

Case Study of Word Learning Strategies in Relation to Fluency

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Introduction and Background:

This case study was designed to discover the relation of word-learning strategies to fluency. In particular two different strategies were performed and compared with their success in improving fluency. The student was a five-year old girl who had recently completed kindergarten. For confidentiality purposes, her name has been changed. Megan had very little reading experiences during her developmental years. Her mother was unsuccessfully homeschooled until the 8th grade and had very little educational experience. In spite of her lack of ability, she wanted a better educational experience for her daughter. The challenge during Megan's preschool years was that while her mother wanted to help her get ahead educationally, she really did not know how to accomplish that goal.

Throughout kindergarten both Megan and her parents worked extremely hard to help her succeed in an uncommonly advanced class of peers. She entered kindergarten with letter recognition of 10 letters (both uppercase and lowercase) and little understanding of letter sounds. She was considered at-risk on the DIBELS benchmark assessment and there were significant concerns about auditory learning problems. However, Megan overcame the challenges and exited kindergarten at benchmark on DIBELS and reading successfully. She was able to read both short and long vowel words. Yet things were still not quite right. When Megan read it sounded disjointed and broken. While she had successfully learned and implemented blending strategies, she seemed to be stuck in the blending process. Words were a collection of individual sounds rather than one single word. As assumed, reading comprehension was also a huge struggle. She had average listening comprehension, but reading comprehension was low. Megan struggled to recall any information after reading just one sentence. This case study

emerged from the need for Megan to see words as a unit to make her reading more fluent and comprehension more successful.

Case Study Design and Rationale:

This case study was designed to compare and contrast two different word learning strategies and to evaluate the strategy's effect on Megan's reading fluency. There are many different research-based methods for word learning emerging in today's educational world and the tutor felt the need to research the successfulness of each strategy in the context of a real student's reading problems.

The first strategy used was a word learning strategy using keywords presented in an article entitled *Procedures for word learning: Making discoveries about words* (Gaskins, I.W., Ehri, L.C., Cress, C., O'Hara, C., Donnelly, K., Dec 1996/Jan 1997). This article described a program which was experimented and evaluated in first grade classrooms. They were all readers who were considered at-risk upon entering first grade (Gaskins, I.W., Ehri, L.C., Cress, C., O'Hara, C., Donnelly, K., Dec 1996/Jan 1997, p. 313). These students had already been taught the keyword program, called Benchmark Word Identification, yet they were having difficulty recalling the keywords when needed.

The focus of this program was to incorporate other strategies and word-learning procedures into the curriculum to teach students how to recall and manipulate keywords successfully. The students learned how to stretch words and name spelling patterns within the keywords. An evaluation of the experimental class was completed at the end of the study and the students identified as at-risk showed reading growth at a much higher level than previous students who only used the Benchmark Word Identification program without learning the

transfer skills (Gaskins, I.W., Ehri, L.C., Cress, C., O'Hara, C., Donnelly, K., Dec 1996/Jan 1997, p. 325).

The second strategy was a word learning strategy modeled from the Peer Assisted Learning Strategies (PALS) curriculum. This strategy was designed as a way to incorporate successful peer-tutoring into classrooms. There is an affective and social benefit to students working together with peers. In the PALS program, students are taught to be coaches and to act as the teacher. This allows the students to get more individualized practice time and social interactions. Also, the teacher is able to circulate and evaluate students on an individual basis without wasting undue time or using additional worksheets to keep students busy. More is available about this strategy at <http://kc.vanderbilt.edu/pals/>.

The design of this study was to complete both strategies with one at-risk student and then to compare and contrast the results. The tutor was looking for both statistical reading accuracy results as well as affective results. The goal was to find a strategy that was successful academically, but also attractive and appealing to the student. As well, the tutor wanted to evaluate the strategies based upon their feasibility for a regular teacher within the general-education classroom.

The tutor set up the study over several sessions. This was extremely important for a five-year-old student to make sure that a short attention span was not skewing the results. The tutor completed general pre and post-assessments at the beginning and end of the study. The two strategies were taught separately on two different days as not to be confused or combined. Surrounding each strategy, there were strategy specific pre and post-assessments. The goal was to evaluate both strategies separately and also to evaluate word-learning as a whole in relation to Megan's fluency.

