

Focus of Research: Explicit teaching of orthographic rime units to fourth grade reading underachievers.

Abstract:

A problem some middle year students have is inefficient word-reading strategies and poor orthographic knowledge at the word level. The purpose of this study was to examine the relationship between explicit teaching of orthographic rime units and automatic reading of isolated words and prose. In this research five grade 4 students were nominated by the classroom teachers because they are considered 'at risk' in literacy. They had both poor reading, writing and spelling skills compared to their peers. The students were assessed and from this an intervention program was developed. The teaching targeted explicit instruction in orthographic rime units.

The hypothesis tested was

"That explicit teaching grade 4 reading underachievers to automatically recognise functional orthographic units improves their ability to read words in isolation and in prose".

The students were withdrawn from the classroom for three sessions per week over a 4-week period. The sessions were of 50 minutes duration. Each session consisted of explicit instruction of two rimes with revision every day. Following the intervention post testing was conducted to assess gains made.

The findings indicated that explicit teaching of orthographic rime units improved the students reading at both isolated word reading and prose reading. However, all students did not achieve automaticity. But all students showed improvement in the use of blending strategies for de-coding of unfamiliar words. Indicating an improvement in their orthographic knowledge.

Introduction:

Many students reach middle primary school without having acquired the strategies and skills to become fluent readers. These students display difficulties at the Word Level in recognising letter clusters, segmenting words into functional units, converting letter clusters to sounds, blending, segmenting and re-coding.

Word reading difficulties can be explained through the developmental model (Multiple levels of text processing). They could be due to poor phonological knowledge, or phonemic awareness, RAN (rapid automatic naming) difficulty, short-term phonological memory or inefficient word reading strategies. The research on word recognition is clear and widely accepted that word reading difficulties are due to deficits in phonological skills. Phonological processing problems effect the acquisition of knowledge about printed words including orthographic regularities (Maris, Doi & Bhahda 2000) The findings also highlight that reading comprehension and other higher order reading activities depend on strong word recognition skills.

(Fitzsimmons 1998) The students in this study have some phonological awareness however; they are unable to use it efficiently.

Most poor readers had not learned to recognise these frequently occurring sound clusters as individual rime units and need the opportunity to work with these larger units (Adams 1990 Chard & Osborn 1999 Salinger 2003). The ability to recognise, segment and manipulate these units of rime is necessary for the student seeking to acquire the word level skills in the literacy model. (Wood 2000) The students need to be able to use their knowledge of rime units to draw orthographic analogies between words that share a common recognisable rime. The importance of establishing automatic orthographic – phonological connections has been stressed by researches (Adams and Bruck 1993). Compton (2002) concurs, *Acquiring a lexical system of representations that permits efficient word recognition is an essential part of learning to read*_(p201).

Efficient word recognition requires a more complete knowledge of sound and symbol not only phonological knowledge but also orthographic knowledge and the ability to use stored knowledge of orthographic patterns (Adams, 1990 Stahl & Mc Kenna 2001).

There are two processes involved in learning orthographic units phonemic re-coding and making analogies between words. The students need to be able to use their knowledge of rime units to draw orthographic analogies between familiar and unfamiliar words that share a common recognisable rime. (Woods 2000)

These students have displayed reading difficulties from early primary and orthographic skills become increasingly important in later reading and reading comprehension (Badian2001). It has been argued that rapid word recognition frees up working memory and is crucial for reading fluency and comprehension (Adams & Bruck, 1993; Chard & Osborn, 1999; Fitzsimmons, 1998). Middle year's students need these skills so that they can pay more attention to comprehension as they 'read to learn' rather than 'learn to read'. (Bandian 2001).

Orthographic knowledge is learnt gradually. The students may use varying strategies to read written words. They may recognise some words or letter clusters automatically and accurately (orthographic processing) or segment and re-code to read other words. If students have immature orthographic knowledge of words (word level) they need to invest large amounts of attention to de-coding the words in a text read thus limiting their comprehension and their ability to engage the text.

The question of whether the ability to read words in isolation and in prose is improved by explicitly teaching orthographic rime units was explored in this study. Also taken into account was their level of phonological awareness as the prerequisite to orthographic knowledge and processing. The teaching targeted an increased body of orthographic knowledge and strategies for using this knowledge.

METHOD:

DESIGN: This study uses a case study OXO design in which the gain in monosyllabic word reading accuracy and prose reading accuracy, following explicit rime unit instruction of orthographic units, is monitored for grade 4 students who have reading difficulties. The students were identified through formal assessment and a strategic plan of action implemented. At the completion of the action plan data was collected and then analysed to determine the success of the instruction. These studies measures the gains made by a group of grade four students given explicit instruction in orthographic rime units for both isolated word reading and prose reading.

PARTICIPANTS: The students were drawn from the grade 4 level at a suburban Victorian Catholic School. These students were identified by their classroom teachers as having reading difficulties particularly in word reading. Two of the five students selected were already involved in intervention assistance through "Corrective Reading Program". The remaining three students had also received additional assistance in a small group for reading/spelling support.

Three students have English as their primary language; Vietnamese and Maltese are the primary languages of the remaining two students. One student had spent 2002 in Malta.

The students were screened for their ability to read words using "Rime Units Reading Test" "The Orthographic Reading Test" Sutherland Phonological Awareness Test and Benchmark Reading Level Running Record (Marie Clay)

Their entry levels are shown in Table 1.

