

Hypothesis: Explicit teaching of dependable rime units in single syllable words to Year 1 students who are experiencing reading difficulties improves decoding of words in isolation and prose reading accuracy.

Abstract

Current research indicates that early success in reading ability is linked to phonological awareness knowledge. Without this knowledge children have difficulty accessing unfamiliar words and therefore are unable to read in a fluent way, maintaining meaning.

The aim of this study was to investigate whether the explicit teaching of dependable rime units in single syllable words to Year one students who are experiencing reading difficulties improves decoding of words in isolation and prose reading accuracy.

Two Year one students in their second year of school were identified as 'at risk' in reading. These students were assessed, withdrawn from their classroom for a series of ten half hour lessons over two weeks, and then assessed again.

The data collected from the post assessments indicated that the hypothesis was confirmed and that explicitly teaching rime units did improve outcomes in reading for both students. Unexpectedly however one student chosen to be in the research project, was assessed initially on the Southerland Phonological Awareness Test as being phonologically very capable although still with reading difficulties. His results suggest an opportunity for further study to explore the link between high level phonological knowledge, possible low level orthographic knowledge and reading disability.

An implication of this study is that a balanced literacy program should incorporate researched based assessment to accurately diagnose reading difficulties to ensure explicit and systematic teaching at the students' point of need that incorporates continued exposure and practise with rime units and letter clusters. Another implication may be to ensure this happens early in the learning life of the student as the influence of phonological knowledge diminishes with the age of the student.

Introduction

We know that for young children, learning to read is a complex task and there are many skills at different levels of text processing that students need to pull together to become skilled readers. Munro and Munro (1991, 1994; cited in Munro 1995c) name these levels of text processing as the word, the sentence, the conceptual and the topic levels. Readers move through these levels as they read depending on their purpose for reading. The information they get from the text depends on the efficiency with which they are able to process this information. If their attention is taken up with processing at one level more than another, there is less attention "available for processing at the other levels and for building a continually updated model of the text" (Munro, 1995c, p.1). Beginning readers are often slow and inaccurate in word recognition and limited in the kind of texts they can read. Skilled readers however can read text confidently with accuracy and fluency. They have learnt, through practice over time, to recognise words automatically.

To be able to recognise words automatically, the reader needs to connect the written words with the spoken words. This is phonological knowledge and is the ability to recognise, combine and manipulate the different sound units of spoken words (Annandale, Bindon,

Handley, Johnston, Lockett, Lynch, 2004). Phonemic awareness, the awareness of the smallest units of spoken language, is one aspect of this (Munro, 1998).

Many students will develop an understanding of phonological awareness through language experiences both at home and school. Playing with words when saying rhymes and singing songs allows students more opportunities to hear sounds in words. However some students will not have had these types of opportunities for language play in the home, so they may not be aware of phonemes in words. Adams (1990; cited in Hempenstall) believes that about a third of students need assistance with the development of phonemic awareness and that it is not to be assumed that it will develop with maturation. Yopp and Yopp (2009, p.4) noted that “a child’s ability to reflect on language itself, specifically the sounds of language and especially the phonemes, supports the child’s understanding of the logic of the written code”.

There is much research to indicate that phonological and phonemic awareness knowledge in students influences reading ability. Stanovitch, (1986), asserts that phonological awareness is a ‘potent predictor’ of the ease of reading acquisition. Hatcher, Hulme and Ellis, (1994); National Reading Panel, (2000); Share, (1995); as cited in Hempenstall, all agree on the importance of phonemic awareness to early reading acquisition. According to Munro (2000) skilled readers have access to phonemic awareness knowledge and this allows them to notice and manipulate sounds successfully. For children with reading difficulties these processes are less able to be performed (Munro, 1998).

Westwood (2001) discusses many studies which focus on the successful effects of specific training in phonemic awareness. These studies suggest that when children have acquired a high degree of phonemic awareness such instruction has immediate beneficial effects on their reading and writing. Further research also indicates that the most successful teaching of phonological awareness occurs when there is an explicit focus on recognising and manipulating sound units (Ehri, 1998; Treiman, 1993, as cited in Annadale et al., 2004).

One aspect of phonemic and phonological awareness that can be targeted explicitly is segmenting words into onsets and rime units. Onsets are the consonant sounds that come before a vowel in a syllable (e.g. *b* is onset for *bat*; *st* is onset for *stop*). The rime consists of the vowel and any sounds that follow it in the syllable (e.g. the rimes in *bat* and *stop* are *at* and *op*). One type of unit frequently taught is the dependable rime unit. The dependable rime mostly makes the same sound when it appears in words that have the same letter sequence. If children are to become efficient readers they need to be able to notice familiar patterns in words and recognise these automatically, therefore spending more time reading for meaning and less time decoding unfamiliar words (Harris, Turbill, Fitsimmons & McKenzie, 2001). Explicitly teaching children how to segment words into onset and rime “increases their word recognition efficiency” (PERI Program Notes). By learning to recognise letter clusters rather than individual letters they are lessening the amounts of information they need to process in order to recognise words. Munro (1998) discusses the need for learners to be able to ‘transfer’ letter cluster knowledge, and the sound that matches, to other words when reading. They need to be able to use what they know about one or some words in order to be able to work out other words. Munro’s (1998) research examined a correlation between a child’s level of phonological awareness and their prose reading ability and found that there was a link between these two with the strongest effect being for younger children. These findings suggest the need for any phonological awareness difficulties to be sorted out at an early age so that prose reading difficulties were less likely to occur.

The present study aims to review the learning outcomes of two Year 1 students, who are experiencing slow progress in learning to read, after they have been exposed to explicit instruction in manipulating onset and rime units. It is hoped that this study will show that the

intervention has improved their ability to decode words in isolation and in their prose reading ability.

As Torgesen (1998) and Crevola and Hill (1998) discuss, a failure to get under way with reading in the early years makes it very difficult for students to catch up with their peers. The consequence being that the gap between high and low achievers becomes wider over time. The importance of early intervention in a structured, explicit way, which is focussed on the learning needs of the students, is imperative for success.

