Explicit teaching of analogy impacts on word acquisition

Abstract

Learning how to read words can sometimes be a difficult process for beginning readers. Building a known lexicon is fundamental in a student successfully engaging in texts. To build this word bank, students need to know how to segment words quickly and to make connections between the known and the unknown.

Research indicates that analogy is a skill that enables students to understand that words can share spelling sequences thus assisting word recognition ability (Askew, 1999; cited in Fountas & Pinnell, 1999).

The hypothesis of this study is that teaching how to use Analogy through Onset and Rime to Post Reading Recovery Students in Year 2 will increase the student's ability to recognize words automatically in isolation and in prose.

The participants in this study were six students who are currently in Grade 2. They were all involved in the school's Reading Recovery Program whilst in Grade 1. Despite the gains made during this Intervention these students are still identified as having difficulties at the word level. Three students were chosen as the Control group and the other three students were the Intervention group. All students are currently in two separate composite grades. The Intervention group were taught how to explicitly use analogy through ten planned lessons that ran for forty minutes each. The lessons involved Shared reading, use of flashcards, rehearsal of word lists, writing words and articulation of learning. The lessons were based on the rime units used in Dalheim's Rime Unit Test.

After the intervention, results were supportive of the hypothesis in the area of reading words in isolation. Further research would be recommended to substantiate the hypothesis in the area of reading prose. Students involved in the intervention lessons demonstrated growth based on the comparison of Pre and Post Testing. Classroom teachers also observed that these particular students were beginning to apply and

articulate their knowledge of analogy in both their reading and writing. Ongoing research would assist in consolidating the validity of the hypothesis, however it cannot be refuted that explicit teaching at the word level does impact on all learners.

Introduction

A known word bank is essential for a reader to read prose fluently and with meaning. In fact for a reader to have fluency they need to recognize about 95 per cent of words within the text. (Adams, 1990; cited in Fountas and Pinnell, 2001). A word bank consists of words 'learnt' through different strategic practices. This lexicon can be formulated through different learning experiences. These may include continuous exposure to commonly used words, teaching decoding skills and/or through students making connections between words and the way the English Language operates.

Like all areas of reading the recognition of words follows a developmental pathway. The speed which students travel along this pathway depends on the knowledge, the strategies and the beliefs the reader holds about the way words work. (Munro, 1985; cited in Munro 2010). A reader needs to learn how to strategically problem solve unknown words and they need to be able to do this automatically to be an effective reader. Explicit teaching of these strategies is essential for reading words with automaticity. Confidence in this area will then enable students to make links between what they know and what they are yet to learn (Fountas & Pinell, 2001).

Analogy is using orthographic similarities to read the unfamiliar (Dalheim ,2010). The ability to successfully use analogy helps to consolidate what student's know and also helps students to build their personal lexicon. Goswami (2001, p.120) reports that a study into the importance of analogy found that "Analogy has a role to play in the initial stages of reading acquisition" Students who find it difficult to use analogy may have a limited word bank and /or have poor RAN (Rapid Automatised Naming). Their reading may also

lack fluency and intonation as they are not making the transfer automatically. They also find decoding with onset and rime a difficult strategy to employ. (Munro ,1985; cited in Munro 2010)

Analogy and Onset and Rime are intrinsically intertwined when students are learning to read .There are 37 dependable rimes that enable students to read five hundred of the most commonly used words. Students who master these rimes quickly are able to apply this knowledge to build on their strategic practices. Munro (1998, p.3) suggests that "the notion of being a 'self-teacher' of word reading, being able to use what they know about some words to read others, is a critical component." This notion of being a "self-teacher' is essential in the developmental process of reading.

Analogy can be an implicit skill that readers do without reflection however it is essential that analogy be taught to emergent readers. Goswami (2001, p.120) expands on this theory. "The fact that analogy can be an implicit process does not mean that we do not need to teach children analogy." Goswami further emphasizes this by adding "The use of an analogy strategy should develop faster if it is explicitly 'taught to'. This research aims to support Goswami's suggestion of the importance of explicit teaching in the area of word analogy.

Learning to use Analogy is a skill that is developmental within itself. (Clay, 2005) Students use analogy at a simplistic level from early on in their reading. They may use the initial letter or Distinctive Visual Features (DVF) to make word predictions. For example a student may make the connection that Mum starts with M as does Michael. However using analogy at a deeper level occurs further down in the word acquisition sequence. In Marie Clay's Reading Recovery program the emphasis on analogy is found further into the making and breaking of words, after children have acquired a word bank that can be effectively drawn upon. This was essential to consider when selecting the group for this research as the students needed to have some word knowledge and skills in order for Analogy to be an effective strategy. The Intervention group selected for this research all exhibit similar traits as a reader at the word level. They have a word bank that they tend to draw upon however this can be inconsistent. They need scaffolding to see links and must be prompted with statements such as "You know (like) so that will help you on this word (bike)." This is also evident in their writing where inconsistencies are often observed. They decode words using letter by letter and only attempt onset and rime if the onset is a familiar one that they have been explicitly taught. All students have been involved in the Reading Recovery program but are identified as still not reaching benchmarks within their reading. They are also not independent in being able to transfer their knowledge from one form to another. Their lexicon, when compared to their peers tends to consist of known 2 to 3 letter words with limited words above this.

