Running Head: USING TECHNOLOGY FOR INSTRUCTIONAL EFFECTIVENESS

Using Technology To Compare The Instructional Effectiveness of Read Aloud and Read Along Methods In An Elementary Classroom

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July 2005

Introduction

Our research group consists of four educators who teach at Wylie Elementary School in Dexter, Michigan. Narda Black is in her third year of teaching fourth grade. Prior to becoming a teacher, she had a career in journalism. Ann Brill is in her twenty-fourth year of education, having worked with children from second to fifth grade. Deb Eber is in her third year of teaching third grade. She graduated from college with a teaching degree in 1981 and made the decision to raise a family before re-entering the teaching profession. Lisa Suomala is a third grade educator in her sixth year of teaching. Prior to becoming a teacher she had a career in retail sales.

We teach in a consolidated school district. Dexter is a bedroom community of Ann Arbor, Michigan. The demographics of our student population are primarily upper-middle class with a low percentage of students needing a subsidized lunch program. Our building consists of 22 self-contained third and fourth grade classrooms.

Because of our interests in using the most effective resources for instruction, our research group decided to focus our study on how technology might influence academic learning.

Problem Statement

The problem we propose to study can be expressed as a question: “What effect does using an LCD projector in the classroom have on the retelling of a narrative text?”

Third and fourth students at Wylie Elementary School need to consistently learn and successfully comprehend written and spoken text in the classroom.

Our study group is concerned that not all students can benefit from reading instruction as a large-group listening activity with literature being held by and read only by the teacher. The instruction is solely based on listening skills. There are no visual prompts or cues for the students.

The problem we face as educators in our school district is the limited amount of resources for reading instruction. Several grade-level standards and expectations require the teachers in our building to use one read-aloud textbook with a class of up to twenty-eight students. We intend to use an LCD projector to transform a read aloud text into an animated whole class read along.

We believe that by using an LCD projector for whole group instruction, we will capture our students’ interest and engage them in the learning process. Our goal for our students is to improve reading comprehension by providing the experience of reading text and analyzing visual cues.

To determine whether an LCD projector will be an effective learning tool in the classroom we want to know the following:

1. Can students retell narrative text more accurately when the instructor uses an LCD projector to show text in a whole class read-along verses a whole-class read-aloud?

2. Will using an LCD projector that allows students to see illustrations and detect visual cues help in the retelling of narrative text?
3. Will using an LCD projector capture and retain the attention of students during a whole class read along?

Literature Review

Our collaborative action research team has identified a research question that states the following, “What effect does using an LCD projector in the classroom have on the retelling of a narrative text?” The unifying theme or idea we have discovered that will relate our sources to one another is that audio-visual technology integration will increase reading comprehension. Our review of literature will be organized from the general to the specific, from incorporating differentiated instructional methods of read aloud and read along to the use of technology to enhance audio-visual literacy. By using the retelling of a narrative as an assessment tool, we can determine whether there is a significant difference in comprehension between a teacher read aloud and a technologically enhanced read along.

In the first study we reviewed, Fountain (2003) compared three methods of reading instruction with a population of sixteen Kindergarten students: read aloud, read along, and picture walk. The purpose of the study was to determine which instructional strategy was most effective for reading comprehension. The methodology of the study included a teacher reading a text to the class six times using one of the three methods for a total of eighteen sessions. The students were asked five comprehension questions following each session. In Fountain’s (2003) study she defined each method. A picture walk was a method of only using illustrations to tell the story. The read aloud method involved the instructor reading one standard-size book with illustrations to the students while the students listened. The read along method involved the use of a big book where students were able to read the text along with the instructor and view the illustrations in a more intimate manner. Fountain also researched how each of the methods impacted

reading comprehension. In conclusion, Fountain (2003) states that, “Allowing the children to see the words as they were being read enabled them to interact with the story energetically” (p. 18). Out team found another way to have children interact and respond energetically with text through the use of audio-visual technology.