Table 1

	Student 1	Student 2	Student 3	Student 4	Student 5
Age	9yrs 10m	9yrs.9m	9yrs10m	10yrs1m	9yrs10m
Rime Units	110	114	98	70	71
Ortho-graphic Units	49/94	42/94	41/94	24/94	27/94
<u>Instruct-ional Reading Level</u>	28	24	28	18	15

MATERIALS:

Word Reading Task

Rime Units Test:

This test contains the 37 dependable rime units. The students read the words as quickly and as accurately as they can. Identifying known rime units. E.g. Vowel/consonant (at); vowel/ consonant/consonant (ack); vowel/vowel/consonant (eat); vowel/consonant/vowel (ate).

Orthographic Reading Test.

This test contains 1 -syllable words that differ in complexity in the following ways:

- In their letter length (3-6 letters)
- In how the letters map into sounds (separate sounds or 2 letters map into 1 sound)

Frequency of the word; whether the word occurs very, moderately or infrequently in written prose for children.

Benchmark Text Levels Marie Clay.

Sutherland Phonological Awareness Test (SPAT):

Thirteen tasks including:

Syllable counting; Rhyme detection; Rhyme production; Identification of Onset; Identification of final Phoneme; Segmentation (1); Blending (VC, CV, CVC); Deletion of initial phoneme; Segmentation (2); CC Blends: Delete first phoneme; CC Blends: Delete second phoneme: Non word Reading; Non word spelling.

PROCEDURE: The above assessments were administered to all students in the following order:

- Orthographic Reading Test
- Rime Units Test
- SPAT
- Running Record

The students performed poorly on the orthographic Reading test; no student gaining higher than the 10th percentile. To gain more information the Rime Units Test was administered and the results of both tests analysed. From this analysis 16 rime units (10 dependable rimes and 6 from the orthographic list) were identified for explicit teaching because at least 3/5 students could not identify the rime in either or both tests. Also because of their poor results the SPAT was administered to identify their strengths and weaknesses in phonological awareness.

Students were withdrawn from class together three (3) days per week for four (4) weeks for a series of ten (10) lessons. Each session was 50 minutes duration. The first 5 sessions consisted of explicit instruction in 3 letter rime units and 2 letter rime units. Session 6 and 10 was reserved for revision. Sessions 7-9 consisted of explicit instruction of 3 letter rimes.

Two rime units were introduced at each session with daily revision of previously taught rime units.

Each session followed the same activity order;

Revision of previous rime	Write each word
Reading each word	Transfer rime to other words
Read each word in segments	Deletion of Phoneme
Blending letter clusters	Reading Prose
How the words are similar	Introduce Second rime
Visualise each word	Say what they Know

Sessions 1-6 each day students were asked to identify rime units suggesting words that contained the rime. If the students gave other rimes that sounded the same but were spelt differently they were listed separately and the students identified how they were different from the rime introduced. Deletion of phonemes was added to the sessions because most of the students had difficulty with this item on the SPAT. The teacher prepared the prose. The students were given an exercise book to record the rimes taught and the prose so it could be practiced. The students took the book home to practice their words and prose reading.

After each session the students were given a homework task to complete. This was corrected as a group in the following session and led into our revision. In lessons 1-3 the rimes were revised individually. From lesson 4-10 the rimes were mixed for revision.

Session 2 and 3 respectively spelling rules Magic "E" /Bossy "E' changes the vowel to its name e.g. at/ate and "When 2 vowels go walking the first one does the talking" e.g.'ain' were introduced. These rules were written on card and placed on the pin-board. As each set of rimes was introduced they were written out and placed under the appropriate rule or if they did not fit either rule the students had a different space on the pin-board for them.e.g. "aw"

Session 6 was used as an assessment of the rimes taught. A teacher prepared Orthographic Reading Test was designed and administered separately to each student. During this lesson the student were introduced to the computer program "Puzzle maker" and spent time creating word puzzle using the words they had studied. Also in this session the students were introduced to the computer program "Phonics Alive! 2 The Sound Blender" The students play games involving identifying and spelling monosyllabic words.

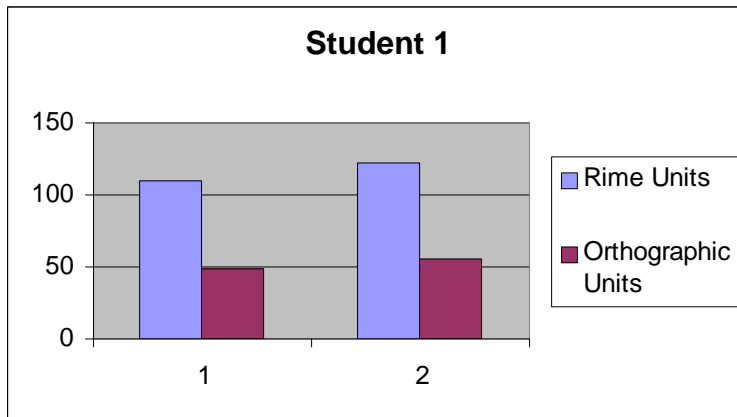
Sessions 7-9 followed the same procedure as the first set of lessons. The students provided the prose reading activity. Creating sentences that were recorded by each student in their exercise book.

Session 10 was reserved for revision of rimes taught. The students reviewed what they had learnt and verbalised how they would remember the rimes taught and how they would use the information in the classroom. They used the rime taught in games e.g. Concentration Board games Making word puzzles (Puzzle Maker) Matching word families (Go Fish "Do you have an 'eam' word?)

