

## CHAPTER 1: INTRODUCTION

### Introduction

In this time of pushing the standards and implementing high stakes tests, even in the elementary years, it can be difficult to effectively assess our students' strengths and deficiencies. Standardized tests often are not reliable or valid indicators of what children can do in typical practice, nor are they sensitive to the varying experiences of young children (Johnston, 1997). The pressures for accountability of student progress and teacher instruction further the need for more authentic assessment tools, which provide a clearer picture of a child's abilities and deficiency areas to guide in developmentally appropriate instruction.

Performance-based assessment was common in many nineteenth century and early progressive schools, but became less important with the rise of standardized tests (Viechnicki, Barbour, Shaklee, Rohrer, and Ambrose, 1993). Standardized tests are more readily available to educators and are more familiar to the public, which tends to increase their use. However, as developmentally appropriate practices increase in primary reading classrooms, the need for more authentic assessment tools that match such practices arise.

Fountas and Pinnell (1997) stated, "The primary purpose of assessment is to gather data to inform teaching." (p.73) Portfolio assessment provides evaluation tools that appropriately assess students' learning, encourage lifelong skills, and provide teachers with insights and diagnostic information as well as enhancing teaching effectiveness (Benson and Smith, 1998). The purpose of this study was to investigate the effects of portfolio assessment on reading skills development of second grade students.

### Statement of the Problem

The purpose of this study was to investigate the effects of portfolio assessment on reading skills development of second grade students.

### Research Question

What were the effects of portfolio assessment on the reading skills development of second grade students?

### Sub-Questions

1. To what extent did portfolio assessment affect second grade students' reading comprehension skills?
2. To what extent did portfolio assessment affect second grade students' word recognition skills?
3. To what extent did portfolio assessment affect second grade students' reading fluency?

### Null Hypothesis

Portfolio assessment had no effect on reading skills development of second grade students.

### Research Hypothesis

Portfolio assessment did affect reading skills development of second grade students.

### Definition of Terms

Terms central to this study were defined as follows:

1. *Portfolio assessment* refers to student work samples as a means of assessing achievement and progress.

2. *Reading comprehension* refers to understanding what is read.
3. *Word recognition skills* refer to the child's ability to identify word sounds or parts to correctly read an entire word.
4. *Reading fluency* refers to the rate, inflection, and expression used by a reader reading aloud.

### Limitations

1. The length of the study, first semester of the 2002-2003 school year, may have been insufficient to show changes in reading development.
2. The sample was a convenience sample rather than a random sample; thus, the results of this study may not be generalized to other groups.
3. The portfolio assessment tool was created by the researcher and may not be a valid instrument to measure growth in reading skills.
4. Different teachers taught the treatment group and the control group and therefore different teachers may be an operating variable and not the variable of interest indicated in the study.
5. Different assessors assessed the treatment group and the control group and therefore different assessors may be an operating variable and not the variable of interest indicated in the study.

## CHAPTER 2: REVIEW OF RELATED LITERATURE

The purpose of this study was to investigate the use of portfolio assessment in developing reading skills. For the purpose of this study, research of effective reading instruction was examined first to synthesize common traits of most effective strategies and methodologies in elementary reading classrooms. Next, an evaluation of current assessment practices in classrooms was addressed in order to raise awareness of the most common assessment practices observed in today's classroom setting. Lastly, the use of alternative assessments in primary classrooms was explored, focusing on teachers' perceptions of their validity and reliability, and the effects of the alternative assessments on student achievement. This chapter concludes with a summary of the literature reviewed.

The following is a summary of the related professional literature and a synthesis of its pertinence to this research.

### Effective Reading Instruction

In the continual search for best reading instructional practices and programs for early readers, we “need to continuously refine the authentic literacy curriculum and seek out best practices” (Brown, 1998, p. 8). Research overwhelmingly indicates that a balanced approach to reading instruction is the most effective in developing confident and proficient readers (Brown, 1998; Guthrie, Schafer, Huang, 2001; Taylor, Pearson, Clark, & Walpole, 2000). These programs combine phonemic awareness, skills instruction, word attack coaching, small group instruction, independent reading, and reading comprehension through other language modes (e.g., listening, speaking, drama

and writing). Furthermore, effective reading instruction tends to be integrated throughout the curriculum areas (Guthrie, et al., 2001) and allows for support from special education teachers and reading specialty areas (Taylor, et al., 2001).

Authentic literacy experiences were most beneficial in meeting the needs of kindergarten learners (Brown, 1998). Multiple authentic reading activities, some of which included shared reading, letter reading, song reading/singing, classmates name reading, poetry, menu reading, graph reading and recipe reading were used in this study. Authentic writing activities such as letter writing, signing in, closure writing, text innovations and dramatic play writing were used to further diversify learning opportunities. Results of this study demonstrated that the students responded positively to the unique authentic literacy strategies but also concluded that further refinement needs to occur in the development of effective reading instruction.