The next research study our team reviewed involved the use of technology and reading comprehension. Doty, Popplewell, and Byers (2001) looked at whether there was a difference in comprehension between having students read a CD-ROM storybook or a conventional printed text. The study involved 39 second-grade students from an urban school district in the Midwest. The study method consisted of students either reading a CD-ROM storybook on a computer or reading from a text. To measure comprehension, the researchers used two methods. They asked the students to give an oral retelling that was scored in accordance with a 10-point scale. They also had the students answer six comprehension questions. Three of the questions were literal, and the other three were inferential or critical. Doty et. al (2001) concluded “evidence from this study indicates that the use of CD-ROM storybooks can have a positive effect on reading comprehension for young readers” (p. 6).

To further develop our understanding of retelling as an assessment tool for comprehension, our team analyzed a research article written by Yetta Goodman entitled, “ Retelling of Literature and the Comprehension Process.” Goodman (1982) shared insights gained from the retelling of text into the reader’s comprehension process. She discussed the differences between comprehending, “the process of trying to make sense of a text, and comprehension, what the reader has understood the text to mean at any point in time” (p. 301). She went on to state that, “retellings after reading provide another

opportunity for the reader to continue to construct the text" (p. 301). The retelling strategy is an open-ended method that instructors can use to measure comprehension. It is an active process that asks students to create a product and make connections, not just answer someone else's questions. Goodman (1982) asserted that the text is easier to comprehend when it is predictable and relative to the reader's own life experiences. In conclusion, she stated, "by relating retelling to both comprehending and comprehension, my purpose has been to expose the complexity of understanding literature and the way humans process it" (p. 306).

The articles and research studies that we analyzed proved to be insightful, and they laid the foundation for our topic of study. In the thesis by Fountain (2003) the information was relevant to our study; two out of the three methods of instruction she used parallel the methods our research team plans to investigate. One disadvantage of the study was the fact that the subjects were Kindergarten age students as opposed to the third and fourth grade students we will be using in our research. Another drawback was the resulting data didn't show as much of a discrepancy between the methods of reading instruction as we would have anticipated.

The Doty et al. (2001) research intrigued us because of the direct connection between technology and reading comprehension. The assessment methods were also of interest to us, including a form of retelling and multiple-choice comprehension questions. The research population was second grade students. To be more aligned with our focus, we would have preferred an older test group. Another discrepancy, in our opinion, was the study was structured as a silent, independent reading activity; there was no listening component.

The retelling article written by Goodman (1982) was insightful in the connection between retelling and comprehension. Our research team liked the way the author discriminated between comprehending and comprehension. She focused on retelling as an active process. The author looked at hundreds of different retellings in her research. One of the drawbacks was that it was summative in nature. There were no research subjects or data collection. The date of the article was also a drawback. When the article was downloaded from the research database, it had a copyright date of 2001. Upon further research for reference information, we discovered the original article was written in 1982. However, our team chose to include it in our review because we felt it offered strong foundational principles of the retelling strategy.

As a result of our team's extensive research review, we modified, expanded, and even narrowed our focus of study. We discovered there were many studies that have been done in the area of general reading instruction, but very few studies dealt specifically with our topic. Our team obtained more articles and made further connections. As we delved into our area of expertise, the terms read aloud and read along Fountain (2003) became part of our research vocabulary. The comparison between a big book in the lower elementary grades and an LCD projector in the upper elementary level emerged out of a discussion we had after analyzing the research that related to our topic.

This comparison directed us to explore resources focusing on visual literacy. When we use the read along method of instruction, the illustrations become critical in the comprehension process. Based on the Goodman (1982) article, our collaborative action research team decided to choose two books of a common genre for the read along and read aloud components of our research. To facilitate a successful retelling, we felt the use

of fairy tales would add predictability and familiarity. Our research group felt it would be important for our study to choose fairy tales that feature colorful illustrations to promote visual literacy and aid comprehension. Galda and Short (1993) state:

> Since a picture book by definition, is a book in which both illustrations and printed text are essential to the story, children must be able to "read" pictures and text to understand the story in its fullest sense. Illustrations are not an extension of the text that simply reinforce the meanings of the words, but are necessary for comprehension. (p.506)

Using an LCD projector in our classrooms will enable our students to experience any text as a big book. The students will be able to read the text and critically analyze illustrations while the instructor models effective reading strategies for comprehension.

