ABSTRACT

It is fairly well documented that reading disability is one of the most common childhood disorders (Berninger, Abbott, Thomson and Raskind, 2001) as cited by Neuhaus and Swank 2002 and one of the three separate language skills associated with this disorder is Rapid Automatised Naming (RAN) (Denckla & Rudel, 1976: Wolf, 1986, 1997).

If a child has a reading difficulty and this is exasperated by a low RAN ability then their fluency is going to be affected.

The action research project began with pre testing of both the intervention group and a control group. Data gathered from this testing then determined the needs of the intervention group. In this study four Year Two students showing slow naming speeds were given explicit teaching to improve their RAN ability. The timing of specific tasks that included high frequency words and dependable rime units were targeted. This study was carried out over 10 45-minute sessions. At the completion of the intervention the study group and the control group were again tested and their gains recorded.

The hypothesis tested was that,

‘By increasing a child's Rapid Automatised Naming ability of high frequency words and dependable rimes leads to their oral reading fluency improving.’

The results confirmed the hypothesis as all four students made significant gains in their timed RAN tests and timed prose reading. The results also showed significant improvement in their word accuracy skills.

Implications of my study indicates that explicit teaching of high frequency words and dependable rime units using RAN based activities can improve a student’s fluency levels and is vital if a student is to reach a standard of decoding that is relatively effortless and reading is smooth and accurate. (Wolf, 2003)

INTRODUCTION

Many students experience difficulties when learning to read. Original studies over the past two decades by Denckla (1972), Geschwind (1965), Denckla & Rudel (1976) have shown that a majority of children with reading difficulties have naming speed deficits. Because in order to read well, beginning readers need to be able to efficiently transfer visual language across modalities to a verbal form. They need to quickly and accurately attach a label to a letter and to do it consistently. Secure letter knowledge is important for successful word reading. (Neuhaus & Swank, 2002) Letter knowledge needs to be automatic, so that naming a letter becomes unconscious and in the case of this intervention group this is not so.


1. Phonological deficit: poor phonological awareness and intact naming speed
2. Rate deficit: naming speed deficits, intact phonological awareness: and
3. Double deficit: impaired naming speed and phonological skills.
The students in this action research project all show signs of subtype three – double deficit disorder, in particular, impaired naming speed. They read their prose slowly and often inaccurately and their knowledge of words in isolation is restricted. At this point the students in this study are having trouble at the word level of J Munro's Multiple Levels of Text Processing Model. They rely mainly on distinctive visual features of a word and have difficulty making analogies between words. It is hoped that with explicit teaching and learning in these two areas that the students' reading fluency will improve.

Wolf (2003) states that fluency is the quality of written language that allows us to read with rapid-executed skill and with almost effortless comprehension. She also states that many children with developmental reading difficulties never attain smooth, fluency reading and as a result become increasingly behind their peers. She suggests that fluency should be part and parcel of how we teach reading. That, it is a lengthy developmental process that encompasses all early phases of reading from letter fluency to word level to connected text level fluency. So the ultimate goal of fluency is comprehension. By building increased automaticity into both letter and word level identification processes a child can better allocate time to the continuum of comprehension skills. Therefore naming speed is strongly related to reading fluency. (Manis et al 2000)

For this group of students to read confidently and fluently it is essential to train them in Rapid Automatised Naming (RAN). This being the ability to retrieve phonological codes stored in long-term memory. (Howard Allor, 2002) Many students have difficulty in being able to read and rapidly recognize high frequency words and dependable rime units as have the four students presented in this study. Once they know these they are able to put that knowledge to work to read new and unfamiliar words, thus decoding by analogy and consequently increasing their reading fluency.

A Rapid Naming task is defined as the efficiency of reading specific items or stimuli and the amount of time needed to name these items or stimuli when they are presented in isolation or serially to a student. (Howard, 2002) RAN is an important predictor of growth in letter and word level reading and RAN assessment tasks are particularly useful in predicting a student's reading performance. RAN ability tasks linked to identified difficulties of individual students, in this case, high frequency words and dependable rime units, should then impact on a student's reading fluency.