Method

Design

The study uses a case study assessment/intervention/assessment design in which the gain in decoding and prose reading ability for Year 1 students with reading difficulties is monitored following teaching of single syllable rime units.

Participants

The participants are two Year 1 students who were identified as 'at risk' through discussion with their classroom teacher and by not having met the Text Level Benchmark for literacy at the end of Prep. Both students were on the Tentative Selection List for Reading Recovery at the beginning of their second year of school however were not given the opportunity to participate in the Reading Recovery program as they were not the most in need in the year level. The students attend a two stream school and are both in the same classroom of twenty – two students where the teacher attempts to meet their learning needs through small group teaching sessions. Student B has been referred to an Occupational Therapist for an assessment and during the time of this intervention had attended two sessions.

A brief description of the participants is shown in Table 1

Student	Age in Y/M	Gender	ESL	EMA	Text Level Pre-test	Other Interventions
Student A	7-0	Female	No	No	10	No
Student B	7-3	Male	No	No	9	Occupational Therapy

Table 1.

Materials

The assessment tasks used as pre and post tests for this study included measures of phonemic awareness, phonological decoding, word recognition in isolation, spelling and instructional text level.

Materials used for pre and post testing included the following:

Letter Identification (Clay)

Rime Unit Test (Dalheim 2004)

BURT Word Recognition Test

Sutherland Phonological Awareness Test (SPAT)

South Australian Spelling Test (SAST)

Alpha Assess Benchmark Texts

Materials used in the Intervention Sessions included the following:

Magnetic letters and whiteboard

Picture cards for each rime unit (home made)

Word cards for each rime unit (whole words and cards cut into onset and rime units)

Blank flashcards

Word wheel (Hill, S., Developing Early Literacy, 2006, p.185)

Small books to write in rime units used in prose

Individual Scrapbooks

Treasure Rhyming Race Game (Word Game Board and Blank Game Board)

Procedure

The pre and post assessment tasks were administered to both students individually in a room free from noise and distraction. These sessions were additional to the teaching sessions.

The intervention program was comprised of ten teaching sessions of thirty minutes each. Both students were withdrawn from the classroom and participated in the sessions together. The ten sessions were conducted on ten consecutive school days at approximately the same time each day. These sessions did not replace the normal literacy teaching sessions conducted in the students' classroom. Both students were from the same Year 1 classroom.

From the rime units identified as not known by both students in the pre-test, nine rime units were chosen to be explicitly taught during the teaching sessions. The lessons focussed on introducing and revising these ten dependable rime units. Each lesson targeted a particular rime unit. The rime units were presented in the following sequence: in, an, it, ip, ug, ay, aw, ick, ell.

The first aspect of the teaching involved the playing of a rhyme game showing words containing known rime units, established from rime unit test, to ensure the students are beginning with what they already know. The purpose of the lesson was then discussed with the students and made explicit. "Today we are going to learn about some words that rhyme and have the same letter pattern."

The students were presented with pictures that contained the focus rime unit, each picture was named and the rime unit identified. Flashcards containing the rime unit were shared between the students and a set of onset cards placed between them. Each student took turns to choose a rime card to match and make a word. Once matched, the students were asked to say the word, say the segmented word in two parts e.g. p-in, and to say the blended word again. The students were then asked to generate other words that rhyme with the focus group of words. These words were written on cards and added to the list.

On the magnetic board the rime was displayed with a group of onsets available. Each student took turns to add an onset to the rime, say the blended word made, and then move the onset

to the left naming the onset while following with the rime. e.g. p-in. As the word was blended the child articulated the complete word e.g. pin.

Each student then wrote some of the words into their scrapbook and drew a picture for each word.

With the support of the teacher some words containing the focus rime unit were used to compose a short story which was recorded in a booklet, read by each student and kept for revision in future lessons.

Each student was given a Word Wheel containing the focus rime unit and together they made and said new words using this word wheel. The lesson concluded with the teacher supporting the students to reflect on what they had learned in the session. The support focused on the vocabulary the students needed to articulate their thoughts about their learning.

The following sessions began with the students re-reading the text composed from the previous session.

In between sessions the students were able to use their word wheel to practise making words and read books containing the rime units. (Fitzroy Readers and PM Readers)

Following the teaching sessions the students were post tested using the same materials and procedure as in the pre-test. The data was analysed by making comparisons between the results from the two testing periods.

Results

The pre and post test results for the participants in the study are shown in Table 2.

Student	Text Level		Letter ID /54		SPAT /60		BURT		Rime Unit Test/149		SAST S.A. Spelling	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Student A	10	12	53	54	30	33	18	24	61	83	14	17
Student B	9	12	50	52	38	47	22	25	54	77	14	20

Table 2. Pre and Post test results.

Table 2 shows that gains were made by both students between pre and post testing across all tests.

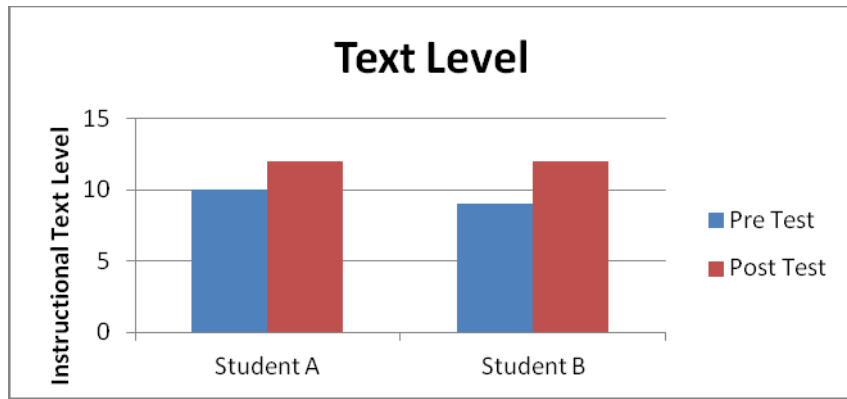


Figure 1

Figure 1 compares the pre and post instructional text levels for both students. Both students increased in their instructional text level although Student B made a bigger gain of 3 text levels while Student A made a gain of 2 text levels.

