

**How Great is the Correlation between the Fluency Rate of Second Graders and their Ability  
to Comprehend Text?**

Action Research

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Recent studies show that students in the middle and high school grades struggle as readers because they need to build reading comprehension skills. "Educators must first figure out how to ensure that every student gets beyond the basic literacy skills of the early-elementary grades." Thus, the No Child Left Behind Act [NCLB] was established with the goal of getting every child to read at their grade level by 2013. NCLB requires that children receive a high quality education to ensure academic success.

In order to give my second grade students the foundation necessary to be prepared for the middle and high school grades, I modified my instruction to include best practices' strategies to teach reading comprehension.

My action research assesses three strategies, and how much is comprehended when they are used:

- Creating mental images [using sensory imagery]
- Using background knowledge
- Asking questions

I wanted to learn how fluent a second grade student could become and how much that student could comprehend after various reading opportunities to practice fluency, including the use of these three comprehension strategies.

### **Context**

My second grade class is comprised of twenty-eight students; 25 are African-American, and 3 are Latino. Their reading levels range from pre-kindergarten to third grade. Their reading comprehension levels and decoding abilities range from preschool to first grade. Of the 28 students, 26 participate fully in the free lunch program.

Students in benchmark grades [3, 6, 8] reported cumulative performance results of just 23.8 compared to the school district's 45.3 on state standardized tests. The school did not meet its Annual Yearly Progress [AYP] in 2004-2005 (Illinois State School Report Card 2004).

### **Rationale**

Reading is a necessary for academic success; research shows that a student's ability to read at a fluent and comprehensive level equals success in the classroom. Since NCLB was introduced,

all states have been required to measure students' *ability* through standardized tests. Materials given to teachers for implementation in the classroom focus on helping students achieve high scores on tests, not acquire life long learning skills. I found that my own students, from kindergarten onwards, were being standardized test-driven, especially since that is the direction of a school on "probation" [not meeting the AYP]. From my experience, the use of best practices has allowed students to become higher order thinkers while continuing to learn test taking skills. However, my students' ability to read fluently and their ability to comprehend information was a grave concern. Therefore, I wondered:

**How Great is the Correlation between the Fluency Rate of Second Graders and their Ability to Comprehend Text?**

My guiding sub-questions are:

- Are the reading strategies being incorporated during fluency monitoring?
- Are the reading strategies being incorporated during full text reading?
- Are the reading strategies being incorporated during pleasure reading?

**Review of Literature**

***Reading***

"Early reading success...is the cornerstone upon which knowledge, self-esteem, and future educational opportunities are built" (Tyner, 2004, p.1). "Reading is fundamental to success in life. [It] opens the door to virtually all other learning" (Zimmermann, 2004, p.4). "Reading is a complex process that brings together a reader and a text. It allows the reader to bring together many strategies to aid in competency" (Fountas & Pinnell, 1999, p.4).

Reading instruction and its strategies was once introduced in early elementary school. In recent years it has been employed more in the preschool classroom. According to Dorothy P. Dougherty, when you read to a young child, you "enhance his visual, vocabulary, and listening skills as well as develop an important foundation" for [the] child's language development. Therefore, preschool teachers participate in read alouds, shared reading, and other literary activities. In America's schools the overall intent is to have all children reading at their grade level by 2013 [NCLB 2001 bill]. Currently, according to the Nation's Report Card, 31 percent of 4th graders and 36 percent of 12th graders are proficient readers (U.S. Department of Education, Nation's Report Card, 2002).

The ability to read is a fundamental skill for success in life. Reading research has found compelling evidence that children who have a poor start in reading have great difficulty catching up. The consequences of a slow start in reading range from negative attitudes towards reading, reduced opportunities for vocabulary growth, and missed opportunities for development of reading ***comprehension strategies*** to less practice in reading than other children. Most children who become poor readers experience early and continuing difficulties in learning how to accurately identify printed words. These students have problems with “sounding out” unfamiliar words, and with developing “sight vocabulary” of words they are able to read fluently and automatically. The ability to develop these skills is necessary for fluent reading and good reading comprehension [Coordinated campaign for learning disabilities].

### ***Reading Strategies and Competency***

Readers comprehend better when they actively think about and apply their knowledge of a book's topic, their own experiences, and the world around them. In their book, Strategies that Work (2000, p. 68), Stephanie Harvey and Anne Goudvis state that, "When children understand how to connect the text they read to their lives, they begin to make connections between what they read and the larger world. This nudges them into thinking about bigger, more expansive issues beyond their universe of home, school and neighborhood."