The present action research paper aims to extend earlier research by examining the effect of explicit rapid naming tasks that target high frequency words and rime units has on reading fluency.
Hypothesis:

‘By increasing a child’s Rapid Automatised Naming ability of high frequency words and dependable rimes leads to their oral reading fluency improving.’

METHOD

Design:

The study uses a case study OXO design in which the gain in word reading accuracy and fluency following explicit teaching of Rapid Automatised Naming (RAN) for high frequency words and dependable rime units is monitored for Year 2 students who have slow naming speeds.

Participants:

The participants are four-second year students attending a Catholic primary school. The students all have a history of reading difficulties since Prep. After consultation with class teachers and Reading Recovery teacher eight students, 4 female and 4 male, were chosen. Using the data from their pre testing the group was divided into a control group and the intervention group. Each of the four students in the intervention group participated in Reading Recovery during Year 1. All have low naming speeds and have struggled since Prep. Student A has progressed through school with poor oral language skills, student B is very quiet and came to the school at the start of Year 1, student C has very low self-efficacy and is very competitive. Student D has also had speech therapy and WISC assessment in Prep and SPELD assessment in Year 1.

The students’ ages and entry levels are shown in Table 1.

Table 1

<table>
<thead>
<tr>
<th>INTERVENTION GROUP</th>
<th>Student A</th>
<th>Student B</th>
<th>Student C</th>
<th>Student D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>7yrs 1mth</td>
<td>6yrs 11mth</td>
<td>7yrs 10mth</td>
<td>8yrs</td>
</tr>
<tr>
<td>Instructional text level</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>Running Record</td>
<td>86% (Hard)</td>
<td>92% (Instructional)</td>
<td>68% (Hard)</td>
<td>80% (Hard)</td>
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<tr>
<td></td>
<td>14min 11secs</td>
<td>6mins 50secs</td>
<td>9mins 58secs</td>
<td>9mins 34secs</td>
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<tr>
<td>RAN testing</td>
<td>RANL 1 – 1:05</td>
<td>RANL 1 – 1:11</td>
<td>RANL 1 – 1:02</td>
<td>RANL 1 – 0:41</td>
</tr>
<tr>
<td></td>
<td>RANL 2 – 1:10</td>
<td>RAND 1 – 0:58</td>
<td>RANL 2 – 1:00</td>
<td>RANL 2 – 0:40</td>
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<tr>
<td></td>
<td>RAND 2 – 1:04</td>
<td>RAND 2 – 0:51</td>
<td>RAND 1 – 0:58</td>
<td>RAND 1 – 0:37</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>RAND 2 – 1:01</td>
<td>RAND 2 – 0:47</td>
</tr>
<tr>
<td>High Frequency words</td>
<td>83/100</td>
<td>81/100</td>
<td>69/100</td>
<td>73/100</td>
</tr>
<tr>
<td></td>
<td>4mins 9secs</td>
<td>3mins 55secs</td>
<td>5mins 26secs</td>
<td>6mins</td>
</tr>
<tr>
<td>Dependable Rime Units Test</td>
<td>45/100</td>
<td>63/100</td>
<td>49/100</td>
<td>50/100</td>
</tr>
<tr>
<td></td>
<td>10mins 30secs</td>
<td>9mins 41secs</td>
<td>13mins 34secs</td>
<td>10mins 8secs</td>
</tr>
<tr>
<td>CONTROL GROUP</td>
<td>Student E</td>
<td>Student F</td>
<td>Student G</td>
<td>Student H</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Age</td>
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<td>7yrs 3mths</td>
<td>7yrs 5mths</td>
<td>7yrs 3mths</td>
</tr>
<tr>
<td>Instructional text level</td>
<td>20</td>
<td>20</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Running Record</td>
<td>90% (Instructional) 6mins 33secs</td>
<td>77% (Hard) 5mins 42secs</td>
<td>72% (Hard) 6mins 39secs</td>
<td>56% (Hard) 7mins 7secs</td>
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<td>RAN testing</td>
<td>RANL 1 – 0:52 RAND 1 – 0:48</td>
<td>RANL 1 – 0:41 RAND 1 – 0:55</td>
<td>RANL 1 – 0:47 RAND 2 – 0:56</td>
<td>RANL 1 – 0:35 RAND 2 – 0:33</td>
</tr>
<tr>
<td>High Frequency words</td>
<td>92/100 2mins 34secs</td>
<td>87/100 2mins 2secs</td>
<td>85/100 2mins 35secs</td>
<td>63/100 3mins 4secs</td>
</tr>
<tr>
<td>Dependable Rime Units Test</td>
<td>55/100 6mins 51secs</td>
<td>49/100 4mins 21secs</td>
<td>56/100 6mins</td>
<td>52/100 8mins 32secs</td>
</tr>
</tbody>
</table>