The aim of this research is to further prove that explicit teaching of analogy does indeed impact on word acquisition. Although the research will predominately work within the Word Knowledge of the MLOTP model (Munro , 1985; cited in Munro 2010) it will be expected that explicit teaching will impact at the sentence, conceptual and topic levels as well as the metacognition level of self management and Oral Language.

At this point it is essential to also recognize that teaching analogy must be a part of a strong literacy program that supports and teaches all strategic skills and consolidates beliefs. It cannot be viewed as a stand- alone process that will "fix" reading difficulties but rather will help to reduce what students need to commit to memory (Wang & Gaffney 1998).

Method:

Design:

This case study was conducted using two groups, an Intervention group and a Control group. The Intervention group was Pre-Tested, explicitly taught analogy through ten lessons and then re-tested using the same tests from previously. The Control group was Pre and Post tested using the same assessment procedures as the Intervention group. Comparisons were then made to ascertain the impact explicit teaching of analogy had on word reading accuracy and reading prose.

Participants:

Student	Age	Gender	ESL	Funding	Reading	EMA	Text level Pre-Test	Attendance
	-	0=Male	Background	_	Recovery-		Easy/Instructional/Hard	at
		1=Female	_		Completed		-	Instructional
					course in			Lessons /10
					Year 1			
Student	85	1	Yes	No	Yes	Yes	Instructional 19	10/10
А	Months							
Student	101	0	No	No	Yes	Yes	Instructional 18	10/10
В	Months						Hard 19	
Student	97	0	Yes	No	Yes	Yes	Instructional 19	10/10
С	Months							
Student	90	1	Yes	No	Yes	Yes	Easy 18	N/A
AA	Months						Instructional 19	
Student	99	0	Yes	No	Yes	Yes	Instructional 18	N/A
BB	Months						Hard 19	
Student	95	0	No	No	Yes	Yes	Instructional 20	N/A
CC	Months						Hard 21	

(Red Indicates Control Group)

The six students (three students in both the intervention and control groups) chosen to participate in this study were students from Year two currently in composite grades of Year Two and Three students. Their ages ranged from 85 months to101 months. All students are Post Reading Recovery students from their year in Grade one. All six students have made gains in their reading as well as their ability to recognize words automatically. However they are all below reading benchmarks for their age group and previous spelling tests indicate inconsistencies between what they know and what they write. Their classroom teachers are concerned that these particular children are not

self managing at the word level and are not effective print technicians when faced with unknown vocabulary.

Seventy five per cent of the students have an ESL background however Record of Oral Language scores completed recently by both teachers do not indicate that this will have an overall impact on this case study as all students reach school standards in this area..

Materials:

In the Pre-testing and Post-testing for this study, students were assessed using a variety of assessment tools.

- Running Records were taken using Alpha Assess Levels 16 to 20. These particular levels were chosen as it was predominately the Instructional range level for all six students. This ensured that the running records would provide some insight into how the student operated at the word level when they encountered unknown words.
- Dalheim's Rime unit test was also administered on a one to one basis. This was used to test student's word knowledge and to assess whether children made links between what they know to assist with the unknown.
- Finally a Dictation passage (Appendix B) was administered that was written especially for the project. This dictation passage comprised words taken from Dalheim's Rime Test and consisted the onset and rime units that were taught in the ten lessons. This test was used to assess knowledge of rime units before and after explicit teaching of the Intervention group and to assess knowledge of the Control group.
- Books for Shared Reading (Each have an Onset and Rime focus)

Book	Author and Publisher	Onset and Rime Foci	
A Fat Cat	F Berryman & Phillip	One consonant and then the	
	O'Carroll	'at' Rime Unit	
	Fitzroy Readers		
Dot	F Berryman	One consonant and then the	
	Fitzroy Readers	'ot' Rime Unit	
Spend a day in Backwards	Samantha Berger	Ay Rime Unit	
Bay	Scholastic		
Jan and Dan	Hubbards cupboard.org	An Rime Unit	
Bowling Pins	Hubbards cupboard.org	In Rime Unit	
The clock who would not	P. Chanke	Ock Rime Unit	
tock	Scholastic		
Chicken soup with Rice and	M. Fleming	Ice Rime Unit	
Mice	Scholastic		
Little Chick	Laurie Stor-E Books	Ick Rime Unit	
	Laurie Stor-E Store		
Brain{and other "ain"	Word Family Mini Books	Ain Rime Unit	
words)	www.abcteach.com		
	M Thompson	Ame Rime Unit	
We are the Same	Sunshine Books		

- Flashcards of the following words:
- Magnetic letters
- Small magnetic whiteboards
- Scrapbooks
- Long strips of paper to make word banners
- Lesson Plans (Appendix A)

Procedure:

The following indicates the pathway that this action research project was carried out.