Reading competency is rooted in one's ability to comprehend. Finding the main idea, recalling facts and details, understanding sequence, recognizing cause and effect, making predictions, finding word meaning in context, drawing conclusions/making inferences, comparing and contrasting, distinguishing fact from opinion, identifying the author's purpose, interpreting figurative language, reading pictures, distinguishing real from make-believe, and summarizing are comprehension strategies used across all grade levels.

“Competent readers bring everything they know to the process...” (Fountas & Pinnell, 1999, p.4). Bringing everything together is reading comprehension.

### ***Comprehension***

From the National Reading Panel's Executive Summary (2004): “Comprehension is critically important to development of... reading skills. [It] has come to be viewed as the ‘essence of reading’.” Early reading programs include the “comprehending of connected text” (Mason & Schummy, 2003, p9] and teaching strategies. Comprehension involves the understanding of text as it “challenges the [students] to ‘think as you read!’” (Calkins, 2001, 35).

Comprehension strategies and skills can include an interactive component, which “creates” a wide range of visual, auditory, and other sensory images, while a child reads. Strategies can also ask questions, synthesize information, and make use of background knowledge (Zimmermann 2001, p7).

Traditional reading comprehension focuses on the reader’s ability to recount all that was relayed in a passage. In general, “comprehension is ‘an intentional thinking during which meaning is constructed through interactions between the text and reader’” (Zimmermann 2001, p7). Comprehension reading strategies are “conscious plans—sets of steps that good readers use to make sense of text” (what is this quote’s source?) This in turn helps students to become “active readers,” and provides reading assistance in making sense of the text [National reading panel p 49].

Reading comprehension entails thinking, learning, and expanding a reader’s knowledge horizon. It builds on prior knowledge, encourages the mastering of new information, and connects the minds of those never met [p. 7]. Comprehension means more than merely literal story understanding, it involves acquiring knowledge [Stephanie Harvey.p.8].

### ***Comprehension Strategies***

According to the National Reading Panel report, “comprehension is defined as “intentional thinking during which meaning is constructed through interactions between text and reader” (Harris and Hodges, 1995, NRP p. 14). Many studies conclude that good readers have certain characteristics which allow them to comprehend text. The following are six comprehension strategies that good readers use studied by the National Reading Council: comprehension monitoring, graphic and semantic organizers, answering questions, cooperative learning, story structure, and summarization. The National Reading Panel defines these concepts below (2003):

\*Monitoring comprehension: the ability to identify what is and what is not understood, and use appropriate fix-up strategies.

\*Graphic and semantic organizers: a means of illustrating a concept and inter-relationships among concepts in a text.

\*Answering and generating questions: questions used as a guide in monitoring students’ learning and encouraging students, while reading, to ask their own questions.

\*Story structure: the way the content and events of a story are organized in to a plot.

\*Summarizing: a synthesis of the important ideas in a text.

\*Cooperative learning: when students work together as partners or in small groups.

The main goal of “comprehension strategy instruction is to turn responsibility for using strategies over to the student as soon as possible” (Open court 2002). In doing so, we create various types of readers.

### ***Types of Readers***

The “primary aim of reading is comprehension” (Open court 2002), however, “young readers may not consistently ‘index,’ or map words to the objects the words represent.

Consequently, these readers fail to derive much meaning from the text” (Glenberg, 2004, p 424).

Comprehension challenges lead to various types of readers, as identified by the State College Area School District:

**emergent** – pretends to read and write and relies on pictures [for comprehension];

**developing** – can identify letters by names and knows most letter sounds, and participates in book discussions [for comprehension];

**beginning** – applies reading strategies and relies on print more than illustrations to create meaning;

**expanding** – uses a variety of decoding strategies independently;

**bridging** – integrates sentence structure, meaning and phonetic clues to identify words;

**fluent** – analyzes and debates the relationships among literary elements;

**proficient** – can interpret sophisticated meaning; and

**independent** – evaluates, interprets, and analyzes literary elements in depth, makes connections appropriately

In conjunction with identifying a child’s reading levels, it is necessary to aid children who read in an inefficient or laborious manner (NRP 2004 p11).