The experience of drama-based reading instruction can improve students' reading skills more than traditional methods. Another "program used an integrated curricular approach to teaching reading; drama was the medium, reading comprehension the goal" (Rose, Parks, Androes and McMahon, 2000, p. 61). The students in the study group improved significantly more than did the control students on the Factual Comprehension subscale of the Iowa Test of Basic Skills (ITBS). Furthermore, study group students scored higher on performance assessments evaluating verbal and non-verbal (dramatic) expression than the control group. This research supported the use of an imagery-based learning for reading comprehension, emphasizing, "reading comprehension requires students to visualize what they read, divide the story into basic elements, and elaborate on the elements of the story" (Rose, et al., 2001, p. 61).

Further exploration of reliable literacy experiences was demonstrated in a study by Taylor et al. (2001) evaluating elements of effective schools and accomplished teachers in reading instruction. This research cited that the most effective reading programs included the elements of small group instruction, time spent in small group instruction, time spent in independent reading, high levels of on-task behavior and strong home communication (Taylor et al. 2000). The methods used by teachers to supplement the structure of the literacy experiences clearly enhance the positive outcome of student's experience. In the study, some teachers supplemented explicit phonics instruction with coaching strategies to apply to their everyday reading (Coaching referring to the "structuring of comments and probing of incorrect responses") (Taylor et al, 2000, p. 157). Teachers also used more high-level questions in discussions of text. The most effective teachers demonstrate a balanced range of approaches to assist students' learning. Finally, collaboration between the classroom teacher and special education teachers was crucial in providing the optimum learning opportunities for these early readers individually and in small groups. This suggests that the programs/methods must be distinctive or differentiated to meet the level of the student's learning needs. "Schools that are serious about fulfilling every student's potential must develop structures and relationships that nurture the strengths and energies of each student" (Weiderich, 2002, p. 746).

"Differentiated instruction promotes high level and powerful curriculum for all students but varies the level of teacher support, task complexity, pacing and avenues to learning based on students readiness, interests, and learning profiles" (Tomlinson, 1999, p 8). Werderich examined the use of dialogue journals as a means of differentiating

reading instruction for seventh grade students (Weiderich, 2002). This study demonstrated that there are categories of teachers' responses that emerged and may assist other teachers in guiding and challenging students' reading experiences. The four categories of differentiated instruction utilized by these teachers included student interests, personal discoveries, setting challenges and teaching strategies. (Weiderich, 2002).

Throughout the literature on effective reading instruction, the common theme continues to be "that children with an optimal mix of cognitive-processing skills and print knowledge will tend to have the greatest amount of success in reading" (Compton, 2000, p. 16). Schools and teachers that use an integrated curriculum, abundance of books and resources, and place a low emphasis on basal programs have demonstrated success in their high-impact reading programs. (Guthrie et al. 2001). This integration demonstrates increased achievement in other content areas such as science, math and writing. Classrooms with a "high level of balanced reading instruction" show higher reading achievement (Guthrie et al. 2001). In Guthrie's study there were three links to students' success identified. The amount of opportunity to read was clearly linked to the students engaging in more reading and thus their reading achievement increased (Guthrie et al. 2001).

With the research stating that a balanced approach to reading instruction is most effective for early readers, it is important for teachers to be able to properly assess the many activities and skills that encompass a balanced approach to reading.

### Current Assessment Practices

Most teachers use multiple factors in grading students such as academic performance, effort, behavior, participation and extra credit (McMillan, Myran & Workman, 2002). Teacher-created exams, publisher created tests (shelf tests) and recently developed alternative assessments form the base of current evaluation practices. A teacher's educational philosophy and experiential knowledge base vary greatly, yet are influential factors on how they grade. Teacher grading methods are unique from one teacher to another and are highly individualized based on a teacher's beliefs. As a group, teachers view grading as an extension of teaching that promotes student success academically and in academic enabling behaviors (i.e. responsibility, effort, improvement, participation and cooperation) (McMillan et al. 2002).

The influence of teachers' experience, grade level and subject area in teacher assessment practices was the focus of the Bol, Stephenson, O'Connel and Nunnery (1998) study. Using a likert-type rating scale survey in four major sections, the researchers evaluated the frequency with which a teacher used various types of assessments, how well prepared they were to develop and administer these assessments, and how accurately the assessment reflected student achievement/progress. The teachers were also asked to provide demographic information about their teaching experience, grade level and content area taught.