**MATERIALS**

The following materials were used:

**Assessment**

**Running Record Text**
This text was chosen from within the Guided Reading Texts available at the school. The text was aimed for an instructional level of RR15 – 18. The text was a chapter book and so the first chapter was used for pre testing and the second chapter for post testing.

**Dependable Rime Units Test (J. Munro)**
100 Most Frequent words list
RAN test/task prepared by John Munro and Hugh McCusker

**Teaching Sessions**
Flash cards generated by teacher and students to reflect specifically targeted words or rime units.
Teacher generated PowerPoint presentations:
✓ Dependable rime units with animation, dependant on mouse activation
✓ High frequency words with 2 sec intermission

Teacher generated short texts reflecting the high frequency words and rime units being targeted.
Games:
✓ Bingo
✓ Snap
✓ Go Fish
✓ Memory
Magnetic letters and tiles.
PROCEDURE

The testing and lessons were carried out during the literacy block over a period of 12 lessons. Two sessions were used for pre- and post-testing of the control group and intervention group. The tests were administered to all students in the following order –
Running Record
Dependable Rime Units Test
100 Most Frequent words list
RAN test/task

The remaining ten explicit teaching sessions were of 45 minute duration and were broken down as follows –
Sessions 1-4 high frequency words
Session 5 testing
Sessions 6-9 dependable rime units
Session 10 testing

High frequency words and dependable rime units chosen were determined by the pre testing and consisted of words and units that each of the four students had difficulty with. (Appendix 1)

Steps undertaken during sessions 1-4 were as follows –
= Individually read a simple teacher generated text targeting the high frequency words for that session. This was timed and a running record taken.
= Student then collects next member of the group from their individual classroom then goes on to the computer to test themselves on the ‘High Frequency Word’ power point.
= Once all students have had a running record taken introduce 5 words to be targeted.
= Flash card race
= Either snap, go fish or memory game played focusing on known high frequency words and the sessions targeted words.
= Using magnetic letters or letter tiles students to make targeted words as quickly as possible.
= At the end of each session a repeat timed running record was taken while others were again testing themselves on the ‘High Frequency Word’ power point.

Session 5 – individually tested each student using a teacher-generated text that targeted all high frequency words specific to sessions 1-4. This was timed and a running record taken.

Steps undertaken during sessions 6-9 were as follows –
= Individually timed each child on rime unit power point. This was teacher generated and targeted specific rime units to be studied by the group.
= Student then collected next member and proceeded to play a game of memory. Game was teacher generated using words and pictures of targeted rime units. (Appendix 2)
= Introduce targeted rime unit, make using magnetic letters or tiles.
= Students generate words using rime unit and put onto flashcards.
= Flash card race
= Game ‘Go Fish’ using teacher generated cards
= Unjumble tiles to make as many words as possible using targeted rime unit
= Student to read each new word before finishing the session.
Session 10 – Individually
= Timed power point
= Timed running record taken on a teacher generated text incorporating all targeted rime units.
= Review with student
= Repeat step 2

Recording of time and word accuracy were collected at each session to provide data for assessing each student’s progress. Anecdotal notes were also taken during and at the end of each session. These included whether the students enjoyed the tasks or not, whether they were engaged at all times and how their self-efficacy was being affected.