A balanced literacy program uses a variety of instructional strategies to teach reading comprehension. Tomlinson (2000 p.2) suggests, "to meet the needs of a diverse student population, many teachers differentiate instruction." One way to differentiate curriculum is by presenting ideas through both auditory and visual means (Tomlinson, 2000). Based on the knowledge we have gained through our literature review, we believe when educators differentiate instruction using an LCD projector as a read along method the literacy experience will be enriched for all our students.

Data Collection

Our data collection plan consisted of two retelling lessons in four classrooms for a total of 200 student retelling responses. The first session featured *The Shoemaker and the Elves* by Anne Rockwell. It was read as a traditional read-aloud story. In the second session, another story by Rockwell, *Lazy Jack,* was taught as a read-along with an LCD projector. The timeline involved administering the two lessons within a three-day window of time during the week of March 14, 2005. As our Data Collection Matrix (Appendix A) shows, we used a variety of valid and reliable sources of data collection throughout our collaborative action research study.

On the first day, each teacher read aloud *The Shoemaker and the Elves* (Rockwell, 1975). During the lesson, a trained observer completed the Attention Checklist (Appendix B) while monitoring the class. Following the activity, students completed a Retelling Response (Appendix C) and created an illustration. Each teacher completed the Observational Data (Appendix D) to record valuable feedback and insights into student reactions and behaviors that occurred during the retelling activity.

On the second day, each teacher read *Lazy Jack* (Rockwell, 1975) with the LCD projector while the students silently read-along. A trained observer again completed the Attention Checklist (Appendix B) while monitoring the class. Students completed a Retelling Response (Appendix C) and created an illustration. Each teacher completed the Observational Data (Appendix D) to record valuable feedback and insights into student reactions and behaviors that occurred during the retelling activity.

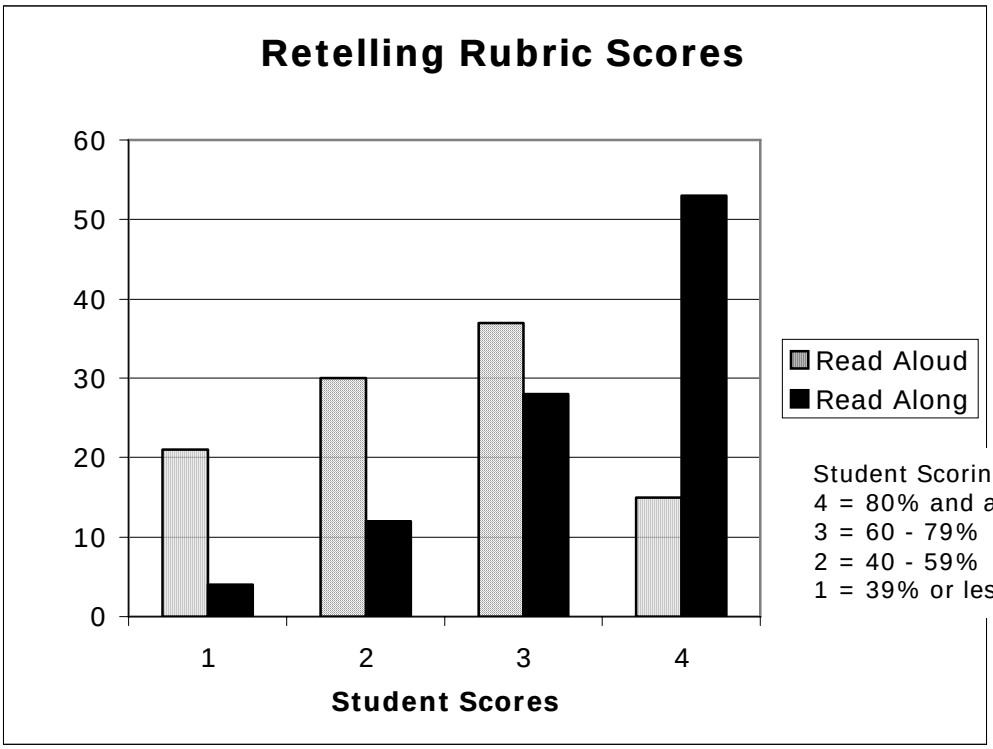
Finally, on the third day, teachers graded the Retelling Responses using the Retelling Rubric, (Appendix E). Students completed the Student Comparison and Feedback Form (Appendix F).