Teachers reported using observational assessment methods and performance tasks more frequently and felt well prepared to develop these assessments. They tended to use both methods of assessment in classrooms, rather than using traditional or alternative methods as their dominant means of student assessment. They also reported feeling

confident that the methods were accurate measurement of standard achievement and progress (Bol et al.1998).

In the sample size of 893 participants, the teachers had little confidence that close-ended, traditional assessments were valid measures of achievement especially when used for accountability purposes. The teachers with most experience (20 plus years) reported using alternative assessments more and felt more prepared to do so. Elementary teachers reported using alternative methods of assessment more frequently than high school teachers and have more confidence in the validity of alternative assessment for measuring achievement than middle school teachers. (Bol et al, 1998).

Alternative assessment reform is favored as a strategy to promote higher standards of teaching (Murphy & Broadfoot, 1995). Hargreaves, Earl & Schmit, has studied four perspectives of alternative assessment reform. “Each perspective exposes different issues and problems in the phenomenon of classroom assessment” (Hargreaves et al. 2002, p. 69). The perspectives examined were technological, cultural, political, and postmodern perspectives. This study used a semi-structured interview protocol to ask teachers about their personal understanding of alternative forms of assessment and other initiatives along with 10 days of observation in each teacher’s classroom.

Results related to the technological perspective demonstrated the difficulties of devising and refining valid forms of measurement, the need to harmonize assessment expectations between home and school and across school levels, the issue of time and resources that help or hinder the introduction of new assessment practices into the routines of the school. The cultural perspective revealed an inter-play among points of

view, values and beliefs. It indicated the need to establish communication and building of understanding among all those involved in the assessment exercise.

The political perspective exposes the reality that assessment involves the exercise and negotiation of power, authority and competing interests among groups. This includes power struggles among ideologies and interest groups in schools. The post-modern perspective involves students' voices in the process of assessment and how products of assessment might be compiled and used.

“Drawing thoughtfully and critically from all four perspectives, we should and can exercise greater vigilance in pursuit of educational values that will move alternative assessment reform in rigorous, equitable and sustainable directions” (Hargreaves et al. 2002, p. 93). This research demonstrates that alternative assessments are highly visible, needed and valued in classrooms, yet lack of appropriate time to devise quality assessments and resources make them more difficult to utilize and generalize to the public. More importantly, however, is how alternative assessments lend themselves to student involvement in the assessment process, thus influencing their future growth in learning.

#### Use of Alternative Assessment in Primary Grades

Standardized testing has been the norm in early reading assessment. Some tests have been used for “virtually sixty years. These tests reflect a behavioral approach that assumes that literacy can only be taught through the direct instruction of isolated skills mastered one level at a time” (Hodges, 1997, p. 157). These tests have not been in step with the other advances in reading research, theory and practice, but many teachers, administrators, and community members continue to believe the results of standardized

tests are more trustworthy than other alternative assessments (Hodges, 1997). In assessing literacy, the standardized tests miss or ignore other parts of literacy such as speaking, listening and writing.

In a three-year investigational study of the validity and usefulness of kindergarten through second grade teacher judgments of students' literacy competency based on alternative assessment techniques Hodges (1997) found teachers' assessments results correlated as well as standardized tests results repeatedly, thus, indicating judgments made by the teachers were valid or trustworthy. However, this study pointed out that when a publishing company develops a standardized test, the teachers assume and conclude that the achievement test is a valid measure. When in actuality, "because they that know there are no perfect measures of reading/writing achievement, they use well-known achievement tests that are only presumed to be valid" (Hodges, 1997, p. 164). These tests are then correlated with other achievement tests for scores. If the tests correlate significantly, then the new test is a valid measure.

In the same study, the teachers who were interviewed thought that the data that they collected through alternative assessment techniques was much more useful for their "daily instructional decision-making, for parent teacher conferences and for making recommendations to the next year's teacher than were the results of the standardized test" (Hodges, 1997, p. 169). Furthermore, teachers and principals interviewed reported they unanimously used the teachers' assessments for placement issues and school wide instructional or curricular decisions rather than standardized test results.

Standardized testing tends to create an environment in which teachers develop practices that "encourage more grade retention and use of drill, practice and workbooks"

(Manset-Williamson, St. John, Hu & Gordon, 2002) in an effort to achieve better test scores. This study, which focused on at risk reading programs, found that explicit skills instruction, basal readers and workbooks, and direct phonics instruction had a positive effect on scores in standardized tests. This implies these “activities and curriculum may be closely aligned with the paper-and-pencil test format” (Manset-Williamson et al. 2002, p. 25). The study noted that while these practices benefit at risk students, they also eliminate the use of other valid literacy outcomes such as print awareness, writing process and reading comprehension.