Pre-Assessment:

The tutor did several pre-assessments to insure that the correct areas were being targeted and that there were not any other missing gaps causing the fluency problem. The first assessments administered were two parts of the DIBELS assessment. DIBELS was chosen for this case study for several reasons. First, it is the assessment used in this child's school and therefore provides continuity from her educational background. Second, the DIBELS assessment provides an accuracy score for phonemic skills during a timed segment. The tutor was interested in whether Megan's accuracy was affected by time. The first DIBELS assessment used was the nonsense word fluency test (NWF). Megan successfully read 43 sounds in the one minute assessment, yet none of the 15 words read were fluent as one unit. Rather, each individual sound was read in isolation (see appendix 1 for tutor's notes).

The second DIBELS assessment used was the Phoneme Segmentation Fluency test (PSF). This would be the opposite skill from creating fluent one-word units, but the tutor was interested in whether Megan recognized the sounds within the word. This was important to distinguish whether she had an understanding of individual phonemic sounds within the unit. This could also show whether auditory problems exist. Megan sounded out 13 words yet only seven of those words were correctly segmented, showing 54% accuracy (see Appendix 1 for tutor's notes). Of the 37 possible phonemes to segment, Megan identified 23 of the sounds. Interestingly, Megan was unable to distinguish any sounds in four of the six missed words.

The second pre-assessment used by the tutor was the Yopp-Singer Test of Phoneme Segmentation. This assessment was included to compare the accuracy of phoneme segmentation in relation to time. The tutor wanted to rule out whether the rush of time caused the fluency problems. Megan correctly segmented nine of 22 words presented, showing 41% accuracy on

the untimed assessment (see Appendix 2 for tutor's notes). However, of the 13 words missed she was not able to segment seven of those words at all.

The third pre-assessment conducted was the MLPP Phonemic Awareness Assessment. This assessment was conducted to ensure that Megan had mastered phonemic awareness skills, which are seen as a major indicator of reading success in current research (Troia, 2004). Four tests were administered as part of this two-section assessment. The first section contained two tests which both dealt with rhyme. Megan did well on both tests. She scored 100% on the rhyme choice test, correctly deciphering whether or not eight word pairs rhymed (see Appendix 3 for tutor's notes). On the rhyme supply test Megan also did well, yet this was a more advanced and challenging skill. Megan was correctly able to name a rhyming word for six of the eight pairs presented, showing 75% accuracy (see Appendix 3 for tutor's notes). This included a mix of short and long vowel rhyming pairs. Due to Megan's success on the rhyming section of the MLPP Phonemic Awareness Assessment, rhyming was not considered to be a major issue in fluency problems.

The second section of the MLPP Phonemic Awareness Assessment contained two tests which both dealt with blending skills. The first was an onset and rime test. On this test, Megan was asked to blend eight words when orally given the separate onset and rime sections. She successfully blended seven of the eight words, showing 88% accuracy (see Appendix 3 for tutor's notes). The second test was a phoneme blending test, on which Megan was asked to blend eight words when orally given the three or four individual phonemes. Megan also did excellent on this test, correctly blending all eight words and again showing 100% accuracy (see Appendix 3 for tutor's notes). Due to Megan's success on the MLPP Phonemic Awareness

Assessment, phonemic awareness skills were not considered to be a weakness in her fluency problems.

Once phonemic awareness skills had been assessed, the tutor continued with more focused assessment and instruction. Several phonemic awareness skills were assessed at the end of the study for comparison purposes, but they were not seen as a major skill deficiency or a possible limitation for the word-learning strategies. Within each strategy more assessments were given, both before and after to assess the success of each strategy.

Strategy #1:

The first strategy was a modification of the keyword strategy that was presented in an article entitled *Procedures for word learning: Making discoveries about words* (Gaskins, I.W., Ehri, L.C., Cress, C., O'Hara, C., Donnelly, K., Dec 1996/Jan 1997). The goal of this strategy was to teach Megan the keyword, "cat", as a model for the rest of the -at family words. This was primarily done through oral teaching first, followed by written reading. The intent was to cultivate onset/rime recognition for Megan to read larger word chunks.

Prior to beginning the lesson, a few pre-assessments specific to the lesson were given to assess strategy success. First, Megan was presented with a word list of 15 words and asked to read the words. She successfully read eight of the 15 words correctly as one unit, showing 53% accuracy (see Appendix 4 for tutor's notes). Of the seven words that were missed, three were read correctly but segmented into individual sounds. The other four words were pronounced incorrectly. Second, Megan was asked to read five sentences that contained a high-frequency of -at family words. None of the five sentences were read entirely correct. Of the 29 words in the five sentences, eight of the words were pronounced incorrectly, showing 72% accuracy (See Appendix 4 for tutor's notes).