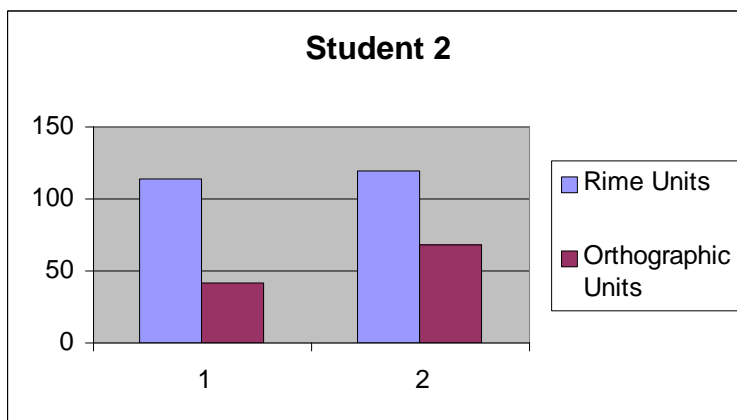
Session 11 Post Testing

Results

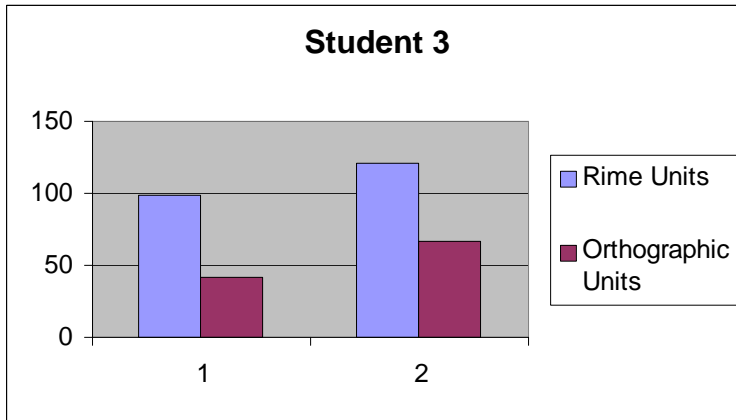
This series of graphs for each student show their individual word reading accuracy for the Rime Units Test and the Orthographic Word Reading Test.



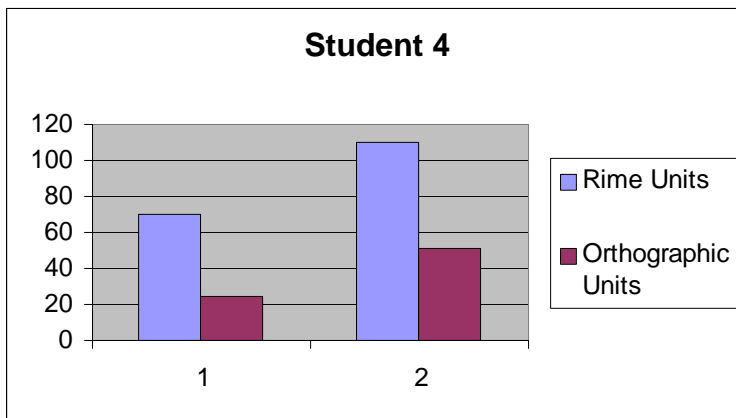
Student 1 made an overall improvement in word reading accuracy of Rime Units of 9% and Orthographic Units of 7%. This student entered with some understanding of blending and segmenting to attempt unknown words.



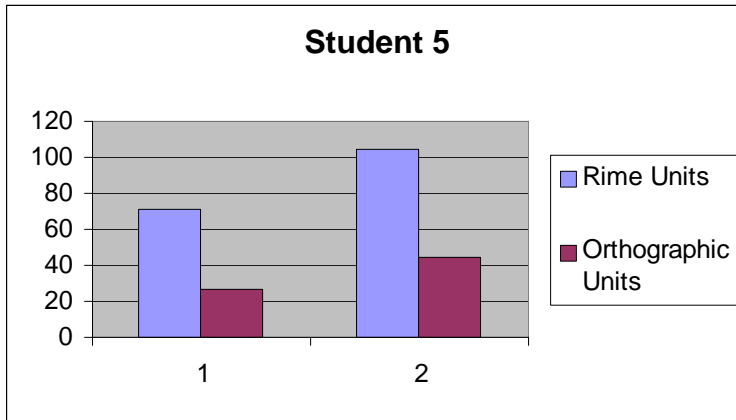
Student 2 made an overall improvement in word reading accuracy of Rime Units of 5% and the greatest improvement was in Orthographic Units 28%. This student had good understanding of blending and segmenting to attempt unknown words.



Student 3 made a significant improvement in word reading accuracy of Rime Units of 18% and the greatest improvement was in Orthographic Units 28 %. This student entered with poor understanding of segmenting and blending and decoded unfamiliar words by letter by letter sounding.



Student 4 made a significant improvement in both word reading accuracy of Rime Units 31% and Orthographic Units 31 %. This student entered with very poor understanding of segmenting and blending and very few strategies to decode unfamiliar words. Student 4 often was non responsive to unfamiliar words and sometimes recognised only inefficient parts of words e.g. claim recognised "im" in attempting to work out the word.



Student 5 made a significant improvement in both word reading accuracy of Rime Units 26% and Orthographic Units 18 %. This student entered with letter confusion, very poor understanding of segmenting and blending and very few strategies to decode unfamiliar words relied strongly on visual cues guessing after recognising the first few letters.

Analysis of orthographic words read.