“The challenges of assessment of young children’s growth, development and learning can be overcome by integrating documentation of standards into the planning of classroom experiences.... Documentation of children’s actual performance is an alternative to traditional methods of assessment” (Gronlund and Helm, 2000). The documentation of a child’s learning can take the form of individual portfolios, individual or group products, teacher observations, child self-reflections and narratives of learning experiences. This documentation does not just recognize that the student has attained a standard but also demonstrates their progress toward that objective. “Teachers can teach in ways young children learn best, can provide critical experiences for intellectual growth, and can assess that growth at the same time” (Gronlund et al.).

A longitudinal study of four teachers’ use of classroom portfolios over a three-year period indicates that the attributes of the portfolio, the student involvement in the portfolio process and the contribution of the portfolio to instructional decision making changed over time (Roe and Vukelich, 1997). The attributes of the portfolio became more streamlined and condensed. The teachers benefited because they had a ‘portfolio

culture'; they were allowed to take risks without competing with other district assessments. Student involvement became central over time moving from teachers' selections to students' selections. The students were able to gear some of their learning such as choosing a topic, deciding how to gather their information, to work alone or in a group, and how to present their a final product. They were given ongoing access to the portfolio to watch their growth. Lastly, the portfolio became a tool used by the teachers to better understand the reading and writing processes of children and thus, summarize children's abilities as well as characterize ongoing needs from collected work samples. "A synergy developed between the doing of the portfolio and the students' reading and writing programs" (Roe et al., 1997, p. 24 ).

The "expansion of student centered, integrative early childhood classroom demand evaluation tools that appropriately assess students' learning, encourage lifelong skills, and provide teachers with insights and diagnostic information" (Benson & Smith, 1998, p. 173). In their study, Benson & Smith (1998), found that the teachers see the portfolio as a useful tool to document students' progress, to communicate with families, a means to motivate, encourage and instruct students in the skill of self-assessment as well as a method "to monitor and improve their own instruction in the classroom" (p. 180). Communicating in this manner with parents seemed to increase the parents' awareness level of children's literacy as well as their related skill strengths and weaknesses.

The interviews of the first-grade teachers involved in the Benson et al. study (1998) further demonstrated that the teachers found the portfolios to assist them in their own decision making by demonstrating a "greater awareness of gaps in skills, more emphasis on reading/writing processes and by the collaboration with students one-on-

one” (p.178). Through the process of portfolio development the students learn the skill of self-assessment by the use of videotapes of students sharing portfolios and by self-selecting pieces to show their accomplishments and growth (Benson et al, 1998).

The above studies demonstrate that the alternative assessment method of portfolios improve teachers’ understanding of children’s reading and writing processes, their ability to articulate this understanding to the families and consequently, influences the quality of the literacy instruction for students. With sufficient time and support, portfolios can become informed collections of standard work and positively influence the classroom literacy environment (Roe et al., 1998).

## CHAPTER 3: PROCEDURES

### Design

The purpose of this study was to investigate the effects of portfolio assessment on reading skills development of second grade students. This study was action research of a quasi-experimental nature. Both qualitative and quantitative data were collected using a convenience sample of second grade students. The treatment was portfolio assessment of developing reading skills. Portfolio assessment included student work samples in reading comprehension, fluency, decoding skills and grade level specific reading standards for the school district. A separate second grade classroom was used as a control group that did not use portfolio assessment in reading. The curriculum materials included: Sunshine Assessments by The Wright Group, Rigby PM Benchmarks, and researcher-designed portfolio assessments.

The study took place during the first semester of the 2002-2003 school year. The treatment and control groups were given reading assessments at the beginning of the semester to determine reading levels and word recognition skills. For later analysis, the researcher stored the assessments for the control group. The same assessments by the treatment group were used as a tool to determine which reading skills were mastered and how to gear instruction.

Throughout the semester, the treatment group provided work samples to demonstrate mastery of specific reading comprehension, fluency, and decoding skills the researcher had identified. Work samples included reproducible activity pages, book projects, and writing samples. As samples were collected, the researcher examined each portfolio for areas that were fulfilled and areas that still needed to be addressed.

The final week of the study was used to collect assessment data. The treatment and control group were again given the same reading assessments to determine reading levels and word recognition skills.

### Sample

The subjects of this study were a convenience sample comprised of female and male second grade students at Northside Elementary School. Northside Elementary School is located in south-central Wisconsin, in the town of Middleton. Northside School is part of the Middleton-Cross Plains School District. The entire district encompasses 68 square miles and serves approximately 5,200 students. Northside's 2002-2003 enrollment was 411 students. Ninety-two percent of its enrollment is Caucasian, .9% is Hispanic, 3.1% is African American, and 3.6% is Asian/Pacific Island. Nine percent of Northside students receive free or reduced lunch. The major businesses and industries in the area include the University of Wisconsin-Madison, Hospitals and clinics, Lands End, Plastic Ingenuity, and Roto Zip. Many Middleton residents commute to Madison for work.