### ***Fluency***

“Fluent readers are able to read orally with speed, accuracy, and proper expression. (It) is one of several critical factors necessary for reading comprehension” (NRP 2004). Two skills used to assist in increasing fluency are guided oral reading and independent silent reading (p 12) – what

does this reference?. It is with these skills that students' fluency rate and comprehension levels increase.

### ***Miscue Analysis***

“Miscue analysis has been tremendously valuable for researchers working to understand the reading process; however, its most important use for teachers is to understand how individual readers, particularly those who are less successful, construct meaning from text” (Wilde, 2000 p 1,-2). Miscue analysis is a procedure for comprehending how learning and reading works. Through this process, students read several literary works of progressive difficulty until they begin to make too many reading and cuing errors. The work where a student makes the fewest errors is used to determine his/her reading level. The miscue levels are as follows: below five for preschool to kindergarten, 5 to 14 for first grade, 15 to 20 for second grade, and 21 to 26 for third grade.

### **The Research**

#### ***Data Tools***

- Pre-survey
- Post-survey
- Fluency rate grid
- Comprehension level grid
- Miscue Analysis
- Notes

#### ***Data Collection***

Data collection occurred over a period of six months. During the classroom day, twice a week for 30 minutes per session [except during the mini-lessons], students were provided with opportunities to read aloud during timed sessions and answer questions after reading either a fluency passage, longer passage or a pleasure read passage. Their responses were recorded on a personal fluency rate grid. On a weekly to bi-weekly basis, notes were taken as the students participated in the task. After the pre-survey and questioning of which reading strategies are often used, I decided to focus on three specific strategies and to conduct mini-lessons for each one, prior to another assessment.

### ***Pre Survey Responses***

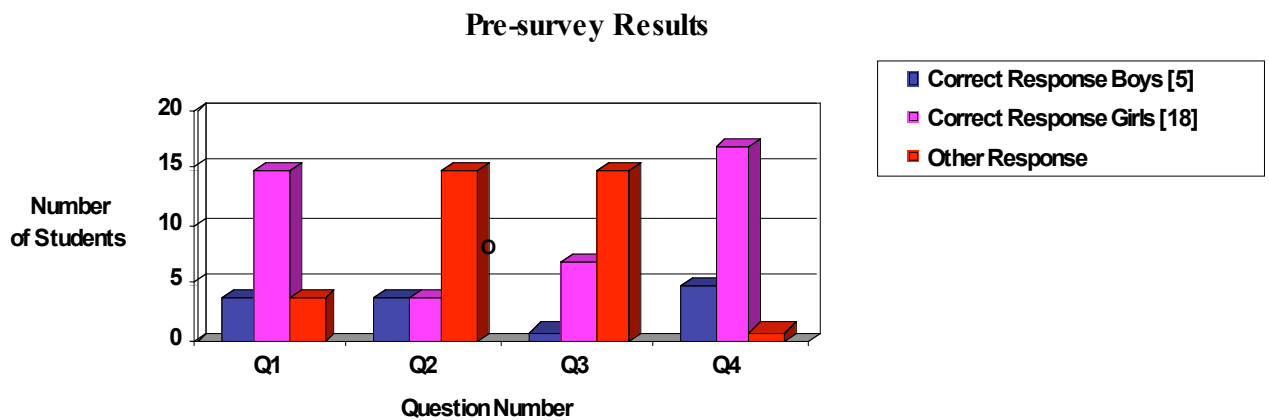
To begin, I polled my second grade students in reading. They each were asked four questions concerning reading, comprehension and fluency (see below). I wondered how the boys and girls compared to each other after sensory imagery, background knowledge, and questioning were introduced as comprehension strategies. I opted not to look at the results as a whole because I felt that assessing the students by gender would provide a more complete look at how my students fared with each strategy.

The pre-survey was administered to determine what students understood about reading and how they used reading strategies in general. Of the 23 students who completed the survey, 5 were boys and 18 were girls. The pre-survey questions were as follows:

1. What is reading? [Q1]
2. How do you read? [Q2]
3. What helps you to understand as you read? [Q3]
4. What kind of reader do you think you are? [Q4]

The results below relate to the following:

- Q1 the correct response was something related to using a book.
- Q2 the correct response was a description of a reading strategy.
- Q3 the correct response was a description of a reading strategy.
- Q4 the gendered responses are those identifying themselves as good readers; the “other response” represents responses not logically connected to the question asked.