On completion of the ten explicit teaching sessions the intervention group and the control group were again tested to monitor their overall gains. See table 2 below.

| Table 2 |
|-----------------|-----------------|-----------------|-----------------|-----------------|
| **INTERVENTION GROUP** | **Student A** | **Student B** | **Student C** | **Student D** |
| Instructional text level | 17 | 17 | 16 | 15 |
| Running Record | 87% (Hard) 6mins 48secs | 92% (Instructional) 5mins 55secs | 92% (Instructional) 9mins 56secs | 95% (Easy) 6mins 10secs |
| RAN testing | RANL 1 – 0:49 RANL 2 – 0:46 RAND 1 – 0:49 RAND 2 – 0:51 | RANL 1 – 1:05 RANL 2 – 0:47 RAND 1 – 0:46 RAND 2 – 0:45 | RANL 1 – 0:47 RANL 2 – 0:41 RAND 1 – 0:50 RAND 2 – 0:47 | RANL 1 – 0:34 RANL 2 – 0:35 RAND 1 – 0:35 RAND 2 – 0:37 |
| High Frequency words | 97/100 3mins 21secs | 96/100 4mins 19secs | 89/100 5mins 43secs | 83/100 2mins 11secs |
| Dependable Rime Units Test | 75/100 10mins 37secs | 78/100 9mins 25secs | 78/100 14mins 19secs | 61/100 6mins 47secs |

<table>
<thead>
<tr>
<th><strong>CONTROL GROUP</strong></th>
<th><strong>Student E</strong></th>
<th><strong>Student F</strong></th>
<th><strong>Student G</strong></th>
<th><strong>Student H</strong></th>
</tr>
</thead>
<tbody>
<tr>
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<td>20</td>
<td>20</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Running Record</td>
<td>90% (Instructional) 5mins 56secs</td>
<td>92% (Instructional) 3mins 39secs</td>
<td>69% (Hard) 5mins 23secs</td>
<td>57% (Hard) 5mins 42secs</td>
</tr>
<tr>
<td>RAN testing</td>
<td>RANL 1 – 0:43 RANL 2 – 0:38 RAND 1 – 0:42 RAND 2 – 0:59</td>
<td>RANL 1 – 0:36 RANL 2 – 0:43 RAND 1 – 0:45 RAND 2 – 0:49</td>
<td>RANL 1 – 0:40 RANL 2 – 0:45 RAND 1 – 0:50 RAND 2 – 0:46</td>
<td>RANL 1 – 0:28 RANL 2 – 0:30 RAND 1 – 0:32 RAND 2 – 0:32</td>
</tr>
<tr>
<td>High Frequency words</td>
<td>95/100 2mins 38secs</td>
<td>95/100 1min 46secs</td>
<td>85/100 3mins 27secs</td>
<td>76/100 3mins 23secs</td>
</tr>
<tr>
<td>Dependable Rime Units Test</td>
<td>51/100 5mins 7secs</td>
<td>48/100 4mins 5secs</td>
<td>72/100 5mins 8secs</td>
<td>49/100 7mins</td>
</tr>
</tbody>
</table>
RESULTS

All four students showed enthusiasm to attend these sessions right from the start. They enjoyed working together and also competing against each other and themselves. Student C had a very competitive nature, which matched his self-efficacy – if he was winning his confidence soared, if he was losing or having difficulty then his confidence dropped.

Sessions were adapted so that he was able to compete against himself – power point presentations and compete against others. During each session all students had an opportunity to work by themselves, work as partners or work altogether to complete set tasks. All students were given equal opportunities to star and to have one to one support.

The students’ performances are described by, firstly, comparing the results of the pre-tests with the results of the post testing. Then by looking at their individual progress through each group of sessions. Comparing the time taken during their pre- and post testing determined the students RAN ability and their fluency during prose reading was measured using running records and time taken on an unfamiliar text during pre- and post testing.