### Instruments

The instruments used in this study were a combination of shelf tests and researcher designed assessments. Instruments used for pretreatment data were the same as those used for post treatment data collection.

Reading level, comprehension skills, decoding, and fluency were tested using Rigby PM Benchmarks (Appendix A). This test calculates a child's reading level by dividing errors in reading by the total number of words in a story and provides scores on reading

comprehension. Reading fluency was also noted in the anecdotal section of the test. This test was used at the beginning and end of the study.

Word recognition skills were tested using the High Frequency Word Lists test by Sunshine/The Wright Group (Appendix B). This test calculates sight word mastery and approximate developmental reading stage. This test was used at the beginning and end of the study.

The researcher designed a reading portfolio assessment checklist to measure student growth in reading skills (Appendix C). Reading skills were listed and checked off when appropriate student work samples had been collected which proved mastery of the identified reading skills. This assessment was used only with the treatment group throughout the study period.

### Data Analysis

To test the null hypothesis for significant differences between the means and to determine if the treatment of portfolio assessment makes a difference in developing reading skills, a t-test assuming equal variances at the .05 level of significance was calculated to compare the reading assessment scores of the treatment group to the control group from the beginning to the end of the study period.

Qualitative analyses were also conducted to measure the growth of developing reading skills within the treatment group using portfolio assessment. The researcher compared the students' portfolio work samples from the beginning to the end of the study period, looking for growth in researcher identified reading skills. A t-test assuming equal variances at the .05 level of significance was calculated to compare treatment group

assessment scores from the beginning to the end of the study period. The researcher also examined patterns in reading skills achievement within the treatment group and for identified skills that have not yet been attained. The use of bar graphs and charts were used to illustrate findings.

### Calendar

The researcher will follow this timetable in conducting the research:

- |                          |  |
|--------------------------|--|
| Mid September 2002:      | Administer reading assessments.                |
| Late September-December: | Use portfolio assessment with treatment group. |
| Mid December:            | Administer reading assessments.                |
| January-February:        | Analyze data. Write chapters 4 and 5.          |
| March 1:                 | Deadline for draft one of chapters 4 and 5.    |
| April 30:                | Final draft of research paper due.             |

### Budget

There was minimal cost involved with this study.

## CHAPTER 4: RESULTS

### Introduction

The purpose of this study was to investigate the effects of portfolio assessment on reading skills development of second grade students. The design of this study was action research of a quasi-experimental nature, for which both quantitative and qualitative data were gathered. The research questions under study were as follows: 1) To what extent did portfolio assessment affect second grade students' reading comprehension skills? 2) To what extent did portfolio assessment affect second grade students' word-recognition skills? 3) To what extent did portfolio assessment affect second grade students' reading fluency?

Quantitative data were gathered during the third and twelfth week of the study period using shelf tests to determine reading level, comprehension, and fluency. During the eleven weeks of the study, the treatment group participated by providing work samples for reading portfolios in order to demonstrate mastery in specific reading comprehension, fluency, and decoding skills the researcher had identified. Work samples included reading running records, reproducible activity pages, book projects, and writing samples. The treatment and control groups were given reading assessments at the beginning and end of the semester to determine reading and word recognition abilities.

### Reading Comprehension Skills

The first sub-question addressed by the researcher examined the effect of portfolio assessment on second grade students' reading comprehension skills. This was measured by a pre and post-reading level assessment. The assessment tool used was Reading Running Records (Appendix A). The information on a Reading Record

identifies the cues and strategies that a student uses while processing the printed word. Reading levels can be identified when accuracy and self-correction rates are calculated. When a student successfully searches for extra information to correct an incorrect response, this is recorded as a self-correction.

The administration of this tool required that the teacher work with the student one-on-one, listen to the child read, record words read correctly, record errors as well as the student's self-corrections. The teacher then calculated the accuracy rate by dividing the total number of words read by the number of errors. If the student reached a percentage greater than 95, this indicated that an appropriate reading level was attained.

Each group had a different teacher who assessed the reading levels for both the pre and post evaluation. A reading specialist assessed the control group's reading levels pre and post, while the researcher provided the assessments for the treatment group.

The researcher began by evaluating the mean and standard deviation reading level of the control and treatment groups. The reading level mean and standard deviations for both groups in this research study were as follows. See Table I for these data.