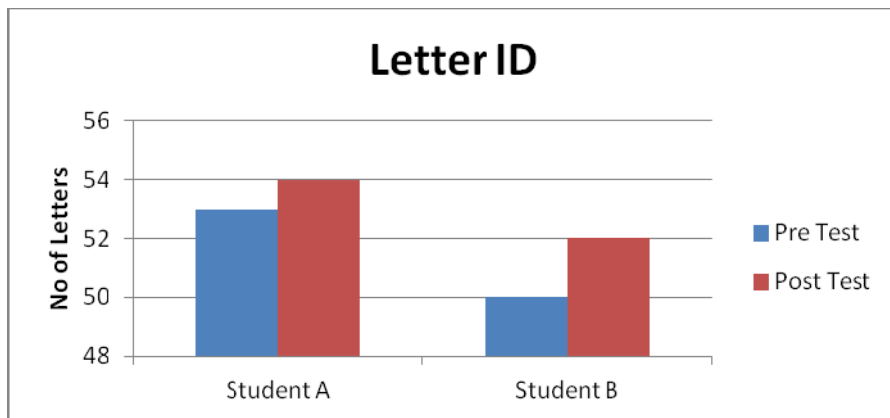


Figure 2

Figure 2 compares the letter name knowledge of both students in the pre and post test situation. The results show although Student A has consolidated her knowledge of the alphabetic code and has overcome a previous confusion Student B is still experiencing confusions with some letters.

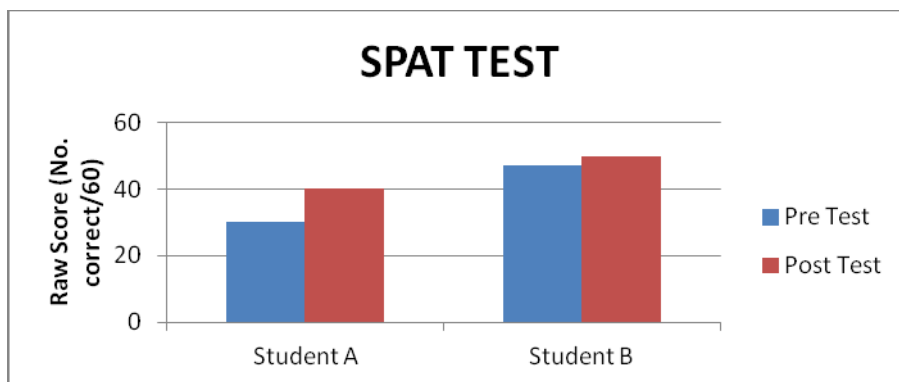


Figure 3

Figure 3 shows the results for each student on the Southerland Phonological Awareness Test. This test is a measure of a student's ability to notice, identify and manipulate sounds in spoken words. The test showed that Student A had improved from a raw score of 30 in the pre test to a raw score of 40 in the post test. Student B had improved from a raw score of 47 in the pre test to a raw score of 50 in the post test.

Table 3 shows the results on particular subtests within the test and highlights the strengths and weaknesses for both students. On the pre test Student A performed above the expected level, for the second year of schooling, on five of the subtests and at expected level on seven of the subtests. On the Deletion Onset subtest, which is a measure of the ability to delete phonemes from words, Student A performed below the expected level. On the post test Student A improved her score on the subtests involving segmentation blends, deletion onset, deletion boundary and non-word reading. Each of the words in non-word reading was attempted by sounding each letter separately in both the pre test and the post test.

Student B performed above the expected level on ten subtests in the pre test and at expected level on two subtests only performing below expected level in one subtest which was the nonword reading test. In the post test Student B improved his score on the nonword reading subtest by one point putting him at expected level for that subtest. He also improved by one point in the deletion internal subtest and the nonword spelling test.

SPAT-R Summary Subtest Scores	Student A Pre	Student A Post	Student B Pre	Student B Post
Syllable Counting	4/4	4/4	4/4	4/4
Rhyme Detection	4/4	4/4	4/4	4/4
Rhyme Production	4/4	4/4	4/4	4/4
Blending CVC	4/4	4/4	4/4	4/4
Onset Identification	4/4	4/4	4/4	4/4
Final Phoneme ID	4/4	4/4	4/4	4/4
Segmentation CVC	3/4	4/4	4/4	4/4
Segmentation Blends	0/4	2/4	4/4	4/4
Deletion Onset	0/4	3/4	4/4	4/4
Deletion Boundary	0/4	2/4	4/4	4/4
Deletion Internal	0/4	0/4	2/4	3/4
Nonword Reading	2/8	3/8	1/8	2/8
Nonword Spelling	1/8	2/8	4/8	5/8
Total	30/60	40/60	47/60	50/60

Table 3 Sutherland Phonological Awareness Scores

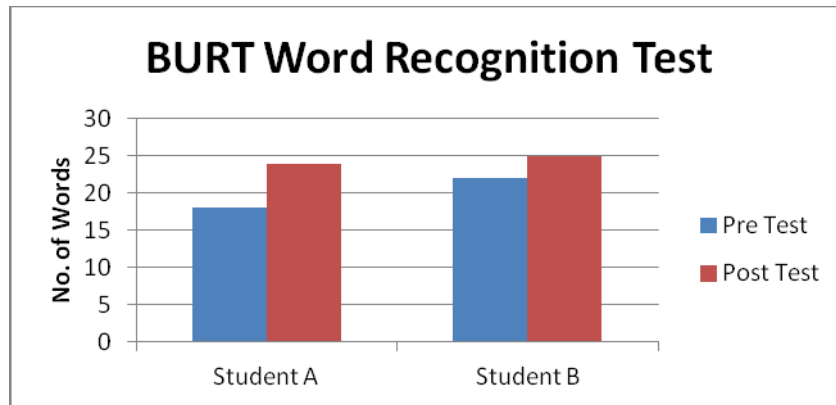


Figure 4

Figure 4 shows the scores for both students on the BURT Word Reading Test. This test assesses students' knowledge of words in isolation and according to Marie Clay (2005) should be used along with a measure of reading continuous text. Both students improved on this test with Student A progressing from a raw score of 18 on the pre test to a raw score of 24 on the post test and Student B progressing from a raw score of 22 on the pre test to a raw score of 25 on the post test. This translates to a reading age of 6.1 on the pre test to a reading age of 6.5 on the post test for Student A and a reading age of 6.3 on the pre test to a reading age of 6.5 on the post test for Student B. Although the gains are small and both students are still below their age range there has been progress in word accuracy.