The trend of three of the four students indicated significant improvements in their RAN ability and fluency at the end of the sessions. Although student C only showed minimal improvements in his fluency and RAN ability, his word accuracy ability improved significantly. As a result, the data gathered throughout this action research project would support the hypothesis as stated.

The following graphs shows the individual times pre- and post testing on the RAN ability test.
The average mean time taken for completion by average readers of 7-8 year olds is RANL 28 secs and RAND 29secs. (Munro) Three of the four students studied were well above this time at the pre testing stage with student D only having a deviation of between 8 to 18 secs. By the completion of this study using explicit teaching all students had improved their time on this test with student D previous deviation coming down to between 6 & 8 secs. The biggest improvement overall was seen by student A whose pre testing deviations were about 40 sec down to post testing of 22 secs.

**Running Record Results**

![Running Record Accuracy Rate](image1)

![Running Record Timed Results](image2)

Referring to the above graph it can be noted that each student in the intervention group showed gains in both time and word accuracy. These results further support my hypothesis by showing an improvement in their fluency on this test. It should also be noted, at this point, that while student A's accuracy rate remained the same her fluency time came down significantly. Student C's fluency time also remained the same but his word accuracy rate improved significantly. At post testing student C was now reading the text at the instructional level. Student D again showed the best overall gains when comparing his pre- and post tests results.

**One Hundred Most Frequent Words Results**

![One Hundred Most Frequent Words](image3)
Comparing the above graphs it is important to note that except for student D there were only minimal gains overall in relation to RAN times but more significant gains in word accuracy. Extraneous variables within the classroom may have also had an influence over these results as I do know that class teachers were providing activities that targeted high frequency words within their reading block.

Throughout the 10 intervention sessions, each student was timed on a particular task. During the sessions that specifically targeted high frequency words, a teacher-generated text was presented unseen at the commencement of each session and again at the completion. (Appendix 3)
The following graphs show the results of these.

Upon analysis of these results student B showed the least improvement in her times. Her accuracy rate was very good but it appears that her confidence to rapidly name each word was detriment to her fluency.

During the intervention sessions that specifically targeted dependable rime units a teacher-generated power point presentation was timed at the commencement of each session. This task required the student to click on each slide to start the animation, say the rime unit then say the word. A picture was also presented to help consolidate the meaning or meanings of the word.

The following graph shows the results of this task.
The learning trend for each of the students on this task shows significant gains over the 5 sessions. This also supports my hypothesis that by explicitly targeting RAN activities that a student’s naming speed will improve.

In summary the trend for all students in the intervention group showed gains from pre testing right through to post testing. Some gains were more marked than others. Gains were also seen within the control group on all tests but not to the same extent as those in the intervention group.

DISCUSSION

The ultimate goal of this action research project was to develop fluency in reading outcome behaviors, including word identification and word attack. By increasing a student’s processing speed or automaticity in left to right scanning, orthographic pattern recognition and faster rime identification then this goal would have been reached.

By targeting high frequency words throughout the first half of this project enabled the students to become better facilitators of word identification or ‘sight’ readers therefore being able to facilitate speed of word recognition. Wolf, Miller & Donnelly (2000) writes:

*The theoretical principle for connecting lexical retrieval and vocabulary skills is that rapid word retrieval is facilitated by the child’s familiarity with and the amount of knowledge about the word.*

By providing activities that enhanced this familiarity the students were all able to make gains in their word accuracy and word naming speed. This then provided a sound base of knowledge for fluent word recognition that, in turn, affected their text reading fluency.

Targeting dependable rime units throughout the second half of this project enabled the students to become better facilitators of multi-letter units rather than relying solely on letter-by-letter decoding.