Report And Analysis of Data

The data that we collected during our collaborative action research study included an Attention Checklist, an Observational Data Sheet, a Retelling Response Sheet, a Retelling Rubric, and a Student Comparison and Feedback Survey.

During the instructional component of our research, the Attention Checklist was completed by a colleague. If assistance was unavailable for support, a video camera was used for later analysis. Immediately following the lessons, we used the Observational Data Sheet to record our thoughts and reflections on student behavior and lesson objectives. After the read aloud or read along experience, the students completed the Retelling Response Sheet. They were asked to retell the story in words and draw a picture of a scene from the text. After the students completed the retelling, we scored the student work using a four point score on the Retelling Rubric. To ensure reliable results and consistent scoring, we met and discussed criteria for meeting each level of performance. The next day students were asked to complete a Student Comparison and Feedback Survey to record their attitudes and perceptions about the method of instructional delivery. They were asked to complete a rating scale on several questions that probed their attitudes and compared the two reading experiences. They were also able to share open-ended responses that gave us valuable feedback about the experiences.

Figure A Retelling Rubric Scores



The results displayed in Figure A answer two of our research questions. First it proves that students can retell a narrative text more accurately when the instructor uses an LCD projector to show text in a whole class read along versus a whole class read aloud. In column four of the bar graph, the percentage of students receiving an 80% or higher was three times higher in the read along compared to the read aloud. On the other hand, in column one, there were very few students who received a score of one, or less than 39% correct during the read along portion of the research.

Second, it proves that using an LCD projector will allow students to see illustrations and detect visual cues to help in the retelling of a narrative text. Student responses from the Comparison and Feedback Survey (Appendix F.1 and F.2) indicate that the students used the pictures to help them retell the story. Pictures were enlarged using the LCD projector, therefore more students were successful during the retelling.

More than 70% of the comments gathered from the student surveys prove that the enhanced illustrations from the LCD projector helped the students retell the story.