Most of my students were able to give a logical response to the questions asked; however, many were not sure as to what strategies they use to understand what they read. These responses were the guiding factor used to determine which comprehension strategies I would select for mini-lessons and growth measurement.

### ***Fluency Assessment***

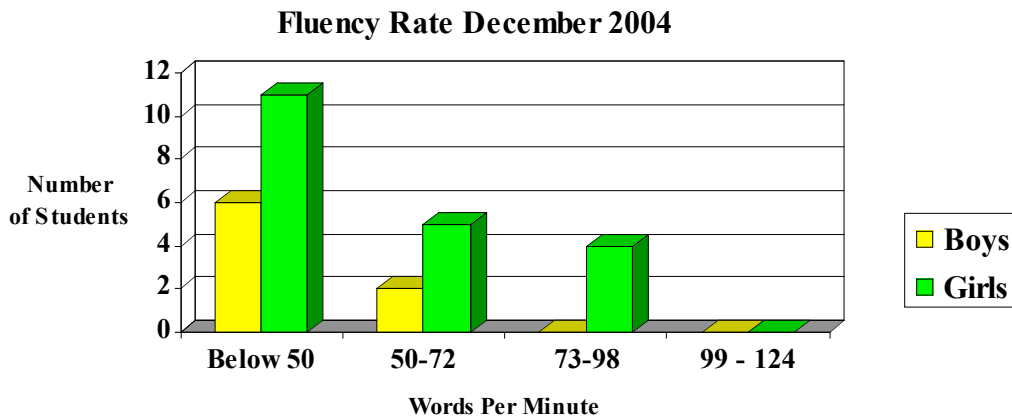
Fluency or words (read) per minute [wpm] may be measured as follows:

- 50 to 72 is low fluency [low level, or LQ]
- 73 to 92 is medium fluency [medium level, or MQ]
- 93 to 124 is high fluency [high level, or HQ]

At the end of second grade, students should read beyond the high level. By February, they should read at the middle level. After assessing my students, I discovered that the majority were below the low level. In fact, 17 students were below 50 wpm, seven were between 50 to 72 wpm, four read 73-98 wpm, and none read at a highly fluent level.

After analyzing this information I decided to try to increase my students' fluency by giving them a timer, and having them to select two copies of the same book. The students were to practice their fluency once a night for one minute at home. After a week's worth of demonstrations, the entire class was monitored at once to show how to tally what they had read. The students were now prepared to monitor their own fluency. After about two weeks of practice at home the students requested time in the classroom. They began to time each other, comparing their new rates with their previous rates on a tally form.

Students read grade leveled materials within 60 seconds. The words read were counted, while the words missed were subtracted. The final number of words read correctly became the words read per minute. The chart below shows the class's collective fluency rate. Six boys read below 50 words a minute and 3 read between 50 and 72 wpm. Some girls did a bit better, with 11 reading below 50 wpm, 5 reading 50-72 wpm, and 4 reading between 73 to 98 wpm. Unfortunately, the majority of the class was reading below 50 wpm.