Table 2

How words are said	Student 1		Student 2		Student 3		Student 4		Student 5	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Correct & Rapid	19%	30%	31%	34%	12%	32%	14%	11%	17%	14%
Correct & Slow	10%	19%	6%	25%	1%	20%	5%	15%	9%	14%
Correct & Slow Partially said	23%	9%	7%	13%	30%	17%	7%	26%	4%	14%
Incorrect	37%	29%	42%	14%	44%	19%	61%	35%	59%	43%

Analysis of 37 Rime Units read.

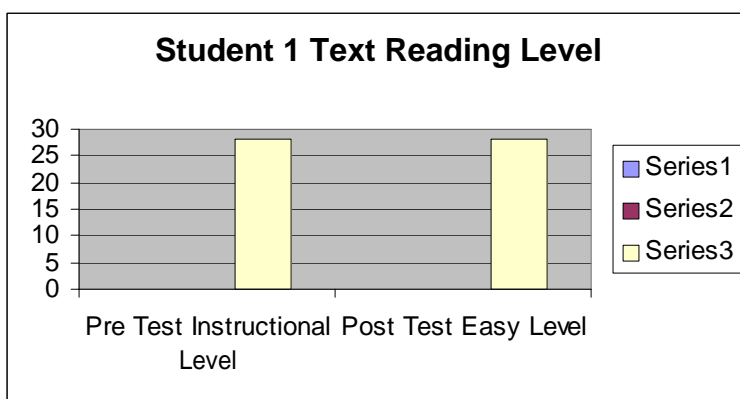
Table 3

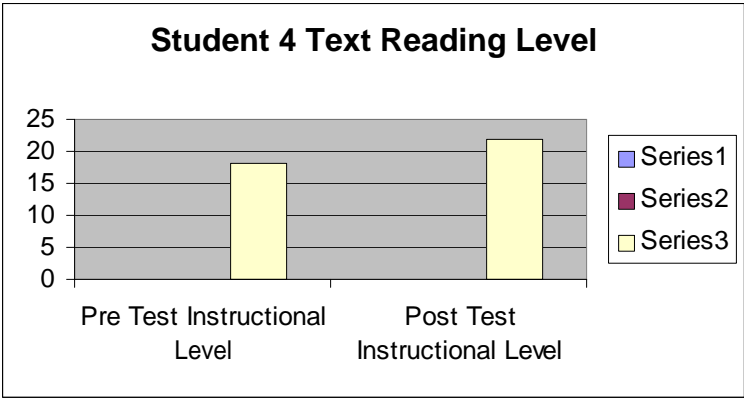
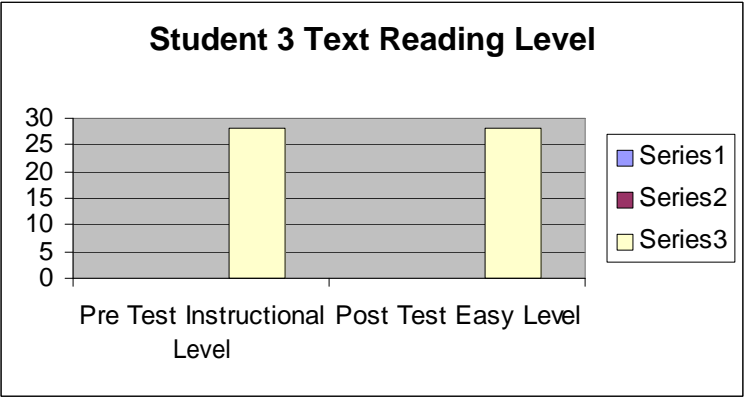
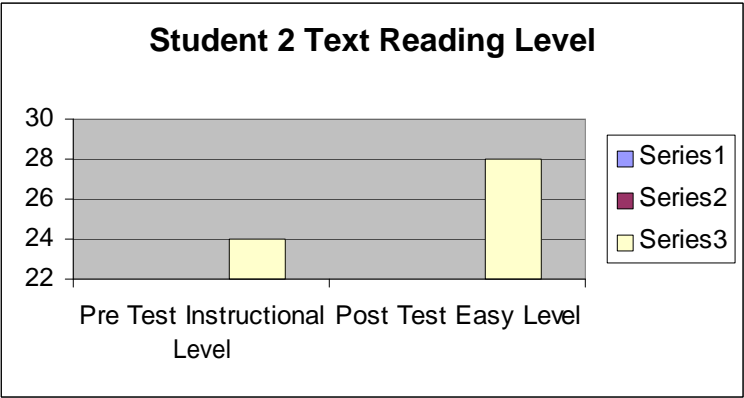
How words are said	Student 1		Student 2		Student 3		Student 4		Student 5	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Correct & Rapid	64%	71%	80%	82%	60%	60%	35%	27%	44%	53%
Correct & Slow	17%	11%	3%	3%	6%	17%	12%	31%	6%	11%
Correct & Slow Partially said	3%	10%	3%	7%	10%	16%	7%	27%	9%	17%
Incorrect	14%	5%	10%	6%	23%	6%	43%	14%	37%	17%

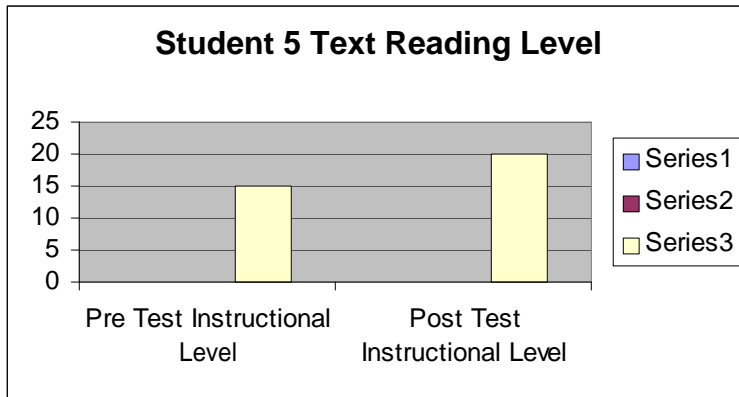
Trends for the group indicate that all students benefited from the intervention. Students 3 and 4 although they loss ground in the *correct and rapid* recognition they displayed skills of segmenting and blending which they did not use previously and relied on these to check some their responses. All students improved their orthographic knowledge using the skills taught (recognition of on-set and rime segmenting /blending) to decode unfamiliar words. This study's prediction that explicit teaching of blending/segmenting orthographic rime units is supported by these results.