The session began with teaching of the keyword, “cat”. It was presented to Megan orally and then the individual phonemes were both blended and segmented. The procedure used oral question and response instruction. Following the oral work, the tutor presented Megan with colored blocks to represent the individual sounds. The tutor began to change the initial colored blocks and prompting initial phoneme manipulation by asking, “What if /k/ is changed to /s/?” After several rounds of manipulation led by the teacher, Megan was asked to generate more words by changing the initial sound.

After Megan became more confident in changing the initial phonemes, the tutor combined the /a/ and /t/ phonemes to create the /at/ word segment. The colors were brought together and from this point forward, the /at/ word segment was recognized as one sound. The goal was to gently lead Megan to independent onset/rime recognition. This was a difficult transition for Megan to make as her natural tendency was to still pronounce all three phonemes in the word.

After Megan showed oral mastery of the keyword cat, and the ability to manipulate and create –at family words, the written word was introduced. Megan was asked to spell cat on the white board. She used all three phonemes to do the spelling, but the tutor expected her to revert to phoneme segmentation rather than using word segments when the increased challenge of writing was presented. The tutor then began the same process of initial phoneme manipulation with the word cat, this time using the written, grapheme representation of the sounds. The tutor changed the initial sound a few times and Megan read the word. She was expected to blend the word in two parts, for example /m/ and /at/. The tutor wanted Megan to be able to see the –at word segment as one unit rather than two phonemes. Color was still used to help Megan by writing the onset and rime in different colors. After a few turns, the tutor handed the marker to

Megan and she was expected to generate more words using those sounds. It was successful and Megan was able to manipulate the phonemes and blend the onset/rime segments.

At this point, the tutor attempted to transfer the concept even further and use a worksheet for further practice (see Appendix 5 for completed worksheet). The thought was that if Megan had enough practice with the keyword cat, she would be able to successfully transfer the word segment –at to her reading and spelling. The worksheet asked Megan to create words in the –at family. It led her step by step through the same process that she had done orally earlier by manipulating the initial phoneme. This time she just had to write each onset/rime and then the complete word. She was also asked to orally dictate sentences that used the –at family words that she had created. The tutor discussed with Megan about nonsense words and the real/nonsense words that she had created.

Following the worksheet, Megan was asked to read a decodable –at family book, *Nat's Cat*. Before reading, the tutor reminded Megan that the goal was to read the book without having to blend each sound and every word. Megan was expected to read as many words correctly as she could so that it flowed better. The tutor tracked the –at family words that Megan mispronounced and there were 16 incorrectly pronounced –at family words (see Appendix 6 for tutor's notes), however some of these mistakes were other words that were mistakenly read as –at family words. For example, the word 'had' was pronounced as 'hat'. From tutor observation it seemed that Megan really seemed to struggle with pronouncing the words completely rather than sounding them out, however she was able to blend onsets and rimes rather than individual phonemes. That was an improvement from the individual blending that she had been doing earlier.

At the end of the lesson, the tutor completed a few lesson-oriented post assessments to discover what was learned specifically from the modified keyword strategy for word learning. Megan again was asked to read the list of 15 -at family words. This time she was able to read all 15 words correctly, improving from eight correct words in the pre-assessment, which demonstrated an improvement from 53% to 100% accuracy of reading -at family words (see Appendix 4 for tutor's notes). This showed tremendous growth and improvement.

During the lesson post-assessment, the tutor also asked Megan to read the five sentences with high-frequency -at words again. In the pre-assessment she had read none of the complete sentences correctly. In the post assessment, she read three of the sentences correctly, which showed a 60% improvement (see Appendix 4 for tutor's notes). In individual word reading within the sentences in the post-assessment, Megan read 27 of the 29 words correctly in contrast with only reading 22 words correctly during the pre-assessment.

Overall, this modified keyword strategy seemed to improve accuracy of reading words with the /at/ phonogram. Whether or not the letter patterns would transfer to help Megan read other words was not assessed. In some informal post-assessment oral questions, Megan seemed to enjoy the lesson. She spoke positively about the activities and reading.

Strategy #2:

The second strategy was a word learning strategy modeled from the PALS (Peer Assisted Learning Strategies) curriculum. This curriculum is designed to be completed between peers, however due to the experimental basis of this project, the tutor acted as a peer. The tutor followed the methodology and language of the PALS program, only differing in words taught. The materials were self-designed by the tutor, but based off the PALS program.