**Table I**

**Mean and Standard Deviation Pre and Post Treatment Comparison of Control and Treatment Groups**

	Pre-Treatment Mean	Pre-Treatment Standard Deviation	Post-Treatment Mean	Post-Treatment Standard Deviation
Control Group	18.3	3.2	24.1	2.9
Treatment Group	20.4	3.5	24	3.6

The control group pre-treatment reading level mean was 18.3 whereas the treatment group level was 20.4 which is within the normal reading level range of beginning second graders. The pre-treatment score of the two groups was .3 standard deviations. However, post treatment, the standard deviation of 2.9 for the control group and 3.6 for the treatment group resulted in a .7 variation.

The control group post-treatment reading level mean rose to 24.1, an increase of 5.8 levels. The treatment group, however, had a post treatment mean of 24, which was a 4.6 increase in the students' reading levels.

To determine the extent to which reading portfolios affected the treatment group, a t-test for independent samples was conducted. The t-value for the two groups was -1.75 pre-treatment and .11 post treatment indicating that the changes in the students' reading levels cannot be completely credited to the reading portfolio intervention. Furthermore, the results of the t-test showed no statistically significant differences between the two groups post-treatment at the  $p < .05$  level. Thus, the t-test does not allow for rejection of the null hypothesis. See Table II for these data.

**Table II**

**Independent Samples t-tests Comparing Control and Treatment Groups on**

**Reading Level**

	<i>Pre-Treatment</i>		<i>Post-Treatment</i>	
	<i>t</i>	<i>df</i>	<i>t</i>	<i>df</i>
Both groups	-1.75	30	.11	30

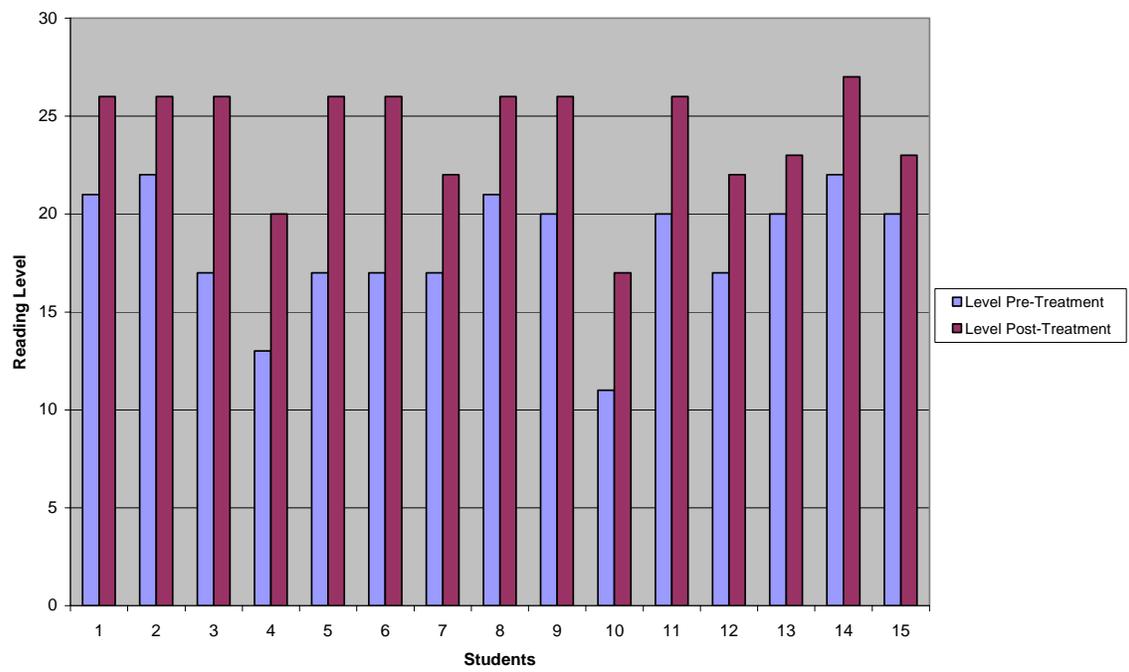
*Note.* For control group,  $N=15$ . For treatment group,  $N=17$ . Critical *t-value*=2.042.

Figures I and II summarize the reading levels of the students in both the control and treatment groups at the beginning and end of the treatment period. Both groups demonstrated positive growth in their reading levels.