Ehri (1997) as cited by Wolf, Miller & Donnelly (2000) writes:

*Repeated experience reading letter sequence that symbolizes the same phoneme blend across different words yields a consolidated unit in which several graphemes become bonded to a blend of phonemes. ...knowing letter chunks is particularly valuable for learning multisyllabic words (p.178)*

The results of the Dependable Rime Units test showed me that the students had learned to break up unknown words into onset and rime, they were able to ability match the correct sounds to the letter clusters and then blend the word parts back together again. It must be noted that although student A, B & C’s scores of word accuracy showed significant gains there was little change in their naming speed. Student D was the only member of the group that had gains in both areas. This was also true for ‘One Hundred Most Frequent Words’ list. I can only conclude from this is that although the naming speed remained stagnant they were all able to read more words within that time frame. Further work in this area would greatly enhance the group’s progress.

To further test the success or not of the intervention I needed to look at their individual results during a timed running record. Running records were taken pre -, post - and
throughout intervention. For pre- and post testing a text was chosen from within the guided reading books that targeted levels 15 –18. Students A, B & C had been reading at the Instructional Level 16 and student D at 14. At pre testing students A, C & D results showed that this text was Hard and student B – instructional. Following the intervention sessions the posttest results showed that although student A & B’s error rates remained the same their naming speed decreased showing a gain in their fluency rate. Student C & D both showed improved error rates taking the text from hard to instructional for student C and hard to easy for student D. Student D’s fluency rate also showed significant gains. When viewing these results I feel that I am able to conclude that overall my teaching has been successful in this area.

As part of my action research project I needed to test the students on their rapid naming speed. The test I decided to use, the Rapid Naming Ability test (Munro, 2004), was first developed by Denckla & Rudel in 1974. It has been shown that for more than two decades it significantly predicted word reading ability. (Neuhaus & Swank, 2002) The results of the post testing showed significant gains for all students and as previous stated helped improve the students’ word reading ability. This is a result of the type of activities that made up the intervention sessions, flash card races and automated power point presentations. Each required the students to pay visual attention to the task, have knowledge of phonological awareness and orthographic recognition.

In the future, I would like to see more emphasis put on Rapid Automatised Naming activities in the Early Years classrooms, especially the Prep area. Having worked so closely with this group of students and the benefits that it has made to their overall reading ability justifies the need. If this had been the focus in their earlier years then I feel the need for intervention may not have been so great.

I support educational suggestions as stated by Neuhaus and Swank (2002):

1. Faster letter reading is associated with more efficient general naming, therefore more emphasis on oral language.
2. Fast letter reading is associated with accurate word reading; therefore build a base of letter knowledge in students through repeated letter practice.
3. Have adequate exposure to all letters, especially less frequent letters.
4. Not all children learn at the same time.
5. Letter names are still learned after Prep.
6. Letters must be over learned to become automatic.

In conclusion the hypothesis put forth by this action research project

‘By increasing a child’s Rapid Automatised Naming ability of high frequency words and dependable rimes leads to their oral reading fluency improving.’

has been supported throughout the intervention sessions and by the results shown in the post testing of both the control group and the intervention group.
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Howard Allor, Jill (2002) Learning Disability Quarterly, Winter; *The Relationship of Phonemic Awareness and Rapid Naming Reading Development*

Miller L. and Felton R. (2001) Journal of Special Education; Fall 2001; 35, 3; “It’s on of them...I don’t know”: case study of a student with phonological, rapid naming, and word finding deficits.

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Munro, John (2004) *Literacy Intervention Strategies notes*

Munro, John (2004) ‘Multiple Levels of Text Processing’ (MTOLP) model


Schatschneider C., Carlson C., Francis D., Foorman B. and Fletcher J. (2002) Journal of Learning Disabilities; May/June 2002;35, 3; *Relationship of Rapid Automatised Naming and Phonological Awareness in Early Reading Development*

Wolf, Maryanne; Research Paper Vol 1:Scholastic; *What is Fluency? Fluency Development: As the Bird Learns to Fly*

**APPENDIX 1**

Targeted High Frequency Words:

New, of, has, our, came, going, the, all, not, then
Could, saw, were, his, ran, because, for, it, had, as
Would, people, down, when, now, there, said, get, can, water.