Since this case study was designed to compare and contrast between two word learning strategies, it was important to again complete some lesson-specific pre-assessments before beginning the lesson. The tutor followed a similar assessment strategy using word lists and sentences to assess word reading and fluency. This lesson focused on the -ill word family.

In the first lesson pre-assessment, Megan was asked to read 15 -ill family words. She was able to fluently read 13 of the 15 words, showing 87% accuracy (see Appendix 7 for tutor's notes). The two missed words were both segmented between onset and rime. There were not individual phonemes segmented in this assessment. That could be accounted for from the previous day's lessons with word families, however that was merely the tutor's thoughts and not proven.

The second pre-assessment for the PALS strategy was for Megan to read five sentences that had a high-frequency of -ill words. The tutor was attempting to see whether individual word knowledge, as shown in reading the word lists, would carry over into sentences with other high-frequency words present. Megan read four of the five sentences correctly, showing 80% accuracy (see Appendix 7 for tutor's notes). In relation to individual words, Megan read 23 of 24 words correctly within the sentences, which shows 96% accuracy. This was clearly a much better performance than the previous day's pre-assessments. Still, there was room for improvement and justification for using the PALS word learning strategy for the -ill word family was present.

This strategy was much more instructive rather than activity based. The tutor was curious to see how Megan reacted to this strategy which was more structured in contrast to the previous strategy. The tutor began by introducing the -ill family words within the modified PALS worksheet. Four -ill family words (jill, hill, mill, bill) were put into a chart randomly

along with some spaces marked with a star (see Appendix 8 for chart). When Megan reached the star she was instructed to say 'great job' along with the tutor.

The tutor acted as the peer in the PALS procedure and led Megan through each word on the chart. When a word was stated incorrectly or there was hesitation, the tutor would instruct by giving Megan the correct word and having her repeat it. Also when a mistake was made, the tutor would bring Megan back to the beginning of that row. This allowed for intense practice of the four words in the chart. When a star was reached, both Megan and the tutor would say 'great job' rather than a word. The procedure continued through more practice in the same manner. There were five smile faces on the bottom of the chart. Each time Megan reached the end of the chart, she was able to cross out a face, which gave her a visual representation of her progress through the lesson.

After the chart was completed five times, Megan was given a decodable book using the -ill family, "*Jill Went Up the Hill*". This book was significantly more difficult than the decodable reader used in the first strategy. While it did have many decodable -ill family words, it also included many sight words that were unknown and Megan became frustrated quickly. She persevered through most of the book, but her performance was definitely affected by her weariness in reading the challenging words. Due to the difficulty of the decodable book, Megan's accuracy was not measured during this activity. It would not have been a valid measure of her ability to read -ill family words because of the intense concentration and focus that was required to read the surrounding text. However, it was still a successful activity for Megan to practice the -ill family words. She had the opportunity to read the words she had been practicing along with other words from the same family. As well, she was able to experience those words in context and hopefully gather word meaning from the textual clues.

There was not a worksheet or any type of onset/rime activities used in this second strategy because the nature of PALS strategy for word learning is to memorize the whole word. Therefore, this strategy was significantly shorter and less involved than the previous activity. The tutor was curious as to whether this focus on the whole word and non-recognition of word parts would help Megan with her broken word fluency issues.

Once again, at the end of the lesson, the tutor completed a few lesson post-assessments to compare and contrast the two strategies. The first lesson post-assessment was the list of 15-ill family words. There were both real and nonsense words on the list and only four of these words had been included on the chart and taught in this lesson. Success on this assessment would show that Megan was able to transfer the pattern knowledge learned to other similar words. Megan was able to successfully read all 15 words, demonstrating 100% accuracy (see Appendix 7 for tutor's notes). This was a 13% gain from the pre to post assessment. Megan's reading was also noted by the tutor to be faster and more confident.

The second lesson post-assessment was a set of five sentences with a high-frequency of -ill family words. Again, Megan was asked to read these sentences. She was able to read all five sentences correctly, demonstrating 100% accuracy in both sentence and word reading on this assessment (see Appendix 7 for tutor's notes). This was a 20% gain on sentence reading and a 4% gain on word reading. Interestingly, the word that was missed during the pre-assessment was a long-vowel word that was never taught during this strategy, yet Megan was able to read it correctly without hesitation in the post-assessment. This leads to a possible conclusion that Megan was able to gather word knowledge from the text, which is a primary characteristic of good readers. However, once again that possible conclusion is merely based on the tutor's thoughts and would require more research and observation to be considered valid.