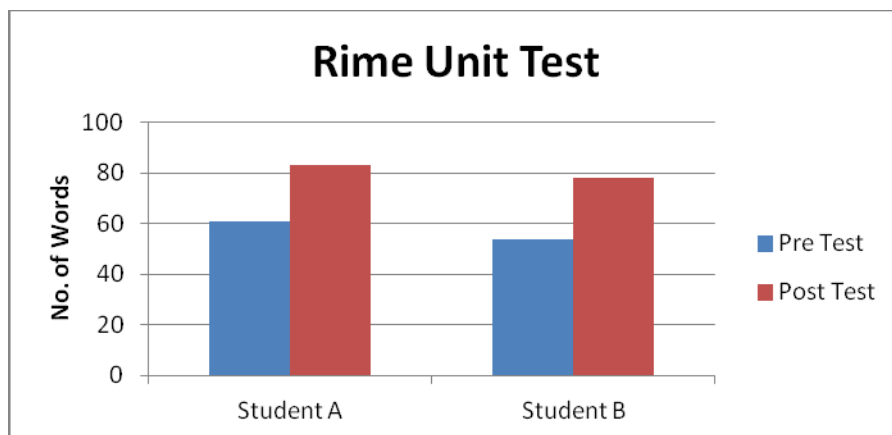


Figure 5

Figure 5 shows the results for the Rime Unit Test. The total number of words attempted by each student was 149.

In the pre test Student A read the first 95 words consisting of the letter patterns CVC, CCVC, CVCC and CCVCC mostly automatically, (3/95 were not read automatically), although not always accurately (54/95 were read accurately). When attempting the 4 and 5 letter words with the letter pattern CVCC and CCVCC she sounded most letters separately and was much less accurate (9/54 accurately read).

In the Pre test Student B read the first 95 words consisting of the letter patterns CVC, CCVC, CVCC and CCVCC with most words requiring attention, sounding individual letters separately. His accuracy was 49/95. Accuracy and automaticity was not good. When attempting the 4 and 5 letter words with the letter pattern CVCC and CCVCC he was a lot less accurate and was still not automatic.

Both students made an improvement in their raw scores. Further evaluation of responses (Table 4) indicated that the rime units explicitly taught in the teaching sequence were identified in the post test in 3 letter (CVC) words rapidly and automatically by Student A and to a slightly lesser degree in 4 letter words (CCVC) and (CVCC). The data in Table 3 indicates that Student B has made considerable gains in his word reading ability particularly in 3 letter (CVC) and 4 letter (CCVC) and (CVCC) words however his automaticity, although improved marginally from the pre test was still not fast. Most words needed attention with letters being sounded separately.

Rime Unit Test	3 Letter Words (CVC) / 24		4 Letter Words (CCVC) / 24		4 Letter Words (CVCC) / 24		5 Letter Words (CCVCC)/23		4 Letter Words (CVCC)/26		5 Letter Words (CCVCC)/28	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Student A	19	23	14	22	11	17	10	12	6	8	1	1
Student B	16	22	10	19	12	18	11	13	3	4	2	2

Table 4

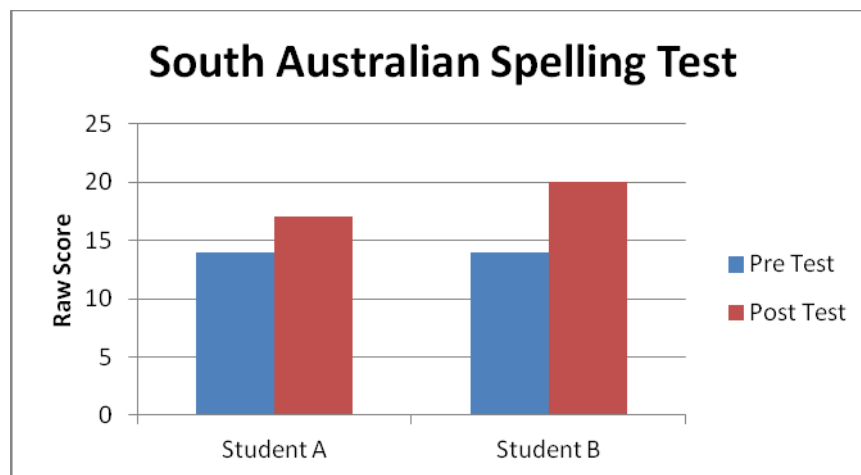


Figure 6

Figure 6 shows results for the South Australian Spelling Test. This test is a standardised test of spelling ability for students in the 6 to 16 years age range. The pre test scores showed both students with the same raw score of 14 however due to the difference in age Student A was below the normal range for her age and two points above being in the critically low category

whereas Student B, also below the normal range, was only one point above the critically low category.

The post test shows that both students made gains. Both Student A and B are now within the normal range for students the same age however both are still slightly below average for their respective age.

Discussion

The purpose of this study was to measure the effect on decoding of words in isolation and prose reading after explicit teaching of dependable rime units in single syllable words. The evidence gathered suggests that explicit teaching of rime units does improve reading ability in the above areas although there were limitations to the study, notably sample size (two students), and the length of the intervention (10 sessions). The hypothesis was confirmed by the results of both students in the post test for both decoding of words in isolation and prose reading.