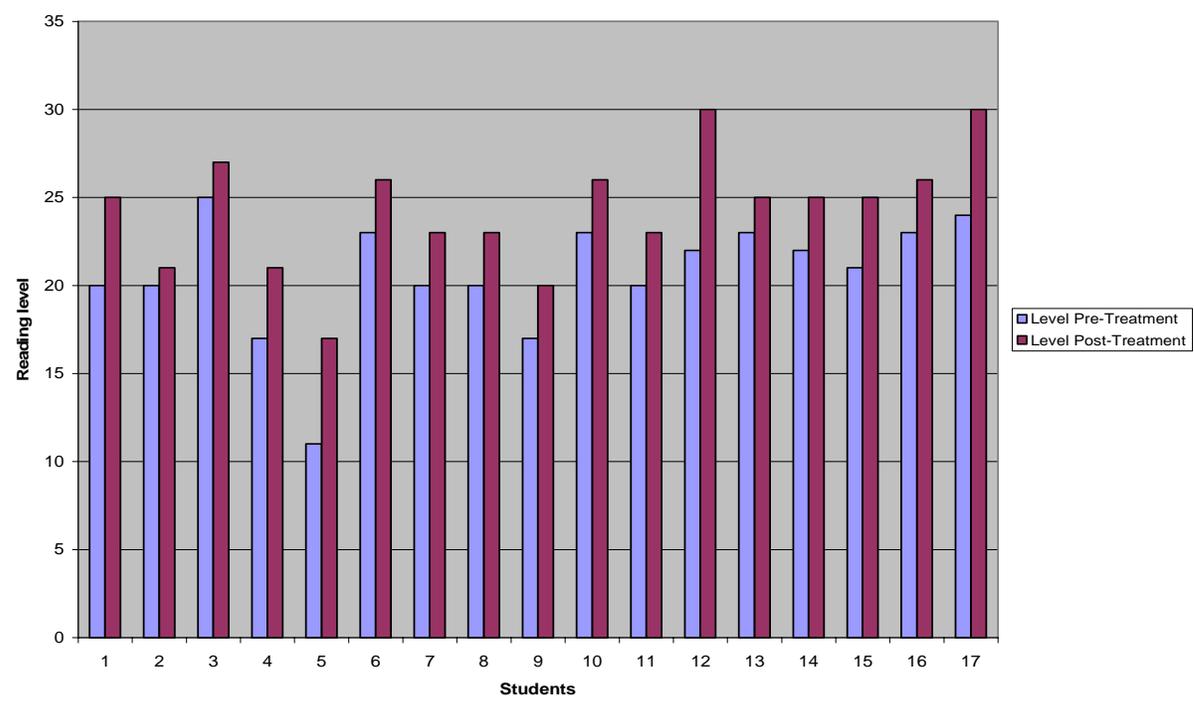
The control group had more significant increases in reading levels from the beginning to the end of the study period. The control group's mean reading level at the start of the study was 2 reading-levels less than the treatment group's starting point. In addition, the frequencies of similar pre and post treatment reading level scores were greater in the control group than in the treatment group. The control group was assessed at a more consistent reading level at the beginning of the study period. Both groups ended at similar reading levels post treatment (See Figures I and II.).

Reading level 25 indicates that the students are at late third, early fourth grade reading level. Nine students in the control group of 15 exceeded reading level 25, whereas 6 students out of 17 in the treatment group exceeded this level. This finding when, converted to a percentage, indicates that 60 percent of the control group reached level 25 and 36 percent of the control group did the same. Beginning second grade reading level is 17. The number of students in the control group who started at level 17 pretreatment was 13, whereas 16 of the 17 treatment group students started at level 17.