- Professional Learning Team discussion on the project and proposals made for possible students
- Pre-testing for all students
- Ten explicit lessons for the Intervention Group

• Post-Testing of all students.

The planning of the lessons also endeavored to follow the 'Model of Teaching and learning' developed by Collins, Brown and Newman

(Collins, Brown and Newman ,1989; cited in Munro, 2010). The responsibility of the researcher during the ten lessons was to model, coach, scaffold and then fade scaffolding. The students' responsibilities were to articulate, reflect and explore.

The Lessons

The Intervention group began their ten lessons for forty minutes each in a room other than their classroom. Due to other school commitments it was not possible to have ten consecutive lessons so the lessons began and concluded over a thirteen day period. The lessons changed as scaffolding was less needed however there were several components that ran throughout all the lessons. The onset and rime units chosen came from Dalheim's Rime Unit Test. These were *at, it.ot.ay,an,in,ock,ick,ice,ain and ame*. A considered decision to start with the units students already knew arose from Clay's suggestion (Cited in Clay 2005) that children need to build on what they know. As the lessons progressed Rime units were introduced that the students in both groups had difficulty with in the testing.

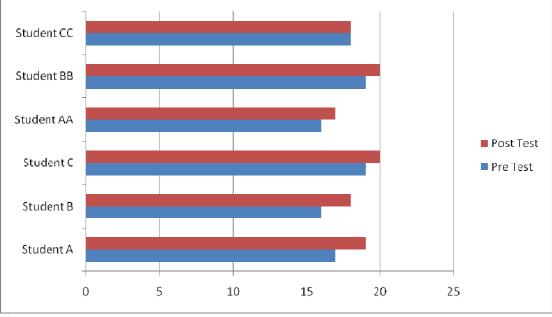
- Each lesson began with Shared Reading which emphasized reflection before reading, during reading and at the conclusion of reading with a focus at the word level. A big book was chosen that clearly identified the selected onset and rime for that day.
- 2. Words from the story that contain the cluster unit were put on flashcards
- 3. Activities were conducted using these words (See Lesson Plans Appendix A)
- 4. A giant word list was made by the group with extra words contributed by the students
- 5. Reread Big Book together
- 6. Explicit instruction and similar language was also used throughout so that the students knew exactly what was being taught. In all lessons children were explicitly praised and were given opportunity to articulate their learning to

another adult at the conclusion of each lesson. (In this case the Teaching and Learning Coordinator).

Results:

Results support the hypothesis that "Teaching how to use Analogy through Onset and Rime to Post Reading Recovery students will increase the Student's ability to recognize words automatically in isolation and in text."

Both the Intervention group and the Control group demonstrated improvement in the testing however Post-test scores indicate that explicit teaching may have resulted in the greater gains made.



Running Records scores Pre and Post Test

Figure 1.

Data from this graph suggests that students in the Control group all increased in their ability to read texts accurately. Anecdotal notes taken during the reading also suggest that Control students' self efficacy had also developed. (This may be in part to the relationship these children had formed to the researcher, increasing confidence in risk taking). Student A within the Control Group made the greatest gains, increasing their text level by 2 levels. Student C increased their reading level by one however they began at a higher reading level than their control group peers. Two students from the Intervention group also increased reading levels, indicating that classroom practices are also impacting on the learning of these students.

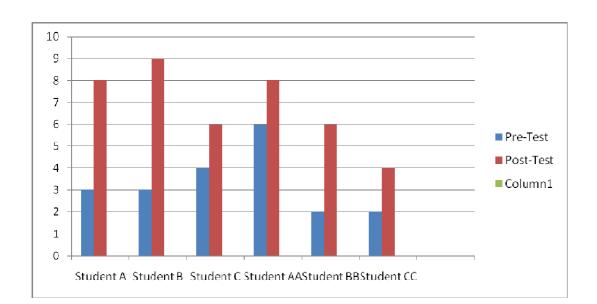
The Running Records taken at this time do continue to demonstrate problems at the word level however the Control Group made more attempts to decode. Onset and Rime strategies were employed by all students at some point during the read. There was no verbal reference or recorded evidence of analogy being used during the reading. Related questions about how words were solved would enhance the data produced in the Running records.

	Total Words		Total Words		Total Words		Total Words	
	Correct		Correct		Incorrect		Incorrect Post-	
	Pre-Test		Post-Test		Pre-Test		Test	
		%	Score	%	Score	%		%
	Score	Correct		Correct		Correct	Score	Correct
Student A	76	51%	123	82.5%	73	49%	26	17%
Student B	59	39.5%	98	66%	90	60%	51	34%
Student C	61	41%	77	52%	88	59%	72	48%
Student	81	54%	85	57%	68	46%	64	43%
AA								
Student	52	35%	60	40%	97	65%	89	60
BB								
Student	77	52%	78	52%	72	48%	71	48%
CC								

Table 2: Rime Unit Test (Dalheim) Results

Results from the Dalheim Rime Pre and Post Tests show that there were gains made in each group however the greatest gains were to be found in the Intervention Group. Student A, B and C improved their accuracy by a total of 69 % whereas Students AA, BB and CC made only an 8 % improvement. It is interesting to observe that student CC from the Control group did not make any gains at all during this period whereas the students in the Intervention group all had significant development. It is essential to note that development in this particular Post Test was expected as the Intervention group had explicit teaching of some of the rime units identified in Dalheim's test. Although these gains were expected the Intervention group also improved in the Rime units that were not taught.