Figure B Self-Evaluated Attention Scores

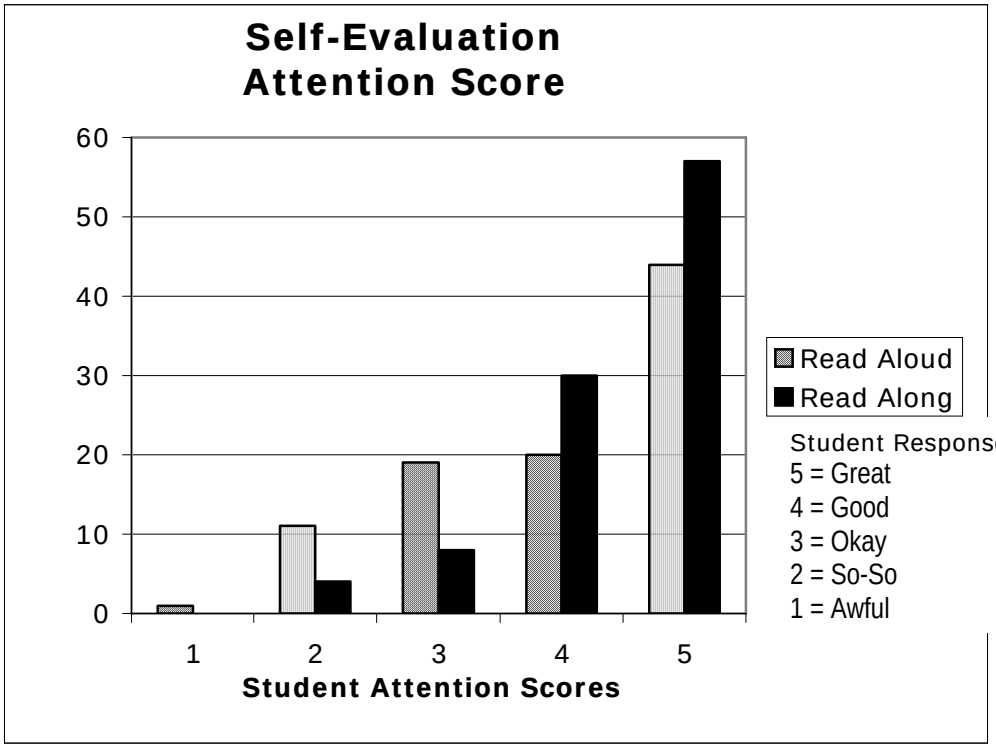


Figure B proves that using an LCD projector captures and retains the attention of students during a whole class read along. In the Student Comparison and Feedback Survey (Appendix F.1 and F.2) questions three and four, students were asked to self-evaluate how easy they thought it was to pay attention to the read along and the read aloud. When we compared the ratings, the results indicated the students found it significantly easier to pay attention to the read along using the LCD projector.

Figures C

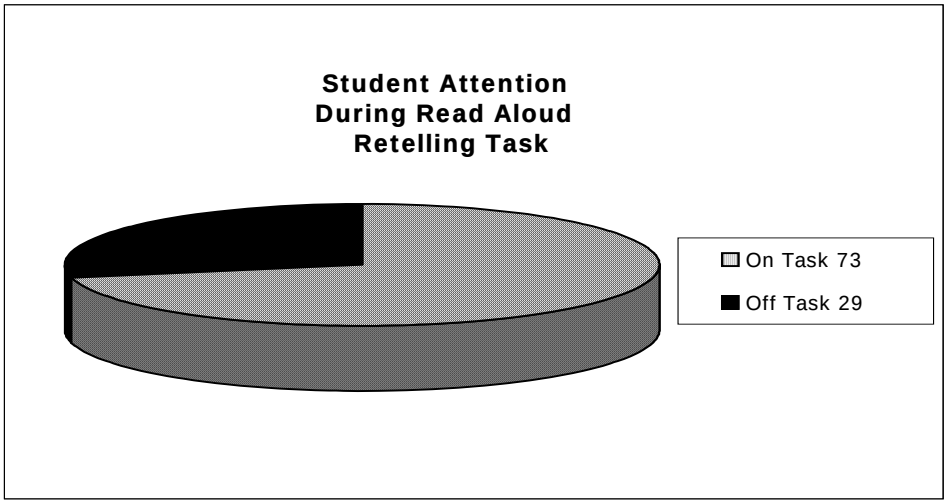
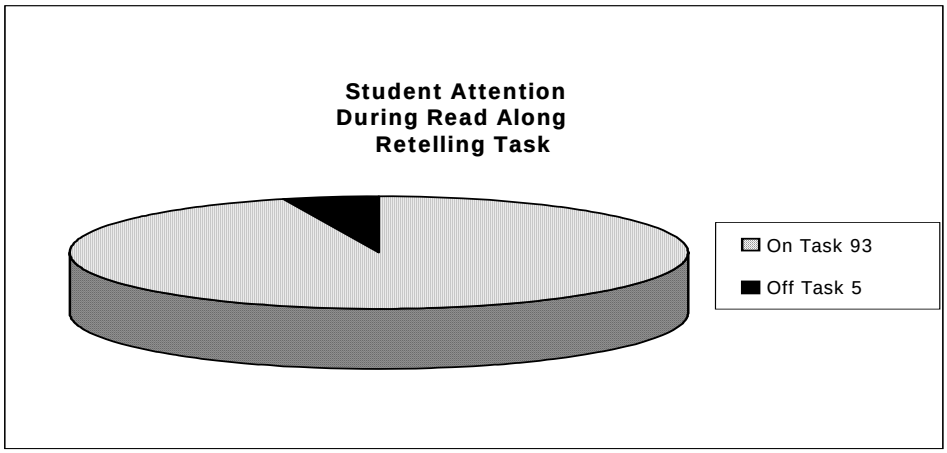
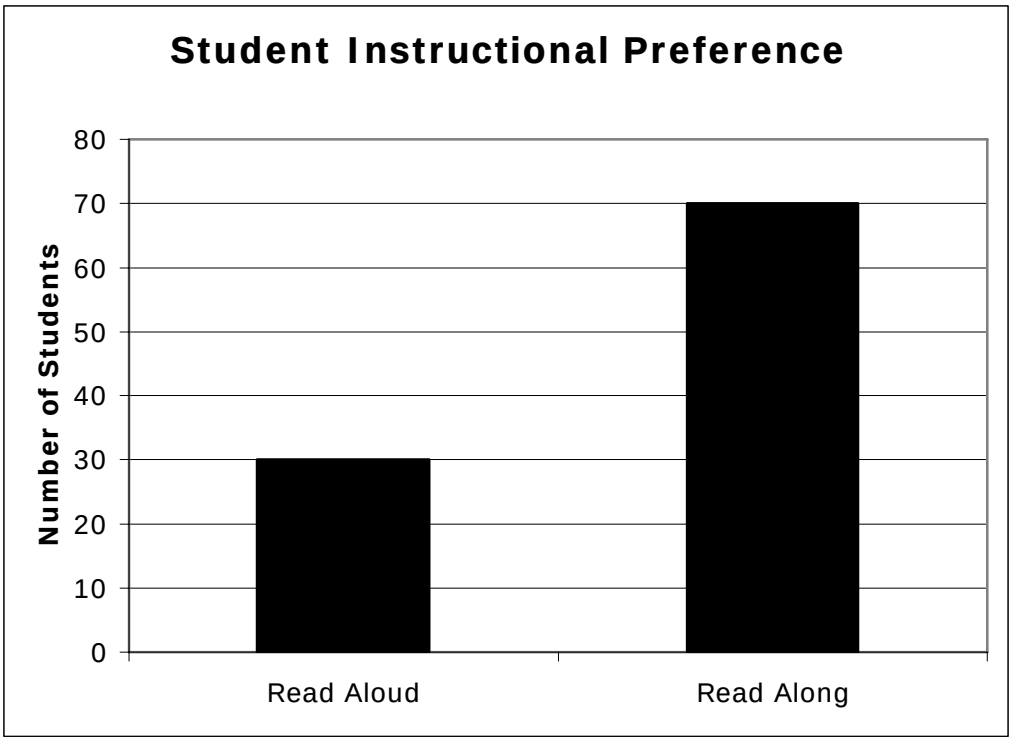