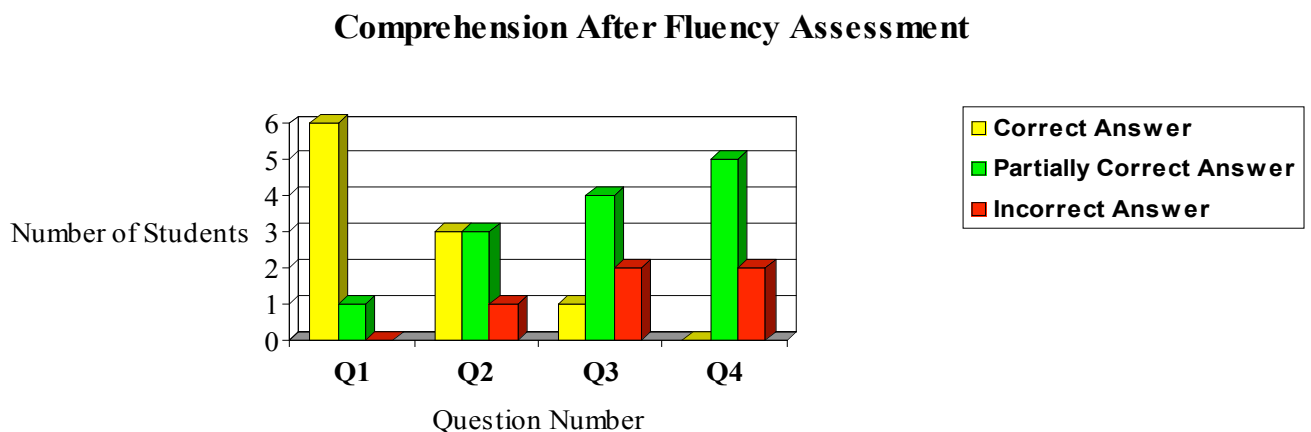


After analyzing the data I noticed that half of the girls were reading more slowly than the boys. I took note of each student's wpm and then selected appropriate reading materials to use in the next fluency assessment. I then devised a best practice plan to help the students move from one level to the next.

### *Comprehension Measurement*

After measuring their fluency rates, I measured my students' ability to comprehend a passage read quickly and for a different purpose. A comprehension questionnaire was designed to measure the three areas: sensory imagery, prior knowledge, and questioning:

1. Who are the characters?
2. What is the conflict in the story with the characters?
3. How was the conflict handled/resolved?
4. What is the main point of the story?

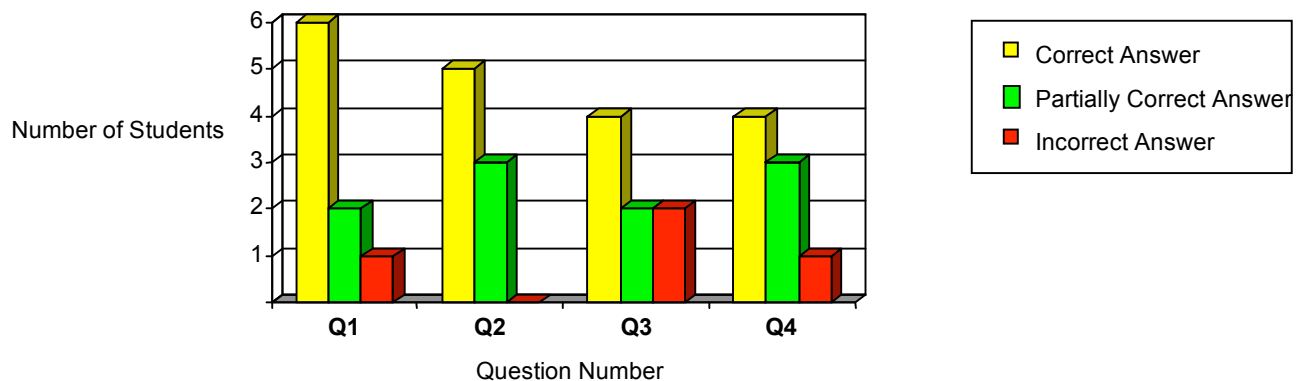


As shown above, six students answered the first question correctly, and one answered it partially correctly. Three students answered question two correctly and three answered it partially correctly, while one missed the concept. In questions three and four, more students gave partially correct [four and five] answers and two missed the concept. As a result of this questionnaire, I realized my students did not comprehend much during the fluency readings.

My next task was to gain a more accurate idea of how many of my students could comprehend what they were reading. I assigned a longer reading for comprehension purposes: they were to read an entire book. Many chose to read aloud to me; I later discovered that this was their way of practicing their fluency in an un-timed manner.

The results of the longer reading questionnaire were better than the fluency comprehension results, however, more practice in the three areas of creating mental images using sensory imagery, using background knowledge, and asking questions was necessary. Though only six students answered Q1 correctly and two answered it partially correctly, with one misconception, more students answered Q2, Q3, and Q4 correctly and fewer had misconceptions.

**Comprehension After Reading a Full Text**



***Mini Lesson One: Sensory Imagery***

To help students imagine verbal descriptions, their sensory writing in poetry was implemented. Poetry was chosen since the students grasped its concept and enjoyed writing it. Students were shown an object and then told to write everything they saw in or on the object. Students wrote a sensory poem to practice identifying sensory images in writing and reading. This mini lesson was introduced and modeled in two 20-minute sessions. The students wrote using

sensory imagery over a period of two weeks, and sensory imagery was referenced frequently for one month.