Students in the Intervention group also completed the Post-test with greater speed, perhaps suggesting that their Rapid Automatised Naming (RAN) had also been impacted. The students from the Intervention group also articulated their beliefs and strategies during the Post-test. One student self corrected after recognizing patterns in words and the other student worked harder to decode the first word of each list, suggesting an understanding that this would assist them with the other words in the subset. Students from the Control continued to rely heavily on the Distinctive Visual features (DVF) to problem solve at the word level.



Dictation Scores Pre and Post Test

(Students needed to read each Rime Unit Pair correctly to score 1 point)

Figure B

The Dictation test was designed specifically for this research task. The results are based on the number of pairs read accurately within the Dictation passage, ten pairs in total. The Pre-Test scores show how many pairs the children correctly wrote compared to the amount of pairs correctly spelt in the Post-Test. The pairs were derived from the onset and Rime units taught during the Intervention.

Figure B further highlights the difference Intervention made to the performance levels of Students A, B and C. During the Post Test Student A and B verbally made the analogy connection as they were reading the words. This aided their accuracy as they did not have to rely so heavily on the Onset and Rime components for every word. Students from the control also increased in their accuracy however there were greater examples where one word was spelt correctly yet its analogy pair was incorrect. Interestingly no child achieved all ten pairs. The difficulties lay within the words of 5 letters and words that ended with a silent e. These may be areas of future exploration for explicit teaching.

It is now essential to review each student individually as the goal of this research was to build on each individual's knowledge and to increase each student's learning capacity.

Individual Scores achieved in all Testing

Table 1.

Student	Running Record Pre-Test	Running Record Post-Test	Dalheim Rime Pre- Test	Dalheim Rime Post-Test	Dictation Pre-Test Analogy pairs	Dictation Post-Test Analogy Pairs correct
Student A	Level 17 93% Accuracy	Level 19 95% Accuracy	76	128	Correct 3	11
Student B	Level 16 94% Accuracy	Level 18 100% Accuracy	59	98	3	12
Student C	Level 19 92% Accuracy	Level 20 94% Accuracy	61	77	4	10
Student AA	Level 16 94% Accuracy	Level 17 96% Accuracy	81	85	6	14
Student BB	Level 19 92% accuracy	Level 20 94% Accuracy	52	60	2	8
Student CC	Level 17 90% Accuracy	Level 17 91% Accuracy	77	78	2	6

Student A

Student A made the greatest gains over the Intervention period. This student was able to articulate what analogy was by the conclusion of the ten lessons. This student's classroom teacher observed that Student A's self efficacy also significantly improved. A self efficacy Pre and Post Test would have assisted in supporting this observation.

Student A's Rime test and Dictation results suggest that this student made the connection between the explicit instruction and the Post-testing. The errors that were made in the Rime unit test were words with a vowel/vowel/consonant onset. This would be an area for future instruction. Student A's Reading level increased by two levels and demonstrated more attempts at decoding. However the student is still not performing at the expected level halfway through grade two. Further analysis of Running Records will help to determine which areas of word difficulty are constricting reading outcomes.

Student B

Student B also made significant gains in their testing. Student B's classroom teacher observed a change in self efficacy through the student's willingness to participate in Guided reading sessions. Student B moved two levels in their reading ability and also made fewer errors in the Rime unit test. Both Student A and B made good progress during the Intervention program. This suggests that both students have responded well in the very short time frame. These students may benefit from further intervention to allow progress to continue, helping to close the learning gap between these students and their peers.

Also like Student A the errors made in the Rime Unit test were words with a vowel/vowel/consonant onset and predominately words that had more than 4 letters.

Student C

Student C made some gains from Pre-Test to Post-Test but value added was not as significant. The classroom teacher observed that Student C did not appear to enjoy the small instruction group and was reluctant to participate. This will need to be explored further to ensure that teaching styles are meeting student needs. However the student was able to make some analogy connections. When the student read 'rock' in the Rime Unit test they then read 'shop' for 'sock' Student C then articulated that this could not be

correct and said "If I know 'rock' I should know this word." The student then went on to self correct. Student C also increased in their reading level however attempts at unknown words were fewer and there was limited evidence of the use of onset and rime.

Student AA/Student BB/Student CC

Without Intervention Student AA made some gains between Pre and Post testing. In the dictation task Student AA made the greatest gain by making more connections between like Rime units. Student AA moved one text level and there were greater examples of word attack skills. Student AA made more self corrections than other students in both groups. This suggests that this student has some self management skills and now needs to consolidate strategies.