TEXT READING LEVELS

Graphs 1-5 show each student's progress in text reading levels as measured by Running Record Benchmarks Text Levels.







Students 1 and 3 made smaller gains in text reading level having begun at Level 28 Instructional Level and progressing to 28 at an easy level.

Student 2 improved by 4 text levels from Level 24 Instructional to Level 28 easy.

Student 4 made gains of 4 text levels progressing from Level 18 Instructional to Level 22 Instructional.

Student 5 made gains of 5 text levels from Level 15 Instructional to Level 20 Instructional.

All students showed improvement in their text reading levels this may be due to a confounding variable of on-going classroom teaching. However, the students did apply the skills taught to read unfamiliar words in isolation and transferred these skills to prose reading.

Sutherland Phonological Awareness Test

Table 4

	Student 1	Student 2	Student 3	Student 4	Student 5
Pre-Test	49	49	48	44	46
Post Test	55	57	53	55	52

During the pre-test all students (except student 1) had difficulty with segmenting and deletion of phonemes. All students had difficulty with both reading non-words and spelling non-words sections of the test. In the post test all students showed improvement in these areas. The test is 'meaned' to mid-year grade three so there are no means for grade 4 students. However, in the pre-test all students were either on the grade three mean or below it. Post test students 1,2 & 4 were higher than one standard deviation above the mean for mid grade 3. Students 3 & 5 were just below 1SD. After the instruction the students showed improvement in their phonological awareness.

DISCUSSION

The results of this action research lend support to the hypothesis examined. That the explicit teaching of orthographic rime units and how to blend and segment these unfamiliar words improves the students word reading and prose reading. The results indicate that these students could make sizeable improvements through such intervention. Student 4 was unable to de-code unfamiliar words and was non-efficient in the use of the phoneme knowledge. Student 5 used either attention demanding strategies to read most words or distinctive visual features. Both students had difficulty using their orthographic knowledge of some words to recognise others through analogy. The students did not recognise rime units before the intervention and relied on individual letter sounding to r-code words. As a result of the intervention the students now identifies rime units to de-code unfamiliar words. Comparison of Pre-test and Post -test results show gains for all five students. The students showed an ability to use strategies taught when decoding unfamiliar words not only in the test situation, but were observed to use them in the classroom.

Researchers have found that children look for meaningful clusters of letters as they decode words and also think in terms of clusters as they spell so it makes sense to teach older students to attend to units of sound that are larger than phonemes but smaller than words. (Salinger p.82). They require the skills to "crack the code" and translate print into comprehensible language.

Results in the post-test indicate that the rimes taught were read correctly though not always automatically. The students did not show great gains in automatising all the rime units taught as many words on the test were sub-vocalised and segmented. However, they now have a strategy for attempting unfamiliar words. At the pre-test stage these students did not display this skill. Orthographic knowledge is learnt gradually (John Munro p16 1991). These students require on-going intervention to maintain the gains they have made over 10 lessons. Salinger states, *Struggling readers in upper primary grades need systematic, explicit instruction as much as students in earlier grades. (p.81)*

The students also exhibited knowledge at the text level. As evidenced by their improvement in their reading levels. They each verbalised their need to blend at the point of difficulty using the skills taught to decode words that did or did not contain the targeted rime units Once again some students showed more significant improvement but these were the students that entered at a lower level. However,

Although this research intervention did not bring the students up to the normal range they did show improvement and their self-efficacy as learners. Although not measured as part of this study it was evident in their approach to their learning.

This study provides evidence that explicit teaching of on-set and rime, blending and segmenting of rime units can improve students decoding of

unfamiliar words in isolation and prose. All students showed gains in both categories (word reading and prose reading). The teaching of orthographic units influences not only reading words in isolation but also the quality of prose reading at the word reading accuracy, comprehension and fluency.

Further long term intervention for these students should result in more improvement in their automaticity and reading ability. They need the opportunity to practice the skills they are taught.

The implications for teaching practice suggested by this study include the teacher's own skill level to determine the student's difficulties and preparing effective intervention using the developmental model. The teacher also needs to be aware of trends in phonemic and phonological awareness and their impact on student learning. Explicit teaching of these skills is necessary to assist students to acquire strategies and skills. To practice these skills not just in isolated word reading but also in prose reading. Acquiring these skills should allow them to improve their comprehension. Applying their skills and verbalising what they know (metacognition) is important in their reading development. As teachers we need to allow them to think aloud about what they know or have learned. Salinger suggests that this thinking aloud gives students models of behaviour they simply may not have acquired.