### ***Mini Lesson Two: Background Knowledge***

During the background knowledge mini-lessons, students read the same copy of a story. During a class discussion, the depth of background knowledge was discussed. Segments of the story were highlighted and students were shown how to use their learned information [prior knowledge]. For example, after reading a work about dinosaurs, students were found to have difficulty understanding the term “prehistoric”. I explained that they should segment the word. They looked at the prefix “pre-” followed by “history”. They realized they knew the meanings of each. When they put “pre-“ and “historic” together again, they were able to comprehend the word. I then highlighted each step they took to understand “prehistoric” and explained how background knowledge applied. After this introduction and my daily (for one week) demonstration, this strategy was then referenced during each new story discussion. The students were reminded to use the strategy as often as necessary.

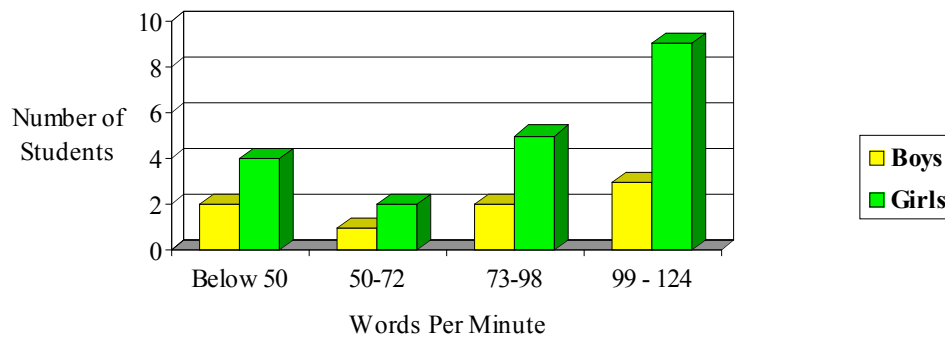
### ***Mini Lesson Three: Questioning***

In this mini lesson my students were asked to read a passage and write a response. Ninety percent of them were not effective in responding since they lacked the questioning skills necessary to comprehend and respond to the text. The demonstration showed how to ask questions at certain points of the reading and about particular aspects of the reading. They were then given a list of the five W’s and H; Who, What, When, Where, Why, and How. Following a week long demonstration segment my students were shown during other parts of the day when to use the questioning strategy.

### ***Fluency Measurement, Part Two***

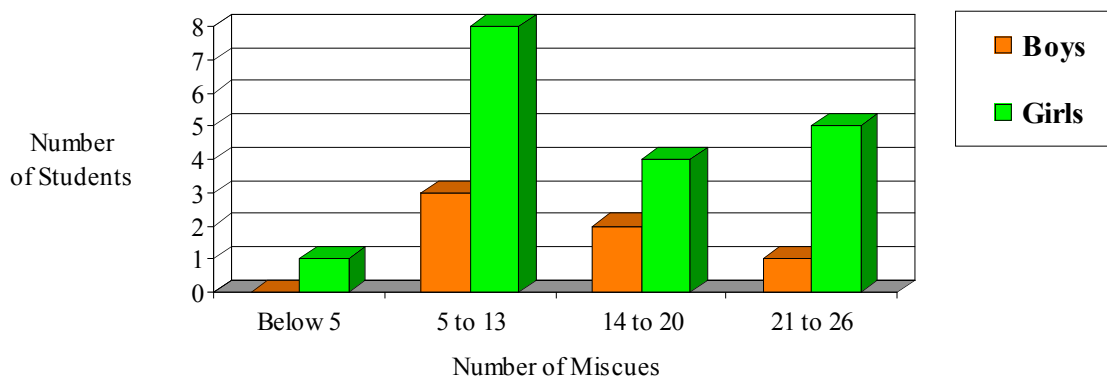
After twelve weeks of practice, at home and in school, my students’ fluency rate increased tremendously— from 18 students’ wpm below 50 to just 6 students’ wpm below 50. There were now 14 girls reading between 73 and 124 wpm!

### Fluency Rate April 2005



I noticed my students' miscue analysis results closely correlated with their fluency rate. Those girls who took a miscue analysis ranked between the second and third grade. The exact number of boys reading between 73 to 124 wpm also ranked between the second and third grade on the miscue. Many students ranked on the high end of the first grade level of the miscue. That is, after seeing the raw data, about nine of the students ranked at 12 or 13 on the miscue.