Post-Assessment:

The general post-assessments followed the same model as the pre-assessments. In the pre-assessments, three main assessments were used: DIBELS Nonsense Word Fluency and Phoneme Segmentation assessments, Yopp-Singer Test of Phoneme Segmentation, and the MLPP Phonemic Awareness assessment. In the pre-assessments, Megan showed strong phonemic awareness skills which were determined not to be a cause of her reading problems. Therefore out of a respect for time and unnecessary assessments, the MLPP Phonemic Awareness assessment was not completed in the post-assessments.

The first post-assessment completed in this study was the DIBELS Nonsense Word Fluency assessment (NWF). This was the timed assessment where Megan was asked to read as many nonsense words as possible. The instructions of the assessment allowed Megan to read either individual phonemes or entire word units. The tutor was hoping to see an improvement in the number of correct word units read rather than the individual phonemes. The grading of this assessment is in two parts, correct letter-sound correspondences (CLS) and words recorded completely and correctly as a whole word (WRC). On the post-assessment Megan scored 27 on CLS and five on WRC (see Appendix 9 for tutor's notes). This was a significant improvement from the pre-assessment. In the pre-assessment, Megan had scored 43 on CLS, but 0 on WRC. While Megan's score for CLS went down, this was still seen as a significant improvement because the goal was to help her read whole word units. In addition, on the post-assessment of the four words that Megan did not read correctly as a unit, she blended in onset/rime segments rather than using individual phonemes. This shows an improvement in her recognition of word segments and their relation to the whole word, which was a goal of the study.

The second post-assessment completed was the DIBELS Phoneme Segmentation Fluency assessment (PSF). There were two phoneme segmentation assessments completed in this study, one timed and the other untimed. This was done to compare the effects of time on Megan's word fluency. On the post-assessment, Megan identified 25 of a possible 37 sounds (see Appendix 9 for tutor's notes). This was similar to her pre-assessment score of 23 phonemes. However, there was improvement shown when considering the number of words segmented correctly. Megan did not get through as many words in the one minute post-assessment, but she segmented the words more accurately. On the post-assessment Megan segmented six of the ten words correctly showing 60% accuracy in comparison with 54% on the pre-assessment. On the four words segmented incorrectly, the final two phonemes were read together on each word. There were no words for which Megan could not distinguish any phonemes.

The final post-assessment completed was the Yopp-Singer Test of Phoneme Segmentation. This was similar to the previous PSF assessment, differing in the timed aspect. This test was untimed and allowed Megan to simply segment 22 words in her own time. Megan accurately segmented 21 of the 22 words presented, showing 95% accuracy (see Appendix 2 for tutor's notes). This was the largest improvement that Megan had on any assessment in this study. She improved 55% from the pre to post-assessment on this test. The one word that was not segmented correctly was segmented by onset and rime. There were no words that Megan was not able to segment, improving from nine un-segmented words in the pre-assessment.

The tutor found a few points of significance in the post-assessment results. First, Megan's ability to decode whole word units rather than individual phonemes on the DIBELS NWF assessment was significantly improved. Second, Megan's phoneme segmentation skills showed excellent improvement on the Yopp-Singer Test of Phoneme Segmentation. Third, the

timed aspect of the DIBELS PSF assessment did seem to be a factor due to her lack of improvement on the timed segmentation assessment in relation to the significant improvement on the untimed assessment. It is possible that the timed aspect hurries Megan and causes her to make errors. If evaluated solely on the timed assessment, it would appear that Megan still struggles with segmentation, although she proved her improved skills on the untimed assessment. The post-assessments appear to show that the strategies in combination worked well to improve Megan's word recognition and basic word fluency.

Discussion:

The goal of this study was to evaluate word learning strategies and their relation to word reading fluency. The study focused on two specific strategies and compared the results. From an academic viewpoint, both strategies were proved successful. Both the keyword and PALS strategy showed improvements and success in strengthening word reading fluency. However when considering time needed to master these skills, the PALS program seemed to be more efficient. It was concise and to the point and took very little teacher instruction. The individual practice was focused and taught Megan the words quickly and accurately. In contrast, while the keyword strategy did show improvements, it took much more work on the part of the teacher. There was a lot of individual instruction required and very little independent practice when a teacher could step out. If instructional time is a factor, it seems that PALS would be a better choice.