In early years teachers have considerable knowledge about how to prevent reading difficulties and there has been a big push for literacy skills. However, some students still reach the middle years with reading difficulties. As middle years teachers we need '*to think outside the box*' and not give these students more of the same. The challenge is to rethink how we teach and through explicit teaching challenge the students to practice and use their literacy skills.(Salinger 2003) The Multiple Levels of Text Processing Model (MLOTP) gives teachers an avenue to revamp their teaching of reading skills across the board including all aspects of reading.

The next step in this process is to use the Model to look at the other levels of reading. At the sentence, conceptual, topic and dispositional levels. Word reading is only part of the picture and to become efficient readers the students need to conquer all the levels of text processing.

In conclusion the gains made by these students in a short time (10 lessons) show that explicit instruction directed at the students needs is beneficial to students with reading difficulties. The classroom teachers of these students were very impressed by the gains these students made in the short period of time. This intervention has shown that much can be achieved if the needs are explicitly targeted. These students benefited from explicit instruction in orthographic skills paired with explicit instruction in how to apply the skills in a meaningful context such as prose reading. The challenge is to extend these skills and strategies allowing the students to practice and use their literacy skills to become proficient readers and learners.

References/ Bibliography

Adams, M. J. (1990). *Beginning to read: Thinking and learning about print*. Cambridge, MA: MIT Press.

Adams, M. J., & Bruck, M. (1993). Word recognition: the interface of educational policies and scientific research. *Reading and writing: An interdisciplinary Journal*, 5, 113-139.

Badian, N. A. (2001) Phonological and orthographic processing: Their roles in reading prediction. *Annals of Dyslexia*. Baltimore Vol. 51 179-203.

Chard, D. J. & Osborn, J. (1999). Phonics and Word Recognition Instruction in Early Reading Programs: Guidelines for Accessibility. LD Online Available: http://www.ldonline.org/ld/indepth/reading/ldrp_chard-guidelines.html (2002, May)

Clay, M. (1993) *An Observation Survey of Early Literacy Achievement* Reed Publishing Heinemann Education Auckland New Zealand

Compton, D. L. (2002) The relationship among phonological processing, orthographic processing, and lexical development in children with reading disability. *The Journal of Special education*. Bensalem: Winter Vol.35 Iss. 4; 201-211.

Fitzsimmons, M. K. *Beginning Reading* Available Online, http://www.ldonline.org/ld_indepth/reading/ericE565.html>

Lane, H. B., Pullen, P. C. Eisele, M. R. & Jorden, L. (2002) Preventing reading failure: Phonological awareness assessment and instruction. *Preventing School Failure*. Washington. Spring. Vol. 46, Iss. 3; 101-111.

Manis, Franklin, R, Doi, Lisa, Michelle, Bhadha, Bhaktawahr (2000) Naming speed, phonological awareness, and orthographic knowledge in second graders. *Journal of Learning Disabilities* Austine: Jul/Aug Vol. 33, Iss. 4;

Munro, J (2000) *Orthographic Reading Test*

Munro, J. (1998). Phonological and Phonemic Awareness: Their impact on learning to read prose and to spell. *Australian Journal of Learning Disabilities* Vol. 3 No. 2. June.

Neilson,R. (1995) *Sutherland Phonological Awareness Test*

Stahl, S. A. & Mc Kenna, M. C. (2001) The Concurrent development of phonological awareness, word recognition and spelling. CIERA (Online) ,<http://www.ciera.org/library/archive/2001-07/200107.pdf>.>

Salinger, T. (2003) Helping older struggling readers. Preventing School Failure. Washington: Winter. Vol. 47, Iss. 2; 79-86

Wood, C. (1999) the contribution of analogical problem solving and phonemic awareness to children's ability to make orthographic analogies when reading. Educational Psychology. Dorchester-on-Thames: Sep. Vol. 19, Iss. 3; 277-287

Wood, C. (2000) Rhyme awareness, orthographic analogy use, phonemic awareness and reading: An examination of relationships. Educational Psychology. Dorchester-on-Thames: Mar Vol. 20, Iss. 1; 5-16

APPENDIX:

Teaching Unit.

Five grade 4 students
Small group intervention (withdrawn from class)
10 sessions of 50 minutes
2 rime units introduced in each session
Pre, interim and Post testing

Consider intervention needs of the students in relation to the Multiple Levels of Text Processing (MLOTP) Model.
Use the flow chart provided to develop the Action Plan (Appendix A) Develop intervention teaching activities (Lesson notes Appendix B)

OUTCOMES:

- The activities in the intervention are designed to improve letter cluster knowledge for polysyllabic words.
- Through the intervention the students will be able to..
- Say each rime targeted in both isolation and prose.
- Segment words into onset & rime
- Blend words using onset & rime to read words
- Identify rimes/letter clusters in words
- Discuss how the words are similar
- Write the words
- Transfer the rime to other words(real and pseudo)
- Manipulate words by deleting phonemes (initial or second) and read the word left.
- Say what they know about the words and how this helps them read other words.
- These activities are based on the word level of the model. The students need to develop their understanding of rimes/letter clusters and word structure. They also require the strategies to convert letter clusters into functional units and re-code

DESCRIBE ACTIVITY:

ASSESSMENT PROCEDURE:

Pre & Post Testing

- Rime Units Test
- Orthographic Reading Test
- Running Record Benchmark Text Levels Marie Clay
- Sutherland Phonological Awareness Test (SPAT)
- Interim Orthographic Reading Test (Teacher designed) (Appendix D)

All tests were administered individually.