Student BB made the greatest gain in the Control group. Student BB improved upon their Rime unit Pre-test and showed a greater connection between words in each subtest. Student BB scored fewer errors in words of three letters. This suggests that Student BB needs to learn more complex onset and rime units consisting of 4 or more letters. During Student BB's reading, Student BB used his finger to break words apart into Onset and Rime.

Student CC achieved the lowest value added scores in all areas tested. Student CC did not make gains in their instructional reading level and actually made the same errors in their Running Record. Interestingly words that were correct in the Rime unit Pre-Test were predominately read incorrectly in the Post-Test. This suggests that these words have not been committed to Student CC's long term memory.

Discussion

Reflection and analysis of data collected suggests that the hypothesis "Teaching how to use Analogy through Onset and Rime to Post Reading Recovery students in Year 2 will increase the Student's ability to recognize words automatically in isolation and in text" is substantiated in varying degrees using the applied testing. All students in the Intervention group made greater gains in comparison to the children in the Control group. Although the gains may not be considered substantial it is important to judge the gains within the limited time factor that explicit teaching occurred. Due to the limited standardized testing available in this area it would be suggested that further research is conducted at the 'text level" of the hypothesis. Running Records alone could not support or disagree with the hypothesis that explicit analogy teaching affects reading words in text.

In an Action Research study such as this it is important to acknowledge the variables that may affect testing outcomes. Students in the Intervention Group were taught the specific Rime Units that were assessed whereas students in the control group were not.

Another variable was the small group setting and environment. Each child in the intervention group was engaged in lessons that allowed for maximum participation. The group were also taught in an environment where noise was limited. This allowed for optimum concentration. Acknowledgement must also be made that students came from different grades. This may also have impacted, depending on teaching styles and what had been previously addressed within the curriculum.

The Intervention group was also explicitly taught what analogy was so that every time analogy was used they were made aware of when connections were necessary. The students were then prepared for what was expected in testing such as Dalheim's Rime Unit test.

Articulation of learning was a major component of the ten devised lesson plans. In articulating to another person the students were consolidating their learning and processing the strategies they were using. (Collins, Brown & Newman, 1989; cited in Munro, 2010). After the ten lessons all three Intervention students were able to read the list of compiled words quickly and without the use of onset and rime. This may suggest that these words are in the student's short term memory and further testing will confirm if these have moved into the long term memory. It may also infer that the children were

beginning to transfer strategic approaches into their beliefs sector as defined within the MLOTP model (Munro, 1985; cited in Munro 2010).

The use of specific language also impacted the learning. Intervention students were taught to repeat the mantra "If I know this then I know...." By the conclusion of the ten sessions students no longer required prompts to use this language in their lessons. The classroom teacher of Student C observed this student using this mantra during several whole class shared reading experiences after the intervention period had concluded.

The completion of the Dalheim Rime Unit test also produced interesting observations. All students from both groups were successful in taking words apart using the correct onset. However it was apparent that Rime units of more than three letters were more difficult. This could suggest that onset patterns may be a greater focus within the curriculum. It would be interesting to address this at a Professional Learning Team to audit practices of explicit teaching of both Onset **and** Rime.

Not all Intervention students recognized that the first word in each subset would assist in reading all the words in that sequence. This was disappointing as this was a major focus within the lessons. These students need to continue working at the word level through word families, patterns and also using distinctive visual features (DVF).

Marie Clay's Reading Recovery program emphasizes the need to break words apart fast. This philosophy was adopted during the ten intervention lessons and this appeared to increase the student's RAN (Rapid Automatised Naming) as the Students completed the Post Testing Rime Unit test more quickly than previously. As students need 95% of words to be able to read a text (Adams, 1990; cited in Fountas and Pinnell, 2001) this will hopefully help to build their lexicon and will eventually impact reading prose.

The format and content of the Intervention lessons also needs to be closely scrutinized. Initially the ten lessons were planned prior to the teaching however after the first lesson it was obvious that each lesson needed to act as a springboard for the next. Therefore lessons followed the same format but certain criteria such as word lengths and the onsets used were determined from the previous lessons. The use of known Rime units as a focus for lesson 1 and 2 was a successful decision as the students were able to learn the expectations and build on this in each subsequent lesson.

It was also essential that scaffolding decreased as the students progressed so that they were being encouraged to self manage their own learning. As depicted in the Model of Teaching and learning (Adams, 1990; cited in Fountas and Pinnell, 2001) it was hoped that students would assume responsibility to 'explore' what they have learnt. It would be beneficial to ensure that this practice carried into other areas of the students' learning to ensure that they are able to build onto what was achieved during this intervention period.

One of the difficulties with each lesson was finding appropriate shared reading material. Some of the books were more effective in tuning the students into the Rime unit of the day than others. This will need to be reviewed as the shared reading was a powerful tool in engaging the students from the beginning of each lesson. The length of the reading material did not always lend itself to effectively doing discussion before, during and after. As this is a powerful component to help students to focus it may be beneficial to revise some of the reading materials.