However, the tutor was interested in not only the academic results of this study, but also the affective feelings of the student. Following the study the tutor asked Megan a few questions about how she felt during the procedures and which strategy she enjoyed more. The answers were somewhat surprising. When asked which strategy Megan would rather do again, she chose

the PALS strategy. The tutor had expected the opposite response due to the more hands-on, active approach of the keyword strategy. When asked why she chose the PALS strategy, Megan commented that it helped her learn more. She felt more confident and successful using the repetition and memorization involved in the PALS strategy. These answers showed that to some degree, even young children know their skill level. Megan was less interested in the enjoyment level of an activity, and was more interested in the results the strategy produced. A reason for this could be Megan's open desire to be at the advanced reading level of her classmates as shown in her classroom behavior last year. She worked incredibly hard to reach her classmates even though she started at a much lower level.

There are a few considerations in this study that should be noted when viewing the results. First, this study was conducted on one at-risk student and it would be interesting to assess how the strategies worked on average or above average students. Second, these strategies were both conducted in isolation in a one-on-one tutoring environment. While the tutor believes that these strategies were both feasible in a general education environment, it could potentially change the results. From the tutor's experience it seemed that the PALS strategy would be more easily integrated into a general education classroom because the one-on-one work is done by peers and it does not involve individual or small group work with the teacher. Third, the PALS strategy is designed to be pairs of peers and not a student and teacher. It would be interesting to see how these groups work in the classroom when students' maturity and skills are sometimes lacking. Another consideration within the PALS program is how much work it would take to teach students to successfully coach each other. It could easily take several days to train students enough to work independently.

Overall, this study seemed to be a success. Both the tutor and parents were both happy with the results and improvements for Megan. Megan's word reading fluency increased, which should translate into an increased general reading fluency. As well, her reading comprehension should also naturally increase as her accuracy and decoding skills become more automatic. The keyword and PAIS strategies both seemed to help Megan build word-reading fluency and reading confidence at the same time, which are vital for her future success.

APPENDIX

Appendix 1 - Pre-Assessment DIBELS Scores

		Benchmark K.2 DIBELS Nonsense Word Fluency		
100%	100%	100%	100%	100%
90%	90%	90%	90%	90%
80%	80%	80%	80%	80%
70%	70%	70%	70%	70%
60%	60%	60%	60%	60%
50%	50%	50%	50%	50%
40%	40%	40%	40%	40%
30%	30%	30%	30%	30%
20%	20%	20%	20%	20%
10%	10%	10%	10%	10%
0%	0%	0%	0%	0%

100% correct letter sequence

100% correct sound sequence and pronunciation

		Benchmark K.2 DIBELS Phoneme Segmentation Fluency		
100%	100%	100%	100%	100%
90%	90%	90%	90%	90%
80%	80%	80%	80%	80%
70%	70%	70%	70%	70%
60%	60%	60%	60%	60%
50%	50%	50%	50%	50%
40%	40%	40%	40%	40%
30%	30%	30%	30%	30%
20%	20%	20%	20%	20%
10%	10%	10%	10%	10%
0%	0%	0%	0%	0%

100% correct

Appendix 2 – Pre- and Post-Assessment Yopp-Singer Scores

Score (# correct) _____

Name _____ Date _____

winter _____

spring _____

Directions: Today we're going to play a word game. I'm going to say a word and I want you to break the word apart. You are going to tell me each sound of the word in order. For example, if I say **old**, you should say "b- e- d". Let's try a few together.

Practice items: (assist in segmenting if necessary): ride (3) go (2) man (3)

Test items: Circle those items that the student correctly segments; incorrect responses are recorded on the blank line following the item.

- | | | | | | | | | | | | | | | | | | | | | | |
|--------|---------|---------|-------|--------|---------|---------|---------|--------|--------|---------|---------|----------|---------|-----------|---------|--------|---------|--------|---------|--------|--------|
| 1. dog | 2. keep | 3. fine | 4. no | 5. she | 6. wave | 7. drew | 8. that | 9. tea | 10. me | 11. sat | 12. lay | 13. race | 14. zoo | 15. three | 16. job | 17. in | 18. ice | 19. at | 20. top | 21. by | 22. do |
|--------|---------|---------|-------|--------|---------|---------|---------|--------|--------|---------|---------|----------|---------|-----------|---------|--------|---------|--------|---------|--------|--------|

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Appendix 3 – Pre-Assessment MLPP Scores

ONSET AND RIME

What word would I have if I put together these sounds?