In prose reading Student A increased her Instructional Text Level from Text Level 10 to Text Level 12. In the pre test she demonstrated the use of mainly semantic and initial visual information to attempt words in prose. The structure of the sentence was relied on minimally. The post test analysis of her errors indicated that she was still relying on semantic and visual information predominantly, and still with little emphasis on the structure of the sentence, however she was now using more visual information to attempt unknown words. She was looking further into the word, attending to medial and final visual information rather than just initial visual information. This may indicate a greater understanding of the need to look at letters in a cluster rather than as individual letters, and/or an increased ability to use onset and rime as a word skill. Student A was exhibiting more awareness of words when reading text after the intervention. Fluency or reading rate were not assessed in this study but may be an area to look into further to compare reading performance between testing periods.

Because Student A read most words in the first two sections of the Rime Unit test at pre test automatically, although not necessarily with a lot of accuracy, it would suggest that her level of orthographic knowledge was low as she was possibly focussing on individual letters rather than on letter groups. Her accuracy improved in the post test so we could assume that she was now more able to see letter clusters and digraphs as a single unit, however this did not transfer to her ability to read words with more complex letter clusters or for words with more letters.

Student A displayed less mature phonological skills in both the pre test and the post test than Student B, being unable to segment blends or delete consonants however after the intervention considerable improvement occurred in segmenting blends, deleting onsets and boundary consonants and nonword spelling. Student A's raw score at pre test on the Southerland Phonological Awareness Test fell below the 25th percentile putting her below the 'average range' although above the 'critically low' range. At post test her raw score was 40 which put her well within the 'average range' for her year of schooling.

The BURT Word Reading Test indicated an improvement of 4 months for Student A after the intervention. Although she made considerable progress she was still approximately seven months behind her chronological age. The pre test indicated a number of words were attempted using either initial letter or initial and final letter and by selecting individual letters nonsystematically. The post test indicated much more accurate reading of one syllable words.

In prose reading Student B increased his Instructional Text Level from Text Level 9 to Text Level 12. In the pre test he demonstrated the use of mainly initial visual information and the use of structure of the sentence to attempt unknown words. He was neglecting to search further for more visual information and also neglecting to use meaning as a source of information. The post test analysis of his errors indicated a similar pattern to the pre test in that he was still neglecting semantic information however was now using more word information rather than just initial letter knowledge to prompt attempts at words, as was Student A.

In the Rime Unit test Student B made gains in accuracy but his automaticity was not necessarily improved. He still needed to pay a lot of attention to the words he was attempting, so we could assume that the intervention has assisted him to be accurate but further work is needed to help him be able to see these letter patterns automatically.

Student B performed very well in the Southerland Phonological Awareness Test. He was able to complete the first ten subtests with 100% accuracy in both the pre and post tests, with his nonword reading improving from 1 to 3 scores in the post test. However in this sub test although he was able to read the two new nonwords accurately they needed attention. He needed to sound letters individually. This suggests that although Student B's hearing of sounds in words and his ability to manipulate them is mature his word reading difficulties are caused by other reasons and may be more closely linked with orthographic processing. It is of interest to note that Student B, in the nonword reading, both pre and post test, either added letters or reversed the order of letters. This also occurred in the Rime Unit test.

The BURT Word Reading Test for Student B indicated an improvement of 2 months after the intervention. There was less sounding of individual letters although two three letter words were said accurately that had not been said accurately in the pre test. Neither of these words contained a rime unit taught in the intervention however transference of how to look at a letter cluster may have occurred.

The findings from this study, although limited, support the work of the researchers cited earlier in this paper. Westwood (2001); Ehri (1998); Trieman (1993) cited in Annadale et al, (2004) believe that explicit teaching in phonological and phonemic awareness has immediate and beneficial effects on students' ability to read. Both students made similar gains in their prose and word reading after the intervention however Student B began the intervention with a high level of phonological awareness while Student A was below the average range for the second year of schooling.

It would appear that both students' results parallel the results of researchers who have noted the reciprocal relationship between phonological skill and reading progress. Ehri, (1979, 1984, 1985; cited in Stanovitch, 1986) holds the position that there is a reciprocal causal relationship between reading acquisition and phonological awareness. Although, Stanovitch, (1986) believes that the direction of the causality is not as important as is the establishment that there is one.

It is difficult to speculate on why Student B didn't make a greater improvement in his prose reading and word recognition when he is so able phonologically, however it is possible his orthographic knowledge about written words is weak. As shown in the rime unit test even though he improved in the number of words he recognised he still needed to pay attention to

the words by sequential letter by letter sounding. Munro (1995c) found that students having difficulty with reading who had a higher level of phonemic awareness knowledge and did not make analogies between words spontaneously needed teaching to enable them to do this. Munro (1995c) also discusses his research findings that teaching disabled readers' letter cluster/sound links improved orthographic knowledge for targeted words and allowed for transfer to unfamiliar words. Further investigation in this area would be of benefit to Student B and an area of future study could be to investigate the link between high level phonological knowledge, orthographic knowledge and reading disability.

It would also benefit both students to investigate their Rapid Automatic Naming ability. Testing showed neither student to be both accurate and automatic when reading words in isolation or in prose reading.

In conclusion the investigation, although limited, provided benefits for both students and confirmed the proposed hypothesis. Although it cannot conclusively be said that the intervention strategies were responsible for the gains made by the students, it can be assumed that these particular reading disabled students would not have made the amount of gain without explicit, systematic teaching.

The results of the study have implications for educational practice. The importance of assessment to diagnose reading difficulties, and to find the starting points for teaching, are highlighted along with effective, explicit and systematic teaching at point of need. Munro (1998) discusses findings of a study that indicate the importance of the development of phonological knowledge on early literacy learning. He discusses how this knowledge not only affects the ability to read isolated words but how it also affects the comprehension of text and the fluency of the reading. He discusses the need to ensure these skills are acquired early as the influence of this phonological knowledge diminishes with age. Crevola and Hill (1998) suggest that as educators we have only a limited time to make a difference to assist these students, and that if we are not successful in improving their outcomes in the early years, then the gap between high and low achievers gets wider as they move through school. Teachers must use research based assessment and instructional procedures that cater for differing skill sets and must pay particular attention to phonological awareness in the early years.