The underlying component of repetition that was evident throughout this Action project also possibly impacted the scores of the Intervention group as opposed to the Control group. Repetition of language, repetition of expectations and repetition of learning all contributed to the outcomes within the intervention group. Each day students were asked to rehearse words from the previous day and then to write these words at the conclusion of the lesson. By the end of the ten lessons student's were reading and writing these words quickly and without having to segment the words into onset and rime. The impact of used word lists around the room and daily exposure to word families would be an interesting hypothesis to explore further. At the beginning of this project the primary aim was to shift student's understanding of analogy as a word skill. What occurred however was not just a shift in student learning but also a shift in learning as an educator. Finn, King, Langer and Slinger (1996) suggest that 'in searching for a self-extending system for our students we find one for ourselves as well". This is a powerful statement to consider for it is when we develop as educators that teaching becomes intrinsically explicit, purposeful and impacts on reading success. This Action research project not only impacted on the students but also opened avenues for professional questions to be asked and hopefully explored further. It also highlighted that educators need to continually analyze how readers learn and to ensure that all teaching is targeting the needs of our students. Reading is the window to a world of experiences, therefore teaching the words that will allow this is perhaps one of the greatest challenges of all!

Bibliography

*Clay, M. (2005). *Literacy Lessons Designed for Individuals*. Auckland: Heinemann Education

* Finn,M,King, C, Langer, D & Slinger, C. (1996). In Search of a Self-extending System for our Students- and Finding one for Ourselves as Well.*The Running Record*, Volume 9,1,8-11

* Fountas ,I & Pinnell,G. (2001). *Guiding readers and Writers Grades 3-6*. Portsmouth, NH: Heinmann

* Fountas, I. & Pinnell, G. (1999). *Voices in Word matters: Learning about Phonics and Spelling in the Literacy Classroom.* Ohio State University: Heinmann

* Goswami, U. (2001) Early Phonological Development and the Acquisition of Literacy.New York: Guilford Press

* Munro, J.K. (2008). Literacy Intervention Strategies, 472697. Lecture notes. 2010.

* Munro, J. (1998). The Phonemic-orthographic nexus: The Phonemic-Orthographic Literacy Program. *Australian Journal of learning Disabilities*, 3, 2, 15-2

*Wang, Chiung-Chu & Gaffney, J. (1998). First Graders' use of analogy in word reading. *Journal of Literacy Research, Sept* 1998

Appendix A: Lesson plans for the intervention Group

(Words in *italics* and **bold** indicate a change in lesson from previous lesson. This is to ensure scaffolding started to fade)

Lesson	Plans
Lesson 1:	Rime Unit "at" Before Reading "A Fat Cat" discuss the title. What do you notice about the title? What might we see in the book? Begin reading. During the book discuss the types of words we are encountering focusing on the "at" onset At the end of the book brainstorm the words used in the book Words are written on flashcard strips and cut into half (Onset and Rime). Go
•	around in the circle and children physically move the cards apart saying their word (e.g. c- at is cat). Children swap words and repeat the activity until all words from the book are said Children are given one word from the book in magnetic letters. Practise taking apart again. Group plays Memory with the flashcards. They must find their magnetic word.
•	Words are put onto giant paper. Children invited to add to the list Read the list slow/fast/in a funny voice One child goes to the whiteboard. Writes one of the words that they already knew from the Rime Unit list) e.g. Cat.) Each child in the group then says to that child "If you know that word you can write" and they suggest a word (eg.bat). The group keeps saying this until all Rime Unit words are written. Each child takes a turn at this. At the conclusion of the lesson children articulate what they learnt about the Rime unit they focused on to the researcher and then to the Teaching and Learning Coordinator
Lesson 2.	 * Rime Unit 'ot' Before Reading "Dot" discuss the title. What do you notice about the title? What might we see in the book? Begin reading. During the book discuss the types of words we are encountering At the end of the book brainstorm the words used in the book Words are written on flashcard strips and cut into half (Onset and Rime). Go around in the circle and children physically move the cards apart saying their word (e.g. d-ot is dot). Children swap words and repeat the activity until all words from the book are said Children are given one word from the book in magnetic letters. Practise taking apart again. Group plays Memory with the flashcards. They must find their magnetic word. Words are put onto giant paper. Children invited to add to the list Read the list slow/fast/in a funny voice One child goes to the whiteboard. Writes one of the words that they already knew from the Rime Unit list) e.g. dot.) Each child in the group then says to that child "If you know that word you can write" and they suggest a word (eg.got). The group keeps saying this until all Rime Unit words are written. Each child takes a turn at this. At the conclusion of the lesson children articulate what they learnt about the Rime unit they focused on to the researcher and then to the Teaching and Learning Coordinator

Lesson 3:

- * Rime Unit 'ay'
- Before Reading "Spend a Day in Backwards Bay" discuss the title. What do you notice about the title? What might we see in the book?
- Begin reading. During the book discuss the types of words we are encountering
- At the end of the book brainstorm the words used in the book
- Words are written on flashcard strips and cut into half (Onset and Rime). Go
 around in the circle and children physically move the cards apart saying their
 word (e.g. d-ot is dot). Children swap words and repeat the activity until all
 words from the book are said
- Children are given one word from the book in magnetic letters. Practise taking apart again. Group plays Memory with the flashcards. They must find their magnetic word.
- Words are put onto giant paper. Children invited to add to the list
- Read the list slow/fast/in a funny voice
- One child goes to the whiteboard. Writes one of the words that they already knew from the Rime Unit list) e.g. day.) Each child in the group then says to that child "If you know that word you can write" and they suggest a word (e.g. bay). The group keeps saying this until all Rime Unit words are written. Each child takes a turn at this.
- At the conclusion of the lesson children articulate what they learnt about the Rime unit they focused on to the researcher and then to the Teaching and Learning Coordinator

Lesson 4:

- * Rime Unit 'an'
- Before Reading "Jan and Dan" discuss the title. What do you notice about the title? What might we see in the book?
- Begin reading. During the book discuss the types of words we are encountering
- At the end of the book brainstorm the words used in the book
- Words are written on flashcard strips and cut into half (Onset and Rime). Go around in the circle and children physically move the cards apart saying their word (e.g. d-ot is dot). Children swap words and repeat the activity until all words from the book are said
- Children are given one word from the book in magnetic letters. Practise taking apart again. Group plays Memory with the flashcards. They must find their magnetic word.
- Words are put onto giant paper. Children invited to add to the list
- Read the list slow/fast/in a funny voice
- One child goes to the whiteboard. Writes one of the words that they already knew from the Rime Unit list) e.g. man.) Each child in the group then says to that child "If you know that word you can write" and they suggest a word (eg.ran). The group keeps saying this until all Rime Unit words are written. Each child takes a turn at this.
- Children given other books to quickly find 'an 'words. Write these words fast against a timer
- At the conclusion of the lesson children articulate what they learnt about the Rime unit they focused on to the researcher and then to the Teaching and Learning Coordinator

Lesson 5

- Rime Unit "in"
- Before Reading "Bowling Pins" discuss the title. What do you notice about the title? What might we see in the book?
- Begin reading. During the book discuss the types of words we are encountering
- At the end of the book brainstorm the words used in the book
- Words are written on flashcard strips and cut into half (Onset and Rime). Go around in the circle and children physically move the cards apart saying their word (e.g. p-in is pin). Children swap words and repeat the activity until all words from the book are said
- Children are given one word from the book in magnetic letters. Practise taking apart again. Group plays Memory with the flashcards. They must find their magnetic word.
- Words are put onto giant paper. Children invited to add to the list
- Read the list slow/fast/in a funny voice
- One child goes to the whiteboard. Writes one of the words that they already knew from the Rime Unit list) e.g. pin.) Each child in the group then says to that child "If you know that word you can write" and they suggest a word (eg.bin). The group keeps saying this until all Rime Unit words are written. Each child takes a turn at this.
- Find in words on the lap tops fast!! Run back to add to list
- At the conclusion of the lesson children articulate what they learnt about the Rime unit they focused on to the researcher and then to the Teaching and Learning Coordinator

Lesson 6

- Rime Unit "ock"
- Before Reading "The Clock who would not Tock" discuss the title. What do you notice about the title? What might we see in the book?
- Begin reading. During the book discuss the types of words we are encountering
- At the end of the book brainstorm the words used in the book
- Words are written on flashcard strips and cut into half (Onset and Rime). Go around in the circle and children physically move the cards apart saying their word (e.g. cl-ock is clock). Children swap words and repeat the activity until all words from the book are said
- Children are given one word from the book in magnetic letters. Practise taking apart again. Group plays Memory with the flashcards. They must find their magnetic word.
- Words are put onto giant paper. Children invited to add to the list
- Read the list slow/fast/in a funny voice
- One child goes to the whiteboard. Writes one of the words that they already knew from the Rime Unit list)e.g. clock.) Each child in the group then says to that child "If you know that word you can write" and they suggest a word (eg.tock). The group keeps saying this until all Rime Unit words are written. Each child takes a turn at this.
- Teacher pins up all ock words including nonsense words. In the group chn work together to select the real words from the nonsense words.
- At the conclusion of the lesson children articulate what they learnt about the Rime unit they focused on to the researcher and then to the Teaching and Learning Coordinator

Lesson 7

- Rime Unit "ice"
- Before Reading "Chicken soup with rice and Mice" discuss the title. What do you notice about the title? What might we see in the book?
- Begin reading. During the book discuss the types of words we are encountering
- At the end of the book brainstorm the words used in the book
- Words are written on flashcard strips and cut into half (Onset and Rime). Go around in the circle and children physically move the cards apart saying their word (e.g. m-ice is mice). Children swap words and repeat the activity until all words from the book are said
- Children are given one word from the book in magnetic letters. Practise taking apart again. Group plays Memory with the flashcards. They must find their magnetic word.
- Words are put onto giant paper. Children invited to add to the list
- Read the list slow/fast/in a funny voice
- One child goes to the whiteboard. Writes one of the words that they already knew from the Rime Unit list) e.g. mice.) Each child in the group then says to that child "If you know that word you can write" and they suggest a word (eg.rice). The group keeps saying this until all Rime Unit words are written. Each child takes a turn at this.
- Turn to a partner and talk about what strategy we are using to solve these words. Record what you think on tape
- At the conclusion of the lesson children articulate what they learnt about the Rime unit they focused on to the researcher and then to the Teaching and Learning Coordinator