- | | |
|----------------|--------------|
| 1. /t/ /ak/ | 5. /d/ /st/ |
| 2. /p/ /m/ /t/ | 6. /t/ /mp/ |
| 3. /d/ /ep/ | 7. /m/ /ese/ |
| 4. /t/ /v/ | 8. /d/ /ep/ |

PRONEME BLENDING

Put these two additional letters on the opposite

What word would I have if I put together

- | | |
|--------------------|----------------------------|
| 1. /t/ /k/ /mp/ | 5. /t/ /n/ /d/ /ld/ |
| 2. /p/ /v/ /m/ /p/ | 6. /b/ /k/ /h/ /k/ |
| 3. /p/ /m/ /t/ /p/ | 7. /w/ /h/ /t/ /w/ /e/ |
| 4. /t/ /n/ /d/ /m/ | 8. /s/ /g/ /t/ /r/ /s/ /d/ |

RHYME CHOICE

Tell me if these words rhyme:

- | | |
|-----------------|-----------------|
| 1. cat / hat | 5. truck / song |
| 2. ball / wall | 6. me / air |
| 3. tree / creek | 7. play / day |
| 4. cat / out | 8. down / truck |

RHYME SUPPLY

Tell me a word that rhymes with _____

- | | |
|----------------|----------------|
| 1. hat / hat | 5. me / me |
| 2. beat / beat | 6. be / me |
| 3. me / me | 7. take / make |
| 4. get / get | 8. end / end |

Appendix 4 – Strategy #1 Pre- and Post-Assessment (-at word lists & sentences)

Read these -at family words: cat nat hat

cat nat hat

jat sat yat

lat fat mat

tat wat vāt

rat dat pat

Read these -at family sentences:

The cat sat on a hat. ✓

The fat rat went to the mat.

Can I pat the cat?

Is the cat fat? ✓

Did the hat fall on the rat? ✓

Appendix 5 – Completed -at family worksheet

Name:

Create words in the -at word family:

h + at = hat

i + at = it

l + at = lat

h + at = hat

l + at = lat

l + at = lat

l + at = lat

l + at = lat

h + at = hat

l + at = lat

Appendix 6 – Nat's Cat Notes

Nat's Cat Text:

Nat liked to sit on the mat with his fat cat.

The fat cat liked to nap on Nat's lap

If the fat cat wanted a pat, he would tap, tap, tap on Nat.

Nat would pat him.

Nat was on the mat with his cat.

They saw a rat in a cap.

"Get the rat." Nat said to his cat.

The fat cat ran at the rat.

The rat ran to the map.

The rat ran to the map.

The rat ran to the bat

The cat ran to the bat.

The cat wanted to tap the rat.

"Stop, cat!" said Meg

"Do not tap the rat. This is my pet rat."

Meg put the rat in the cap.

She sat on the mat with the rat in the cap.

Nat sat on the mat with his cat.

The fat cat sat on Nat's lap.

The rat and the cat had a nap.

"Nat's Rat" - obtained from www.edingatoz.com

Appendix 7 – Strategy #2 Pre- and Post-Assessment

Read these -ill family words:

jill

dill

mill

pill

nill

sill

rill

hill

till

vill

kill

fill

zill

will

bill

Read these -ill family sentences:

Jill went up the hill. ✓✓

Pay the bill. ✓

Will you fill the pan? ✓

We went to the mill. ✓✓

Will you go up the hill? ✓✓

Appendix 8 – Modified PALS Chart

jill	*	bill	jill	bill	mill
hill	bill	jill	*	mill	jill
mill	hill	*	jill	mill	bill
hill	mill	hill	mill	jill	*