Targeted Dependable Rime Units:

‘aw’ – saw, claw, straw, thaw
‘eat’ – eat, meat, seat, cheat
‘ake’ – cake, snake, take, lake
‘ain’ – rain, chain, stain, pain
‘an’ – ran, van, plan, an

**APPENDIX 2**

An example of the teacher generated rime cards

- cake
- straw
- straw

- ice cream
- straw
- boy with drink
APPENDIX 3

Teacher Generated Running Record Texts

Session 1:
Our dog came with a new name. It has lots of spots. I am going to call it Spot. If not then I will call it Dot.
Error rate (first reading) =
Accuracy % (first reading) =
Time (first reading) =

Error rate (second reading) =
Accuracy % (second reading) =
Time (second reading) =

Session 2:
Tom and Dot were going to a party when Tom lost his hat. He ran back to get a new one. On the way he saw a lot of bees. The bees came towards him. Could he get home?
Error rate (first reading) =
Accuracy % (first reading) =
Time (first reading) =

Error rate (second reading) =
Accuracy % (second reading) =
Time (second reading) =

Session 3:
Sam said ‘Now, look at the people down there!’ ‘Can they get out?’ said Tam. ‘Not when the water comes in.’ said Sam. ‘When would that be?’ said Tam.
Error rate (first reading) =
Accuracy % (first reading) =
Time (first reading) =

Error rate (second reading) =
Accuracy % (second reading) =
Time (second reading) =

Session 5 (interim test):
One hot sunny day Fred went down to the new lolly shop to see all the people. When he got there he saw lots of water on the road. The people were playing in it. ‘Where has it come from?’ he said. ‘It came from our house,’ said a little boy. ‘How could it?’ said Fred. ‘It ran down his path to here,’ said an old man. Fred decided to now go home. ‘It would be much drier at home,’ said Fred. So Fred ran home to where his mother was. Then Fred spent the rest of the day inside.
Error rate (first reading) =
Accuracy % (first reading) =
Time (first reading) =

Error rate (second reading) =
Accuracy % (second reading) =
Time (second reading) =
APPENDIX 4

Session Outline for teaching High Frequency Words:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Task Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text reading</td>
<td>Individually – take a timed running record of a teacher generated text that targets the session's words. Observe and note errors for future sessions.</td>
</tr>
<tr>
<td>Power point presentation</td>
<td>Student to watch and read timed animated power point targeting specific high frequency words. Encourage rapid naming speed.</td>
</tr>
<tr>
<td>Targeted words</td>
<td>Present session's words using flash cards. Students to read out aloud. Flash card race.</td>
</tr>
<tr>
<td>Game</td>
<td>Using a produced set of cards eg: M100W or teacher generated cards, play a game such as memory, go fish or snap. Reinforce the idea of rapid naming speed</td>
</tr>
<tr>
<td>Power point presentation</td>
<td>Work in pairs on power point presentation – count the word accuracy of their partner.</td>
</tr>
<tr>
<td>Text reading</td>
<td>Individually – repeat timed running record and review with the student.</td>
</tr>
</tbody>
</table>
Session Outline for teaching Dependable Rime Units Words:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Task Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power point presentation</td>
<td>Student to watch and read animated power point targeting specific dependable rime units. This activity is timed and shared with student. Encourage rapid naming speed</td>
</tr>
<tr>
<td>Targeted words</td>
<td>Present session's rime unit using letter tiles or magnetic letters. Students to read out aloud. Encourage students to generate and make words that contain this rime unit. Write onto flash cards Flash card race</td>
</tr>
<tr>
<td>Game</td>
<td>Using a teacher generated set of cards that contain a picture and written word of each rime unit to be targeted, play a game such as memory, go fish or snap. Reinforce the idea of naming speed</td>
</tr>
<tr>
<td>Power point presentation</td>
<td>Student to watch and read animated power point targeting specific dependable rime units. This activity is timed and shared with student. Review the student's gains.</td>
</tr>
<tr>
<td>Targeted words</td>
<td>Individually – read and review the session's words.</td>
</tr>
</tbody>
</table>

Session 10 (interim test):

Timed power point
Timed Unjumble – student to make as many of the targeted words as they can within 2 minutes.