PROCEDURE:

Session 1-5:

- Review of previous letter cluster: Students read words from flash cards. Session 1 2 &3 review of each rime individually. Session 4-5 words were mixed for revision.
- Reading each Word: Introduce rime by showing 4 words with the rime. Students provide 4 other rime words. Teacher reads words then students read each word three times.
- Segmenting Words: Teacher demonstrates segmentation of words students practice the strategy.
- Blending words: Students read blend words eg. 's' 'eam' = seam.
- How the words are similar: Teacher asks how the words are similar. Students respond eg. with rime or follow a spelling rule (eg Magic "E").
- Visualise and Write Words: Students close their eyes and 'see' the rime then write the word
- Transfer rime to other words: Teacher writes other rime words on the blackboard (real or non-sense) students read the words.
- Deletion of Phonemes: Teacher covers the initial phoneme of a word and students read the word. Repeat covering second phoneme.
- Reading Prose: Teacher prepares prose passage or sentences using targeted rime students read the passage/sentences.
- Introduce second rime: Follow above procedure
- Students say what they have learnt: Students say what rime they have learnt. What they know about it and how they will remember it.
- Game: Go Fish, Concentration, Sort the rimes.

Session 6 All students were administered the teacher prepared orthographic reading test reviewing the rimes taught. Students were also introduced to "**Puzzle maker**" on the computer (<http://puzzlemaker.school.discovery.com/code/BuildWordSearch.asp>). The students submit their rime words and the program produces a word puzzle. These puzzles were also given to their classmates to complete. "**Phonics Alive! The Sound Blender**" Advanced Software Mona Vale Australia was also introduced at this session. The students identify rime families, spell words and sort rime families with the computer program

Sessions 7-9: Followed the same procedure as the first 5 lessons however the students provided the sentences for the prose reading passages.

Session 10: Review of all rimes using games.

Session 11: Post testing.

Appendix:

Appendix A	Flow chart for Action Research
Appendix B	Lesson notes (sample)
Appendix C	Assessment Tools & Commercially available computer games
Appendix D	Orthographic Reading Test (Teacher designed)
Appendix E	Table of Results - Orthographic Reading Test

APPENDIX A

Flow chart for your action plan

Explicitly teaching Gr. 4 reading under achievers to recognise orthographic units improves their ability to read words in isolation and prose.

Step	What you will do
Identify the problem to be targeted by the teaching. Describe it as clearly and as specifically as you can	Target functional orthographic units (onset & rimes) to assist chn. to decode unknown words. The chn. are unable to identify/recognise onset & rime/ letter clusters.
Say what you think is causing the problem from a teaching /intervention perspective.	<ul style="list-style-type: none"> • difficulty recognising/recalling letter clusters • units not stored in long term memory • ineffective word reading strategies • use distinctive visual features • RAN • phonological awareness knowledge limitations
Identify possible interventions that you think might work	<ul style="list-style-type: none"> • small group • explicit teaching of orthographic units • teaching chn. to store the units in their long term memory
Sharpen your possible solutions, select one that links the problem with the solution	<ul style="list-style-type: none"> • teaching chn. to store the units in their long term memory.
Write your solution as an intervention: say <ul style="list-style-type: none"> • what you, the teacher, will do • what the student will do 	<p><u>Teacher:</u> Intro/teach unknown orthographic unit through individual words & prose. Word cards for games/sorting etc. Make up sentences containing some of the words(students could help)</p> <p><u>Student:</u> Talk about what they know about the letter clusters-suggest other words--other units with similar letters ('ain' 'ail') How they remember/recognise the letter clusters. Self talk what they will do if they come to an unfamiliar word (segmenting). Why it is a useful strategy.</p>

<p>Describe how you will contextualise the intervention: how you will</p> <ul style="list-style-type: none"> • apply it in the classroom? • decide when to do it? • scaffold the child's learning? • cure the child to do it? • deal with information load? • pass control to the child? • see what the child already knows? 	<ul style="list-style-type: none"> • 10 sessions 45 min. duration 3 sessions per week. • withdrawal during Literacy time • group of 5 children • introduce 2 rime units per session. Read each word. Segment each word. Blend. Categorise. Visualise Spell the words. Sentences • review previous rimes taught. Students read 4/5 examples of the rime. Individually & in prose. • read the rimes in prose • cue students to look for smaller/familiar words with in words/letter clusters • cue self-talk "What do I need to do when I come to an unknown word?" "What do I already know to help me?" • see themselves as "self-teachers" using their knowledge to read unfamiliar words.
<p>Describe the steps you will take to control or manage the intervention:</p>	<ul style="list-style-type: none"> • structure the sessions carefully choosing unlike rimes (e.g. ain ump) less confusion. • Maintain same structure for each session • Teach unknown rimes according to assessment. • Confounding variables--classroom teaching/self efficacy
<p>Decide how you will describe the changes in the student's ability, both during the research continues and when it has finished.</p>	<ul style="list-style-type: none"> • Re-assess at lesson 5 and at lesson 10. • Post-test 2/3 weeks after intervention lessons. • Record words read automatically in isolation & prose • Listen and observe effectiveness of self talk-Does it focus the student on the task at hand?
<p>Describe your action plan. Note</p> <ul style="list-style-type: none"> • how you will decide where each child is now in terms of your measuring stick. • how you will describe the student's entry level knowledge and ability • what you will look for as each child progresses to the goal • what you will look for • how you will record the changes. 	<ul style="list-style-type: none"> • <u>Formal assessments</u> Orthographic Reading Test. Running Record (Text Levels) Sutherland Phonological Awareness Test (SPAT) Onset & Rime Reading Test. • Ability to segment words into onset & rime units • Prose reading more fluent • Quicker recognition of orthographic units

Run and evaluate a pilot research study.	
<p>Implement the intervention</p> <ul style="list-style-type: none"> • the teaching procedures you used each session. • the teaching conditions you put in place • what the students did, both /behaviours you predicted and those you didn't predict • any unexpected or unanticipated behaviours or outcomes. • any benefits, problems and hurdles you experienced, how you dealt with them. • data you collected, how you measured progress, reviewed student gains. • how you debriefed, how each session fitted in your pathway. 	
Review / evaluate the success of the intervention.	
Write a report that describes the intervention, what you did, the indicators of student progress, the outcomes, how you would recommend it being used in the future, for whom.	