Figure D



The Figure C and D above reinforce idea that students pay more attention during a read along activity with an LCD projector. The data in The Attention Checklist (Appendix B) was collected by a trained colleague while the researcher was instructing the class. The colleagues were asked to observe and record students demonstrating off-task behavior. The dramatic results shown in Figure C and D prove that students were more engaged during the retelling activity following the read along lesson with an LCD projector.

Figure E



In the Figure E graph above the data shows the strong student preference for the use of the read along instructional method with an LCD projector. Students overwhelmingly preferred reading along with an LCD projector and seeing the enhanced illustrations and visual cues.

As a side note, an interesting grade-level preference emerged out of our data analysis. Almost 50% of the third grade students said they preferred the read aloud method to the read along, whereas 80% of the fourth grade students preferred the read along method to the read aloud. This made educational sense to us because younger children seem to prefer stories being read to them and fourth grade students would be able to read the text more fluently. Even when taking these preferences into consideration, students, regardless of grade level, still comprehended text better with an LCD projector.

Action Plan

The data we collected clearly shows that an LCD projector is an effective learning tool in the classroom. Based upon these findings, our research team plans to write a grant to a non-profit educational foundation for the funding of LCD projectors in the classroom. Our school currently has only two LCD projectors available for teachers to checkout for classroom use. There are almost 30 staff people who can check out the equipment. By writing a grant to fund the purchase of LCD projectors for use in our classrooms, we will be able to fully integrate the technology to its fullest potential.

Through the success of this study, our view of this technology has been expanded to the wide variety of possibilities in which an LCD projector can be effectively used in the classroom. The possibilities range from Internet animations of science processes to teacher developed Power Point presentations that correlate with curricular objectives. An LCD projector would allow students to view the image on a 72 x 68 inch screen. This screen is three times larger than existing chart paper and ten times larger than the average size picture book. Another strength of an LCD projector is the addition of color, sight, sound and inter-active computer capabilities. Teachers can enhance curriculum through visual learning. Every curricular objective can be enhanced, complimented and supported through the use of an LCD projector.

We also plan on sharing our findings with our colleagues. Throughout our research, we have been communicating the power of using an LCD projector and as a result, many teachers have now become motivated to learn and apply the technology themselves. Because of the electronic format of the materials used when teaching

curriculum with an LCD projector, it will be very easy to collaborate and share materials among educators.