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Resources

Dalheim, B. (2004) Rime Unit Test

Thirty Seven Dependable Rimes. Retrieved 9/9/11 from <http://www.magicwords.com.au/information/research>

Treasure Rhyming Race (Blank Board Game) Retrieved 9/9/11 from <http://www.treasureforteachers.com>

Appendices

Appendix 1

NAME	Control=0 Teaching=1	Age in Months	Gender Male=0 Female=1	Years of Schooling	ESL No=0 Yes=1	LNSLN Funding NA=3	Earlier Intervention NO=0 RR=1 Bridges=2 ERIK=3	EMA No=0 Yes=1
Student A	1	84	1	2 Years	0	3	0	0
Student B	1	87	0	2 Years	0	3	0	0

Attendance No. of sessions	Text Level PRE	Text Level POST	SPAT PRE	SPAT POST	BURT PRE	BURT POST	Rime Units PRE	Rime Units POST	SA Spelling PRE	SA Spelling POST	Letter ID	Letter ID
10	10	12	30	40	18	24	61	71	14	19	53	54
10	9	12	38	50	22	25	54	73	14	17	50	52

Appendix 2

The Teaching Unit: Onset and Rime

Establish which rime units are already known and which units are to be taught by giving the Rime Unit Test. The lessons were designed for a group of two students. Each lesson targets a particular rime unit except for Lesson Ten which focuses on revision of the nine taught rime units. The lesson sequence is based on the Phonological awareness pathway (Munro, 2006).

Preparation for each lesson:

- Picture cards with target rime unit
- Onset and rime cards to match pictures
- Blank cards
- Treasure Rhyming Race Game prepared for each session with appropriate words in playing spaces. This to be laminated and used with a die and a counter for each student.
- Magnetic board and letters
- Scrapbook and pencils for each student
- Scrapbook used to record jointly constructed sentences
- A Word Wheel constructed from circles of cardboard, one circle with onsets and one with rime, prepared for the first nine lessons. (Instructions for construction Appendix 3)
- Textas, scissors

Lesson one: 'in' (pin, tin, win, fin, chin, thin)

Game: Treasure Rhyming Race (5 mins)	Revision of known rime units through a board game. Known rime units established through rime unit test: at, ap, op, ot
Rhyming Activities: (2 mins)	Present students with picture cards to name. Rime unit identified in each case by each student through questioning. e.g. What sound is the same in all of these words?
Blending Task (3 mins)	Share flashcards containing rime unit between students. Place onset cards in the middle. Students take turns to choose an onset and match to the rime. Student says word they have made, with assistance if necessary.
Rhyming Words (2mins)	Teacher asks students to think of other words that rhyme with these words. These words are recorded on cards and added to list.
Manipulate and Read Target Words (3 mins)	Rime is displayed on magnetic board with a group of onsets available. Students take turns to add an onset to the rime and say the blended word made. They then move the onset to the left saying the onset, while following with the rime. After the two parts of the word are joined together the student says the complete word again.
Writing Target Words (6 mins)	Students write words into their scrap book and draw a picture for each word.
Jointly Construct and Read a Text (5 mins)	With the teacher's support some words containing the focus rime unit are used to compose a short story which is recorded in a booklet. This is read by each student and kept for future revision
Revise (2 mins)	The students take turns to make a word and say it using a word wheel containing the rime unit and onsets.
Reflect (2 mins)	Students are asked to reflect on what they had learned today. What did we learn today? What is the rime? How do we say words in two parts? Teacher supports students with appropriate vocabulary needed to articulate the learning.

Lesson Two: 'an' (pan, man, ran, tan, fan, can)

Game: Treasure Rhyming Race Revision (5 mins)	Revision of known rime units through a board game. Known rime units established through rime unit test: at, ap, op, ot Revision of rime unit taught in previous lesson by reading text constructed in that lesson.
Rhyming Activities: (2 mins)	Present students with picture cards to name. Rime unit identified in each case by each student through questioning. e.g. What sound is the same in all of these words?
Blending Task (3 mins)	Share flashcards containing rime unit between students. Place onset cards in the middle. Students take turns to choose an onset and match to the rime. Student says word they have made, with assistance if necessary.
Rhyming Words (2mins)	Teacher asks students to think of other words that rhyme with these words. These words are recorded on cards and added to list.
Manipulate and Read Target Words (3 mins)	Rime is displayed on magnetic board with a group of onsets available. Students take turns to add an onset to the rime and say the blended word made. They then move the onset to the left saying the onset, while following with the rime. After the two parts of the word are joined together the student says the complete word again.
Writing Target Words (6 mins)	Students write words into their scrap book and draw a picture for each word.
Jointly Construct and Read a Text (5 mins)	With the teacher's support some words containing the focus rime unit are used to compose a short story which is recorded in a booklet. This is read by each student and kept for future revision
Revise (2 mins)	The students take turns to make a word and say it using a word wheel containing the rime unit taught and onsets.
Reflect (2 mins)	Students are asked to reflect on what they had learned today. What did we learn today? What is the rime? How do we say words in two parts? Teacher supports students with appropriate vocabulary needed to articulate the learning.

Lesson Three: 'it' (hit, sit, fit, bit, kit, pit)

Game: Treasure Rhyming Race (5 mins)	Revision of known rime units through a board game. Game incorporates words with previously taught rime units and known rime units, in, an, op, at, ap, ot. Revision of rime unit taught in previous lesson by reading text constructed in that lesson.
Rhyming Activities: (2 mins)	Present students with picture cards to name. Rime unit identified in each case by each student through questioning. e.g. What sound is the same in all of these words?
Blending Task (3 mins)	Share flashcards containing rime unit between students. Place onset cards in the middle. Students take turns to choose an onset and match to the rime. Student says word they have made, with assistance if necessary.
Rhyming Words (2mins)	Teacher asks students to think of other words that rhyme with these words. These words are recorded on cards and added to list.
Manipulate and Read Target Words (3 mins)	Rime is displayed on magnetic board with a group of onsets available. Students take turns to add an onset to the rime and say the blended word made. They then move the onset to the left saying the onset, while following with the rime. After the two parts of the word are joined together the student says the complete word again.
Writing Target Words (6 mins)	Students write words into their scrap book and draw a picture for each word.
Jointly Construct and Read a Text (5 mins)	With the teacher's support some words containing the focus rime unit are used to compose a short story which is recorded in a booklet. This is read by each student and kept for future revision
Revise (2 mins)	The students take turns to make a word and say it using a word wheel containing the rime unit and onsets.
Reflect (2 mins)	Students are asked to reflect on what they had learned today. What did we learn today? What is the rime? How do we say words in two parts? Teacher supports students with appropriate vocabulary needed to articulate the learning.