### Miscue Analysis Results

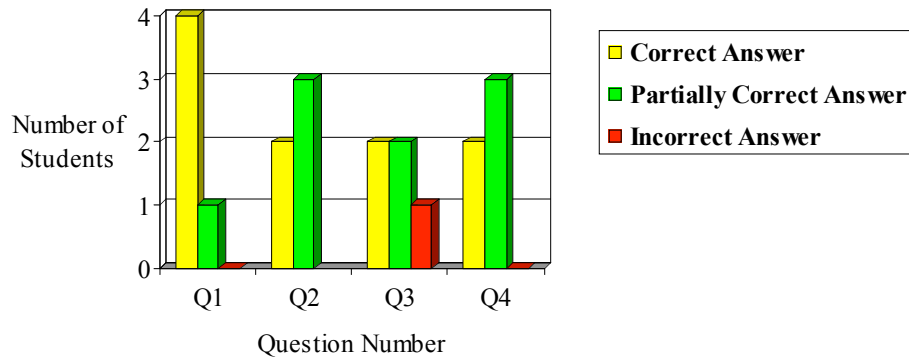


### *Comprehension Measurement, Part Two*

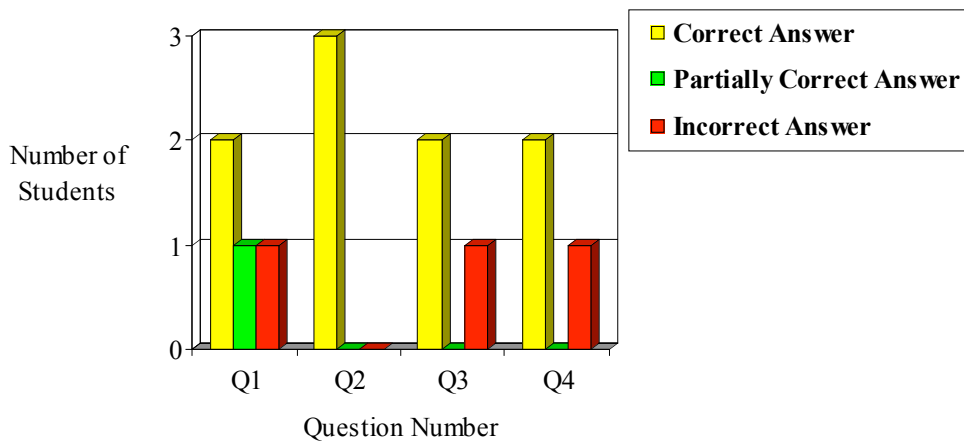
After the implementation of all of the mini-lessons, using the same questions, I reassessed my students' comprehension. The results show that comprehension remained the same; implementing the strategies resulted in no improvement. However, when students were asked about the use of the three strategies; creating mental images [using sensory imagery], using background knowledge, and asking questions, their responses proved that the mini-lessons were

still beneficial. I came to this conclusion using the results of the comprehension full text assessment, in which I looked at individuals and compared their results from the previous comprehension assessment. Though as a whole it appeared that the students remained the same, individually, some students had gained.

### Girls Comprehension Full Text



### Boys Comprehension Full Text



### *Use of Strategies*

After the mini-lessons and the assessments, I asked my students three additional questions pertaining to the comprehension strategies from the mini-lessons.

- Creating mental images [using sensory imagery]: *When do you use creating mental images?*

All students began using this strategy during all types of reading.

- Using background knowledge: *When do you use background knowledge?* About 50% of the students use this strategy during full text readings and 10% use it during fluency readings.
- Asking questions: *When do you ask questions?* Ninety percent of the students used this strategy during the full text reading. Only 5% used it during a fluency reading.