In conclusion, our plan is to fully implement the use of an LCD projector in our classrooms during the next school year. When we integrate the technology on a daily basis, the students in our classrooms will be more motivated and engaged in their learning. We also plan to stimulate interest and enthusiasm among our colleagues as we discover new and exciting ways to teach.

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Appendices

Appendix A

Data Collection Matrix

Research Question	Data Source #1	Data Source #2	Data Source #3
1. Can students retell narrative text more accurately when the instructor uses an LCD projector to show text in a whole class read-along verses a whole-class read-aloud?	Retelling Response & Rubric	Student Survey	Observational Data
2. Will using an LCD projector that allows students to see illustrations and detect visual cues help in the retelling of narrative text?	Retelling Response & Rubric	Student Survey	Observational Data
3. Will using an LCD projector capture and retain the attention of students during a whole class read along?	Attention Checklist	Student Survey	Observational Data

Appendix B

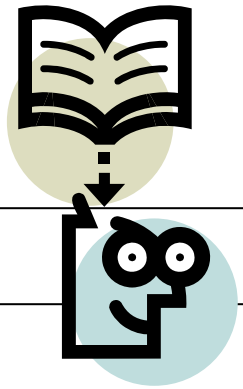
Attention Checklist

Directions: Mark off students who are off-task during the labeled activity.

Names	Paying attention in pre-reading activity	Paying attention at the **beginning** of story	Paying attention during the **middle** of the story	Paying attention at the **conclusion** of the story	Attentive during retelling assignment instructions	On-task during retelling of narrative text
Student 1						
Student 2						
Student 3						
Student 4						
Student 5						
Student 6						
Student 7						
Student 8						
Student 9						
Student 10						
Student 11						
Student 12						
Student 13						
Student 14						
Student 15						
Student 16						
Student 17						
Student 18						
Student 19						
Student 20						
Student 21						
Student 22						
Student 23						
Student 24						
Student 25						
Student 26						
Student 27						
Student 28						
Student 29						

Appendix C

Retelling Response



Appendix D

Observational Data

Date: _____ Time: _____ Location: _____

Appendix E

Retelling Rubric

Name: _____ # _____ Date:_____

Name of Book: _____ Author: _____

Picture Rubric

	None	Partial	Good	Great
Picture includes characters from story	1	2	3	4
Picture is an accurate scene in story	1	2	3	4
Picture includes appropriate details	1	2	3	4

Written Rubric

Setting information is included	1	2	3	4
The main character is described	1	2	3	4
The problem is described	1	2	3	4
The student has included episodes	1	2	3	4
The solution is described	1	2	3	4

Total Score /32

4 = 80% or above

3 = 60 – 79%

2 = 59 – 40%

1 = 39% or less

Appendix F.1

Student Comparison and Feedback Survey

	Awful		Okay		Great
Question #1 Did you enjoy the read along of *Lazy Jack*?	1	2	3	4	5
Question #2 Did you enjoy the read-aloud of *The Shoemaker & The Elves*?	1	2	3	4	5
Question #3 Was it easy to pay attention to *Lazy Jack*?	1	2	3	4	5
Question #4 Was it easy to pay attention to *The Shoemaker & The Elves*?	1	2	3	4	5
Question #5 Was it easy to complete the retelling of *Lazy Jack*?	1	2	3	4	5
Question #6 Was it easy to complete the retelling of *The Shoemaker & The Elves*?	1	2	3	4	5

What did you like better, **hearing** the teacher read *The Shoemaker and the Elves* or **reading** *Lazy Jack* along with the teacher on an LCD projector?

Circle one: Hearing or Reading

Why? _____

_____

_____

_____

Appendix F.2

What did you like the MOST about when your teacher read *The Shoemaker and the Elves?*

_____

_____

_____

What did you like the LEAST about when your teacher read *The Shoemaker and the Elves?*

_____

_____

_____

What did you like the MOST about when your teacher used the projector for the read along of *Lazy Jack*?

_____

_____

_____

What did you like the LEAST about when your teacher used the projector for the read along of *Lazy Jack*?

_____

_____

_____