Lesson Four: 'ip' (tip, dip, sip, lip, nip, ship,)

Game: Treasure Rhyming Race (5 mins)	Revision of known rime units through a board game. Game incorporates words with previously taught rime units and known rime units, in, an, it, at, ap, ot. Revision of rime unit taught in previous lesson by reading text constructed in that lesson.
Rhyming Activities: (2 mins)	Present students with picture cards to name. Rime unit identified in each case by each student through questioning. e.g. What sound is the same in all of these words?
Blending Task (3 mins)	Share flashcards containing rime unit between students. Place onset cards in the middle. Students take turns to choose an onset and match to the rime. Student says word they have made, with assistance if necessary.
Rhyming Words (2mins)	Teacher asks students to think of other words that rhyme with these words. These words are recorded on cards and added to list.
Manipulate and Read Target Words (3 mins)	Rime is displayed on magnetic board with a group of onsets available. Students take turns to add an onset to the rime and say the blended word made. They then move the onset to the left saying the onset, while following with the rime. After the two parts of the word are joined together the student says the complete word again.
Writing Target Words (6 mins)	Students write words into their scrap book and draw a picture for each word.
Jointly Construct and Read a Text (5 mins)	With the teacher's support some words containing the focus rime unit are used to compose a short story which is recorded in a booklet. This is read by each student and kept for future revision
Revision (2 mins)	The students take turns to make a word and say it using a Word Wheel containing the rime unit and onsets.
Reflect (2 mins)	Students are asked to reflect on what they had learned today. What did we learn today? What is the rime? How do we say words in two parts? Teacher supports students with appropriate vocabulary needed to articulate the learning.

Lesson Five: 'ug' (rug, bug, dug, tug, hug, pug)

Game: Treasure Rhyming Race (5 mins)	Revision of known rime units through a board game. Game incorporates words with previously taught rime units and known rime units, in, an, ip, it, ap, ot. Revision of rime unit taught in previous lesson by reading text constructed in that lesson.
Rhyming Activities: (2 mins)	Present students with picture cards to name. Rime unit identified in each case by each student through questioning. e.g. What sound is the same in all of these words?
Blending Task (3 mins)	Share flashcards containing rime unit between students. Place onset cards in the middle. Students take turns to choose an onset and match to the rime. Student says word they have made, with assistance if necessary.
Rhyming Words (2mins)	Teacher asks students to think of other words that rhyme with these words. These words are recorded on cards and added to list.
Manipulate and Read Target Words (3 mins)	Rime is displayed on magnetic board with a group of onsets available. Students take turns to add an onset to the rime and say the blended word made. They then move the onset to the left saying the onset, while following with the rime. After the two parts of the word are joined together the student says the complete word again.
Writing Target Words (6 mins)	Students write words into their scrap book and draw a picture for each word.
Jointly Construct and Read a Text (5 mins)	With the teacher's support some words containing the focus rime unit are used to compose a short story which is recorded in a booklet. This is read by each student and kept for future revision
Revise (2 mins)	The students take turns to make a word and say it using a word wheel containing the rime unit and onsets.
Reflect (2 mins)	Students are asked to reflect on what they had learned today. What did we learn today? What is the rime? How do we say words in two parts? Teacher supports students with appropriate vocabulary needed to articulate the learning.

Lesson Six: 'ay' (say, pay, day, lay, may, play)

Game: Treasure Rhyming Race (5 mins)	Revision of known rime units through a board game. Game incorporates words with previously taught rime units and known rime unit, in, an, ip, it, ug, ot. Revision of rime unit taught in previous lesson by reading text constructed in that lesson.
Rhyming Activities: (2 mins)	Present students with picture cards to name. Rime unit identified in each case by each student through questioning. e.g. What sound is the same in all of these words?
Blending Task (3 mins)	Share flashcards containing rime unit between students. Place onset cards in the middle. Students take turns to choose an onset and match to the rime. Student says word they have made, with assistance if necessary.
Rhyming Words (2mins)	Teacher asks students to think of other words that rhyme with these words. These words are recorded on cards and added to list.
Manipulate and Read Target Words (3 mins)	Rime is displayed on magnetic board with a group of onsets available. Students take turns to add an onset to the rime and say the blended word made. They then move the onset to the left saying the onset, while following with the rime. After the two parts of the word are joined together the student says the complete word again.
Writing Target Words (6 mins)	Students write words into their scrap book and draw a picture for each word.
Jointly Construct and Read a Text (5 mins)	With the teacher's support some words containing the focus rime unit are used to compose a short story which is recorded in a booklet. This is read by each student and kept for future revision
Revise (2 mins)	The students take turns to make a word and say it using a word wheel containing the rime unit and onsets.
Reflect (2 mins)	Students are asked to reflect on what they had learned today. What did we learn today? What is the rime? How do we say words in two parts? Teacher supports students with appropriate vocabulary needed to articulate the learning.