Lesson 8

- Rime Unit "ick"
- Before Reading "Little Chick" discuss the title. What do you notice about the title? What might we see in the book?
- Begin reading. During the book discuss the types of words we are encountering
- At the end of the book brainstorm the words used in the book
- Words are written on flashcard strips and cut into half (Onset and Rime). Go around in the circle and children physically move the cards apart saying their word (e.g. ch-ick is chick). Children swap words and repeat the activity until all words from the book are said
- Children are given one word from the book in magnetic letters. Practise taking apart again. Group plays Memory with the flashcards. They must find their magnetic word.
- Words are put onto giant paper. Children invited to add to the list
- Read the list slow/fast/in a funny voice
- One child goes to the whiteboard. Writes one of the words that they already knew from the Rime Unit list) e.g. chick.) Each child in the group then says to that child "If you know that word you can write" and they suggest a word (eg.sick). The group keeps saying this until all Rime Unit words are written. Each child takes a turn at this.
- Go to Prep classroom to teach a make and break word activity to other students
- At the conclusion of the lesson children articulate what they learnt about the Rime unit they focused on to the researcher and then to the Teaching and Learning Coordinator

Lesson 9

- Rime Unit "ain"
- Before Reading "Brain and other words" discuss the title. What do you notice about the title? What might we see in the book?
- Begin reading. During the book discuss the types of words we are encountering
- At the end of the book brainstorm the words used in the book
- Words are written on flashcard strips and cut into half (Onset and Rime). Go around in the circle and children physically move the cards apart saying their word (e.g. tr-ain is train). Children swap words and repeat the activity until all words from the book are said
- Children are given one word from the book in magnetic letters. Practise taking apart again. Group plays Memory with the flashcards. They must find their magnetic word.
- · Words are put onto giant paper. Children invited to add to the list
- Read the list slow/fast/in a funny voice
- One child goes to the whiteboard. Writes one of the words that they already knew from the Rime Unit list) e.g. train.) Each child in the group then says to that child "If you know that word you can write" and they suggest a word (eg.rain). The group keeps saying this until all Rime Unit words are written. Each child takes a turn at this.
- As a group write an excerpt for the newsletter to be included after Intervention. Discuss what we have learnt about words
- At the conclusion of the lesson children articulate what they learnt about the Rime unit they focused on to the researcher and then to the Teaching and Learning Coordinator

Lesson 10

- Rime Unit "ame"
- Before Reading "we are the same" discuss the title. What do you notice about the title? What might we see in the book?
- Begin reading. During the book discuss the types of words we are encountering
- At the end of the book brainstorm the words used in the book
- Words are written on flashcard strips and cut into half (Onset and Rime). Go around in the circle and children physically move the cards apart saying their word (e.g. s-ame is same). Children swap words and repeat the activity until all words from the book are said
- Children are given one word from the book in magnetic letters. Practise taking apart again. Group plays Memory with the flashcards. They must find their magnetic word.
- Words are put onto giant paper. Children invited to add to the list
- Read the list slow/fast/in a funny voice
- One child goes to the whiteboard. Writes one of the words that they already knew from the Rime Unit list) e.g. same.) Each child in the group then says to that child "If you know that word you can write" and they suggest a word (eg.name). The group keeps saying this until all Rime Unit words are written. Each child takes a turn at this.
- Using all the flashcards used over the lessons categorise into word families
- At the conclusion of the lesson children articulate what they learnt about the Rime unit they focused on to the researcher and then to the Teaching and Learning Coordinator

Appendix B. Dictation Test

Students are read the passage first. Students then record the passage as it is read slowly to them. Encourage students to attempt all words.

For my birthday I <u>got</u> a <u>lot</u> of <u>nice</u> things. I got a <u>thin cat</u> who eats <u>mice</u>. I got a <u>game</u> to <u>play</u>. I got a red <u>sock</u> and a <u>thick bat</u>. I got a <u>fan</u> and a <u>tin clock</u>. I got a <u>fan</u> and a <u>tin clock</u>. I got a pen with my <u>name</u>. I got a <u>train</u> and a big <u>stick</u>. And I got a dog that <u>ran away</u> in the <u>rain</u>.

Rime Unit	Correct	Incorrect	Record errors
Pair			made
Cat/Bat			
Got/Lot			
Play/Away			
Fan/Ran			
Thin/Tin			
Sock/Clock			
Nice/Mice			
Stick/Thick			
Train/Rain			
Game/Name			