Appendix B

SESSION 5 "IKE" & "EAM"		
Activity	Teacher	Students
Review of previous letter cluster	<ul style="list-style-type: none"> Teacher presents cards with all the rimes taught in random order 	<ul style="list-style-type: none"> Students read the words in isolation and prose.
Introduce new letter cluster	<ul style="list-style-type: none"> Introduce the letter cluster pattern "ike" by showing 4 words Read words to students 	<ul style="list-style-type: none"> Provide 4 other words with the patter Read all words 3 times
Read each word in segments	<ul style="list-style-type: none"> Teacher demonstrates . Read the word segmentif eg.like say 'l' & 'ike' If the student makes an error, repeat the instruction. Provide them with the initial sound and cue them to say the rime unit 	<ul style="list-style-type: none"> Students say onset & rime of each word Draw arcs under each segment
Blending letter clusters	<ul style="list-style-type: none"> Teacher presents onset & rime unit & demonstrates blending the two parts to read the word 	<ul style="list-style-type: none"> Students read letter clusters by saying each part & blending e.g. 'l' 'ike' = like
How words are similar	Teacher asks; <ul style="list-style-type: none"> What is the rime? What do the list words have in common eg. letter clusters &/or shared sounds Revise rules (Magic 'e' & 2 vowels) 	Students read each word again & say eg. <ul style="list-style-type: none"> The rime The number of letters The rule they follow (Magic 'e' or 2 vowels)
Visualise & write each word	<ul style="list-style-type: none"> Teacher asks students to close their eyes and 'see' the rime in their mind. Ask "What do you see?" Say target word 	<ul style="list-style-type: none"> Students visualise the letter cluster & verbalise what they 'see' Write the word & check your answer underline the rime
Transfer to another rime	<ul style="list-style-type: none"> Write other words (real or nonsense) with the same rime unit on the blackboard 	<ul style="list-style-type: none"> Students read new word
Deletion of phoneme	<ul style="list-style-type: none"> Teacher covers initial or second phoneme 	<ul style="list-style-type: none"> Students read new owrd
Reading prose	<ul style="list-style-type: none"> Teacher writes sentences or short prose containing targeted words. 	<ul style="list-style-type: none"> Students read sentences .or prose identify rime words
Introduce second rime	<ul style="list-style-type: none"> Teacher introduces second rime unit following the same procedure 	
Meta cognition	<ul style="list-style-type: none"> What they know about the letter cluster pattern How they can use what they know about some words to read other words How they segment 7 blend words Why this is a useful strategy 	<ul style="list-style-type: none"> I have learnt the ---rime I know these words I will remember how to say the word by blending & segmenting I can remember this rime because I already know 'this word' and it will help me to learn other words.
Games		<ul style="list-style-type: none"> GoFish,Concentration, Sorting words

Appendix C

Clay, M. (1993) An Observation Survey of Early Literacy Achievement Reed Publishing Heinemann Education Auckland New Zealand.

Munro, John. (2000) Orthographic Reading Test

Munro, John. (2000) Rime Unit Reading Test

Neilson, R (1995) Sutherland Phonological Awareness Test

Puzzle Maker <http://puzzlemaker.scholl.discovery.com?code/BuildWordSearch.asp>

Phonics Alive! The Sound Blender Advanced Software Mona Vale NSW Australia

Spelling Rules

When 2 vowels go walking the first one does the talking. Eg. 'pain'

_Has an long "A" sound.

Magic "E" or Bossy "E" at the end of a word changes the vowel to the long sound.

Eg. cap/cape

Appendix D

Interim Orthographic Reading Test							
Teacher's record Sheet							
Name:			Grade:			Date:	
law	mate	hide	main	boil	seen	raid	hike
dine	slide	vine	plate	gate	wide	brain	jaw
chain	staid	claw	fine	cream	state	oil	train
ride	mike	spine	paw	maid	soil	spike	dream
wine	been	rate	braid	rain	team	pine	saw
drain	nine	coil	bride	seam	pike	green	aid
bike	stride	late	paid	spoil	draw	like	strain
grate	beam	spleen	shine	strike	screen	gain	toil

Appendix E

Results of Interim orthographic reading test

Interim -test was completed during lesson 6. Post test was completed 2 weeks after the completion of the teaching sessions.

How words are said	Student 1		Student 2		Student 3		Student 4		Student 5	
	Int.	Post	Int.	Post	Int.	Post	Int.	Post	Int.	Post
Correct & Rapid	31	41	38	51	41	47	16	17	18	30
Correct & Slow	9	4	8	3	4	2	9	18	9	17
Correct & Slow Partially said	18	16	16	8	6	12	35	28	32	16
Incorrect	6	3	2	2	14	3	4	1	5	1

This document was created with Win2PDF available at <http://www.daneprairie.com>.
The unregistered version of Win2PDF is for evaluation or non-commercial use only.