Lesson Seven: 'aw (saw, paw, raw, jaw, law, draw)

Game: Treasure Rhyming Race (5 mins)	Revision of known rime units through a board game. Game incorporates words with previously taught rime units, in, an, it, ip, ug, ay. Revision of rime unit taught in previous lesson by reading text constructed in that lesson.
Rhyming Activities: (2 mins)	Present students with picture cards to name. Rime unit identified in each case by each student through questioning. e.g. What sound is the same in all of these words?
Blending Task (3 mins)	Share flashcards containing rime unit between students. Place onset cards in the middle. Students take turns to choose an onset and match to the rime. Student says word they have made, with assistance if necessary.
Rhyming Words (2mins)	Teacher asks students to think of other words that rhyme with these words. These words are recorded on cards and added to list.
Manipulate and Read Target Words (3 mins)	Rime is displayed on magnetic board with a group of onsets available. Students take turns to add an onset to the rime and say the blended word made. They then move the onset to the left saying the onset, while following with the rime. After the two parts of the word are joined together the student says the complete word again.
Writing Target Words (6 mins)	Students write words into their scrap book and draw a picture for each word.
Jointly Construct and Read a Text (5 mins)	With the teacher's support some words containing the focus rime unit are used to compose a short story which is recorded in a booklet. This is read by each student and kept for future revision
Revise (2 mins)	The students take turns to make a word and say it using a word wheel containing the rime unit and onsets.
Reflect (2 mins)	Students are asked to reflect on what they had learned today. What did we learn today? What is the rime? How do we say words in two parts? Teacher supports students with appropriate vocabulary needed to articulate the learning.

Lesson Eight: 'ell' (bell, sell, fell, tell, yell, well)

Game: Treasure Rhyming Race (5 mins)	Revision of known rime units through a board game. Game incorporates words with previously taught rime units, in, an, it, ip, ug, ay, aw. Revision of rime unit taught in previous lesson by reading text constructed in that lesson.
Rhyming Activities: (2 mins)	Present students with picture cards to name. Rime unit identified in each case by each student through questioning. e.g. What sound is the same in all of these words?
Blending Task (3 mins)	Share flashcards containing rime unit between students. Place onset cards in the middle. Students take turns to choose an onset and match to the rime. Student says word they have made, with assistance if necessary.
Rhyming Words (2mins)	Teacher asks students to think of other words that rhyme with these words. These words are recorded on cards and added to list.
Manipulate and Read Target Words (3 mins)	Rime is displayed on magnetic board with a group of onsets available. Students take turns to add an onset to the rime and say the blended word made. They then move the onset to the left saying the onset, while following with the rime. After the two parts of the word are joined together the student says the complete word again.
Writing Target Words (6 mins)	Students write words into their scrap book and draw a picture for each word.
Jointly Construct and Read a Text (5 mins)	With the teacher's support some words containing the focus rime unit are used to compose a short story which is recorded in a booklet. This is read by each student and kept for future revision
Revise (2 mins)	The students take turns to make a word and say it using a word wheel containing the rime unit and onsets.
Reflect (2 mins)	Students are asked to reflect on what they had learned today. What did we learn today? What is the rime? How do we say words in two parts? Teacher supports students with appropriate vocabulary needed to articulate the learning.

Lesson Nine: 'ick' (sick, lick, pick, tick, kick, Mick,)

Game: Treasure Rhyming Race (5 mins)	Revision of known rime units through a board game. Game incorporates words with previously taught rime units, in, an, it, ip, ug, ay, aw, ell. Revision of rime unit taught in previous lesson by reading text constructed in that lesson.
Rhyming Activities: (2 mins)	Present students with picture cards to name. Rime unit identified in each case by each student through questioning. e.g. What sound is the same in all of these words?
Blending Task (3 mins)	Share flashcards containing rime unit between students. Place onset cards in the middle. Students take turns to choose an onset and match to the rime. Student says word they have made, with assistance if necessary.
Rhyming Words (2mins)	Teacher asks students to think of other words that rhyme with these words. These words are recorded on cards and added to list.
Manipulate and Read Target Words (3 mins)	Rime is displayed on magnetic board with a group of onsets available. Students take turns to add an onset to the rime and say the blended word made. They then move the onset to the left saying the onset, while following with the rime. After the two parts of the word are joined together the student says the complete word again.
Writing Target Words (6 mins)	Students write words into their scrap book and draw a picture for each word.
Jointly Construct and Read a Text (5 mins)	With the teacher's support some words containing the focus rime unit are used to compose a short story which is recorded in a booklet. This is read by each student and kept for future revision
Revise (2 mins)	The students take turns to make a word and say it using a word wheel containing the rime unit and onsets.
Reflect (2 mins)	Students are asked to reflect on what they had learned today. What did we learn today? What is the rime? How do we say words in two parts? Teacher supports students with appropriate vocabulary needed to articulate the learning.

Lesson Ten: Revision

Game: Treasure Rhyming Race (10 mins)	Revision of known rime units through a board game. Game incorporates words with previously taught rime units, in, it, ip, ug, ay, aw, ell, ick. Revision of rime unit taught in previous lesson by reading text constructed in that lesson.
Manipulate and Read with Target Rimes (8 mins)	Rimes are displayed on magnetic board with a group of onsets available. Students take turns to add an onset to the rime and say the blended word made. They then move the onset to the left saying the onset, while following with the rime. After the two parts of the word are joined together the student says the complete word again.
Read Jointly Constructed Texts (6 mins)	Jointly constructed texts that have been constructed in previous lessons are read by students in turn. Support only given if a student appeals to the teacher.
Use of Word Wheels - Revise (4 mins)	The students take turns to make words and say them using the Word Wheels containing the rime units and onsets from earlier lessons.
Reflect (2 mins)	Students are asked to reflect on what they have learned. What did we learn today?

Appendix 3

Instructions to Make a Word Wheel (Hill S, 2006)

1. Cut two 15cm circles from cardboard. Cut a wedge from one circle at the 9 o'clock spot, and write the vowel and ending consonants of your chosen word family (e.g. – in) to the right of it. Make a round hole in the middle.
2. On the second circle write beginning sounds that form words with that family evenly around the outside edge so that only one at a time will show through the window wedge. For example, the –in family can be formed with b, t, w, p, d, f, ch, th, sh. Cut a slit in the middle of the circle.
3. Put the circle with the wedge on top of the other circle. Push a brass fastener through the round hole and the slit. Flatten the fastener, making sure the top circle can turn.
4. Children operate the word wheel by turning the top circle and reading the words they have made.