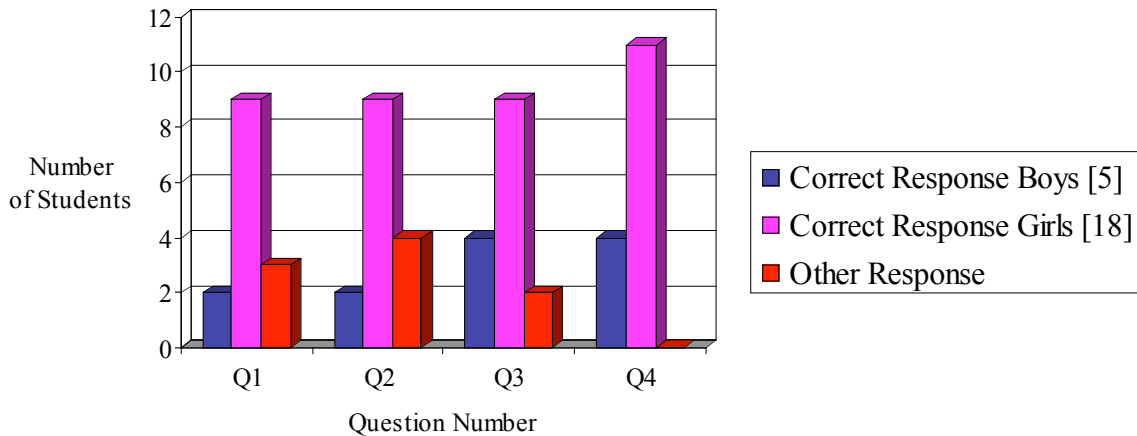
### ***Sub Questions***

- Are the reading strategies being incorporated during fluency monitoring?
  - From the strategy data it seemed appeared that during fluency reading one of the three strategies is being incorporated.
- Are the reading strategies being incorporated during full text reading?
  - Yes, from the strategy data I found when the students have more time to read and they assume that questions are going to be asked, they focus on implementing the strategies.
- Are the reading strategies being incorporated during ‘pleasure’ reading?
  - From the strategy data, it appeared that my students somewhat used the imagery and prior knowledge strategies more during the pleasure read. Very few students asked questions of the text.

### ***Post Survey***

After the fluency and comprehension assessments and the mini-lessons, the students were asked the same questions as in the pre-survey to determine if they could respond correctly. The results show that students were better equipped to identify what they do in reading, which strategies they use and why they use a strategy. Two boys and nine girls responded correctly to question one, while just three students gave unrelated responses. Thirteen students responded correctly to question two and just four gave unrelated answers. This pattern continued in questions three and four.

## Post Survey Results



### Analysis and Reflection

After several months of preparation, the pre-survey helped me realize that my students were not aware of the types of things they did as readers. Their view of reading and was simple, and they did not believe it required specific strategies, it was just something they tried to master. It was also quite difficult to achieve consistency in assessing my student's skill levels and masteries because of some internal challenges. Therefore, I focused on the mini-lessons, and then conducted the appropriate assessments for this research. I also modified my plan of implementation when I realized the students did not need segments of information, but connections and practice instead; hence the mini-lessons. I decided to not assess during the mini-lessons so they did not have to feel as if they needed to 'perform' a task instead of acquire information. This worked better and the students began to show growth in their non-assessed tasks. The strategies were introduced, demonstrated, and practiced as intended. The students began to feel empowered, "I'm ready for third grade," stated one student. "Can we time ourselves and practice our fluency?" two students asked during the course of 'training'.

Overall, through my observations I found that in my students' daily routines of reading in each subject area, they utilized comprehension skills. When they realized information was not being collected, they performed extremely well [it was evident in their writing]. I believe the skills had an important role for some in their ability to perform at or above grade level reading.

## **Policy Recommendations**

### *Local Recommendations:*

- Return to best practices for fluency and comprehension instruction; do not simply focus on ‘just passing the test.’ Test-taking strategies can be given throughout the year, the goal is equip students to become life long learners.
- Use the Basal readers as a supplement, not the main material of teaching reading. Allow students to work with literature in its original context. The Basal reader is a good resource and the workbooks are great for at home use.
- Teachers should teach reading and comprehension strategies, as opposed to teaching components of a reader set for a larger group of children. When teachers are able to continue an introductory stage of a concept students are more apt to return to it.

### *At the district level:*

- Allow all schools the freedom to implement best practices instead of using the Basal reader as the core reading program. Let the reader become supplemental material. Allow students to handle actual literary works to improve their reading comprehension and increase their fluency rate.

## **Next Steps**

- Encourage principals and literacy departments of school districts to allow teacher-led best practice instruction.
- Conduct presentations, interview ‘successful’ school districts, and devise a comparison chart to support the action research conducted.

# Survey Questions

1. What is reading?
2. How do you read?
3. What helps you to understand as you read?
4. What kind of reader do you think you are?

# Comprehension Question

1. Who are the characters?
2. What is the conflict in the story with the characters?
3. How was the conflict handled/resolved?
4. What is the main point of the story?

# Strategy Questions

1. When do you create mental images?
2. When do you use background knowledge?
3. When do you ask questions?

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