Appendix 9 – Post-Assessment DIBELS Scores

Appendix 9A
Post-Assessment Scores
Pre-Intervention (Spring 2008) Measures

Participant	Word Reading Fluency	Oral Reading Fluency	Letter-Word Identification	Comprehension
1	12	12	12	12
2	15	15	15	15
3	18	18	18	18
4	20	20	20	20
5	22	22	22	22
6	25	25	25	25
7	28	28	28	28
8	30	30	30	30
9	32	32	32	32
10	35	35	35	35
11	38	38	38	38
12	40	40	40	40
13	42	42	42	42
14	45	45	45	45
15	48	48	48	48
16	50	50	50	50
17	52	52	52	52
18	55	55	55	55
19	58	58	58	58
20	60	60	60	60
21	62	62	62	62
22	65	65	65	65
23	68	68	68	68
24	70	70	70	70
25	72	72	72	72
26	75	75	75	75
27	78	78	78	78
28	80	80	80	80
29	82	82	82	82
30	85	85	85	85
31	88	88	88	88
32	90	90	90	90
33	92	92	92	92
34	95	95	95	95
35	98	98	98	98
36	100	100	100	100
37	102	102	102	102
38	105	105	105	105
39	108	108	108	108
40	110	110	110	110
41	112	112	112	112
42	115	115	115	115
43	118	118	118	118
44	120	120	120	120
45	122	122	122	122
46	125	125	125	125
47	128	128	128	128
48	130	130	130	130
49	132	132	132	132
50	135	135	135	135
51	138	138	138	138
52	140	140	140	140
53	142	142	142	142
54	145	145	145	145
55	148	148	148	148
56	150	150	150	150
57	152	152	152	152
58	155	155	155	155
59	158	158	158	158
60	160	160	160	160
61	162	162	162	162
62	165	165	165	165
63	168	168	168	168
64	170	170	170	170
65	172	172	172	172
66	175	175	175	175
67	178	178	178	178
68	180	180	180	180
69	182	182	182	182
70	185	185	185	185
71	188	188	188	188
72	190	190	190	190
73	192	192	192	192
74	195	195	195	195
75	198	198	198	198
76	200	200	200	200
77	202	202	202	202
78	205	205	205	205
79	208	208	208	208
80	210	210	210	210
81	212	212	212	212
82	215	215	215	215
83	218	218	218	218
84	220	220	220	220
85	222	222	222	222
86	225	225	225	225
87	228	228	228	228
88	230	230	230	230
89	232	232	232	232
90	235	235	235	235
91	238	238	238	238
92	240	240	240	240
93	242	242	242	242
94	245	245	245	245
95	248	248	248	248
96	250	250	250	250
97	252	252	252	252
98	255	255	255	255
99	258	258	258	258
100	260	260	260	260

Appendix 9B
Post-Assessment Scores
Post-Intervention (Spring 2009) Measures

Participant	Word Reading Fluency	Oral Reading Fluency	Letter-Word Identification	Comprehension
1	15	15	15	15
2	18	18	18	18
3	20	20	20	20
4	22	22	22	22
5	25	25	25	25
6	28	28	28	28
7	30	30	30	30
8	32	32	32	32
9	35	35	35	35
10	38	38	38	38
11	40	40	40	40
12	42	42	42	42
13	45	45	45	45
14	48	48	48	48
15	50	50	50	50
16	52	52	52	52
17	55	55	55	55
18	58	58	58	58
19	60	60	60	60
20	62	62	62	62
21	65	65	65	65
22	68	68	68	68
23	70	70	70	70
24	72	72	72	72
25	75	75	75	75
26	78	78	78	78
27	80	80	80	80
28	82	82	82	82
29	85	85	85	85
30	88	88	88	88
31	90	90	90	90
32	92	92	92	92
33	95	95	95	95
34	98	98	98	98
35	100	100	100	100
36	102	102	102	102
37	105	105	105	105
38	108	108	108	108
39	110	110	110	110
40	112	112	112	112
41	115	115	115	115
42	118	118	118	118
43	120	120	120	120
44	122	122	122	122
45	125	125	125	125
46	128	128	128	128
47	130	130	130	130
48	132	132	132	132
49	135	135	135	135
50	138	138	138	138
51	140	140	140	140
52	142	142	142	142
53	145	145	145	145
54	148	148	148	148
55	150	150	150	150
56	152	152	152	152
57	155	155	155	155
58	158	158	158	158
59	160	160	160	160
60	162	162	162	162
61	165	165	165	165
62	168	168	168	168
63	170	170	170	170
64	172	172	172	172
65	175	175	175	175
66	178	178	178	178
67	180	180	180	180
68	182	182	182	182
69	185	185	185	185
70	188	188	188	188
71	190	190	190	190
72	192	192	192	192
73	195	195	195	195
74	198	198	198	198
75	200	200	200	200
76	202	202	202	202
77	205	205	205	205
78	208	208	208	208
79	210	210	210	210
80	212	212	212	212
81	215	215	215	215
82	218	218	218	218
83	220	220	220	220
84	222	222	222	222
85	225	225	225	225
86	228	228	228	228
87	230	230	230	230
88	232	232	232	232
89	235	235	235	235
90	238	238	238	238
91	240	240	240	240
92	242	242	242	242
93	245	245	245	245
94	248	248	248	248
95	250	250	250	250
96	252	252	252	252
97	255	255	255	255
98	258	258	258	258
99	260	260	260	260
100	262	262	262	262

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