunder - mouse - blunder**
- **hair - nose - bear - chair**
- **bike - wheel - hike - like**

### Recap

**Let's go through our sound cards. Now let's practice some of the letters that go with the sounds.** Dictate the key pictures (words) from the alphabet chart. The child writes the *first* sound on their white board.

### Lesson

**Note:** The correct sound for /y/ sounds like the long e sound /ee/. The children will discover this once they begin to stretch /y/ as they say the first part of the word *yellow* slowly.

**Hold up the picture on the /y/ card. Show the /y/ picture cards. Yellow - yawn - yo-yo - yell. Can you hear the /y/ at the beginning of these words? Hold up the letter y. This letter represents the /y/ sound. Hand out mirrors. What is your mouth doing when you start to say yellow? Is it stretching out like a funny smile?** Have each child demonstrate this sound. If they have difficulty, or are tempted to say 'yu' (as many teachers teach it!) have them say *yellow* slowly and stop them just as they are about to complete the word.

**Note:** The /qu/ sounds like /coo/ (a bird call!) when it is said in isolation - not 'coo-wu'. Technically the /coo/ is two sounds quickly blended together. To avoid confusing the children, do not teach it as two sounds. If a child is able to distinguish these letters as two sounds, congratulate them and say they are correct!

Hold up the picture on the /qu/ card. Show the /qu/ picture cards. **queen - quilt - questions - quack. Can you hear the /qu/ ('coo') at the beginning of these words?** Hold up the letter pair qu. **These two letters represent the /qu/ ('coo') sound. They always work together to make this sound. This letter** (refer to the q) **is never alone in words that you will be reading and spelling. Every time you see a word that has a q you will also see a u after it. Whenever we write this letter, we'll always put the u after it, too.** Hand out mirrors. **Let's see what our mouths are doing when we say the first part of queen slowly into our mirrors.** Describe the shape of the mouth and lips, and where the tongue is.

Practice the proper letter formation on the white boards. Dictate the /y/ and /qu/ sounds for the children to write. Make sure they say the sound as they write the letter(s). The children may need to be reminded that q and u are always written together.

### **Activity**

Introduce Sound Man Sam (directions for making him are in the appendix). Tell the children that he is a great word maker (even when he makes silly words), but he always needs help to read the words that he makes. He's called Sound Man Sam because he can only spit words out - one sound at a time! Use the letter cards that go with him and put a C - V (red card) - C in his s'ot, one at a time. Each child blends the phonemes together and reads the word back to him. Make flash cards with the new letters.

### **Revision**

Display all alphabet chart sounds. Go over, reviewing the new sounds of /y/ and /qu/.

## Lesson 28 - More decoding practice

### Materials Required

letter cards 1-26  
Word cards 76-98  
mirrors  
white boards/ pens  
Word Slides/Lists 4-6  
Picture Cards for /ch/ and /sh/

### Phonemic Awareness Exercises

**Let's look at the pictures that begin with /ch/ and /sh/.** Show the picture cards, one at a time, and have the children attempt to isolate the phonemes (sounds) in each word. Use the hand gesture as the children say the word and count the phonemes.

**Note:** This exercise may be difficult for the children to do on their own and they may need some modeling from the teacher. The aim of this exercise is for the children to understand that now they will be exposed to words that may have more letters than actual speech sounds (ie. /sh/ - /ow/ - /er/).

### Recap

**Yesterday we learned how to write two new speech sounds. Who remembers what those sounds were?** Hand out white boards and pens and have the children write each sound learned so far. Pay attention to proper letter formation and make sure the child says the sound as they write it.

### Lesson

Divide word cards 76-96 into piles of three and give to each child. The children can pick a card from their pile to read to the group. Although the children may have to 'sound out' some words, discourage them from saying out loud the individual sounds. Remind them that they are to say the sounds in their heads before saying the whole word.

Hand out Word Slides for /o/ /i/ /u/ and Word Lists 4-6. Have each child say the sticky letter sound in their head before reading each word. Trade lists so that each child has had the opportunity to read all three lists.

### Revision

Have each child individually say the sounds learned so far by referring to the alphabet chart.

**\* The children are now ready to read their phonetic storybooks**

## Lesson 48 - Introducing acorn /a/

(This lesson may take two days to complete)

### Materials Required

letter cards 1-31

mirrors

white board

'Acorn' alphabet chart/ a\_e, eigh, ay and ai cards

Word worksheet #1 and #2

highlighter pens

blank flash cards/coloured pencils

### Phonemic Awareness Exercises

***What's the second sound in the word cape?***

***What's the first sound in the word ate?***

***What's the second sound in the word tail?***

***What's the third sound in the word play?***

***What's the second sound in the word say?***

***What's the second sound in the word pain?***

### Recap

Review sounds 1-31, flash card style. Say the sounds behind the back as the children write the letters.

### Lesson

**Note:** The first sound (phoneme) in the word ate (long a sound) will be represented by /a/. This will avoid any confusion with the /a/ as in bat.

Do not refer to this sound as "saying the letter name", which may be confusing to many children.

Hold up the picture of the 'acorn' on the alphabet chart. Ask the children to say "acorn" and concentrate on the first sound. Use mirrors (as in previous lessons) to describe what their mouths are doing. ***What's the first sound you say when you say acorn? Acorn begins with the sound /a/. There are lots of different ways that letters can be put together to make the /a/ sound.*** Hold up the a\_e, eigh, ay and ai cards. ***Today we'll talk about four ways to make the /a/ sound.*** Remind the children that they already know that it's possible to have two letters represent one sound. Ask them to look at the alphabet chart and find an example of two letters put together that make only one sound (they should point out 'ch', 'sh', 'th', etc.). Using the 'ch' as an example, demonstrate how both 'c' and 'h' make two completely different sounds, and if you put them together, they make a third sound that is very different than 'c' or 'h' alone. Write the 'eigh' letter combination on the teacher white board. Ask the students to tell you how many letters you wrote down. Now ask them how many sounds these letters represent. Ask them what the sound is that these letters represent.

**Note:** Some children may try and sound-out the letter combination. Circle all four letters and remind them to look and say "acorn", emphasizing the /a/ at the beginning. It may also be helpful to circle the 'eigh' letter combination while the students say /a/, and then unexpectedly, add a /t/ at the end. See who may be able to read the word 'eight'. Ask how many sounds the word 'eight' has, circling 'eigh' at the same time you say /a/, and then saying the /t/.

Write the other three phonemes on the white board (ie. ay, a-e, ai) and ask the children what sound each letter combination represents.

Hand out the word worksheet #1. With highlighter pens, have the children highlight the /a/ sounds (a\_e and ai) on the first word, then read each word, round robin style.

**Note:** Children may ask why there is a space between a\_e. Tell them that the space leaves room for a letter that is not sticky. Demonstrate this by writing a\_e on the white board and have the children suggest a non-sticky sound. Take turns reading what the partial word would be.

Hand out the word worksheet #1 and #2 separately. With highlighter pens, have the children highlight the /a/ sounds (a\_e, ay, eigh and ai) on the first word, then read each word, round robin style.

### **Activity**

Make four personal flash cards by drawing an acorn on one side, and writing one of each of the four graphemes (letter combinations) in red on the reverse.