**Figure I-Control Group Pre/Post Reading Levels**



**Figure II-Treatment Group Pre/Post Reading Levels**

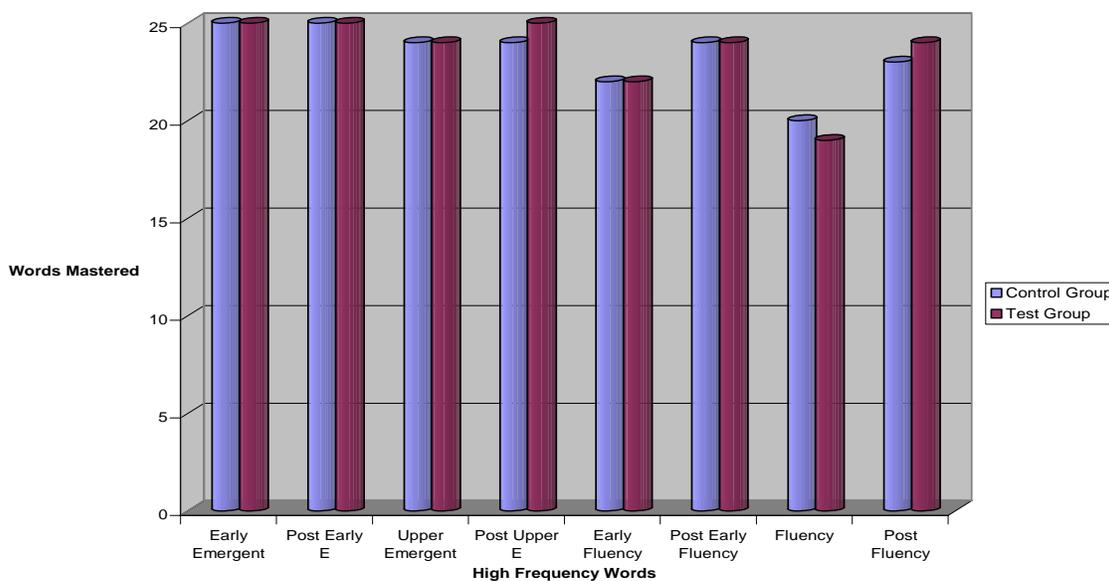


### Word-Recognition Skills

This sub-question was evaluated by the use of a Word-Recognition Assessment tool (Appendix B), which determines the number of high frequency words that students know. These words are given out of context and in isolation because they should be instantly recognizable to the students.

When compared to the control group, the treatment group students excelled in their learning in ‘Upper Emergent’ and ‘Fluency’ word recognition. The ‘Early Emergent’ and ‘Pre and Post’ word groups for both research groups received the same score. The control group ‘Fluency’ score increased by 3 words post treatment whereas the treatment group gained 6 words post treatment. Both groups made similar progress in all the other categories (see Figure III).

**Figure III-Word Recognition Assessment**

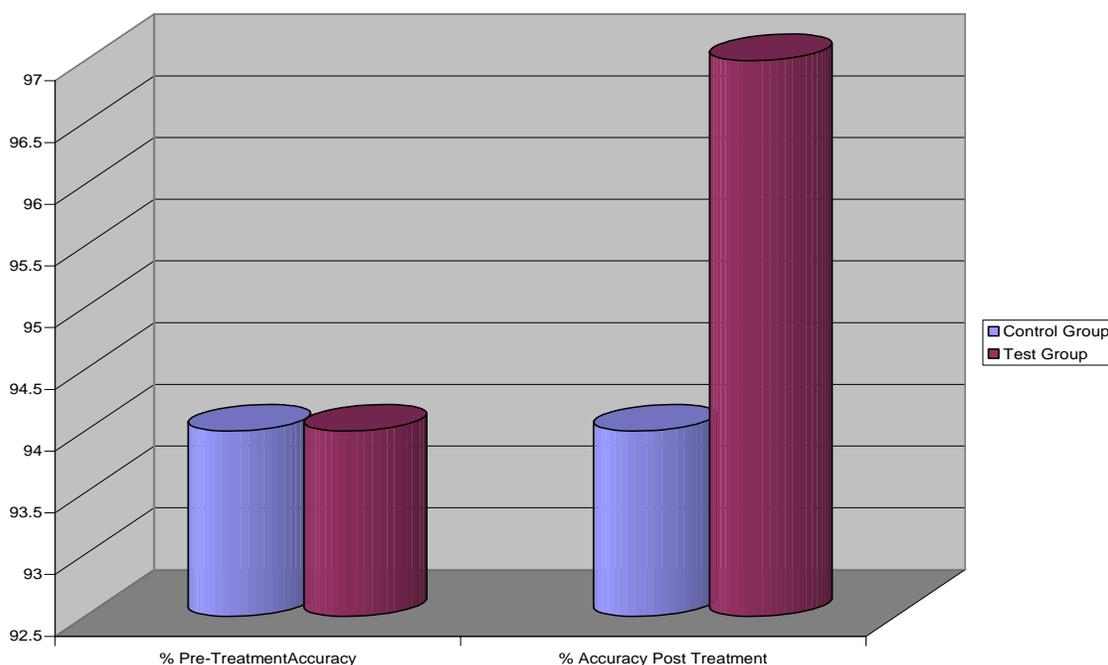


## Reading Fluency

The final sub-question evaluated the extent of portfolio assessment on the students' reading fluency. The tool used to measure reading fluency was the Reading Running Records (Appendix A). The students' fluency was measured by a percentage of words read accurately in a story. The accuracy rate is calculated by dividing the number of words read accurately in a story. The accuracy rate is calculated by dividing the number of words read by the number of errors.

The mean of the control group prior and post treatment was 94 percent (See Figure IV.). The treatment group mean changed from 94 to 97 percent after treatment. A 95 percent accuracy rate of words read and a self-correction ratio of 1:5 or less indicates that a student is at the "independent" reading level and then the student is moved to the subsequent reading level. In reading fluency, the treatment group demonstrated more growth than the control group.

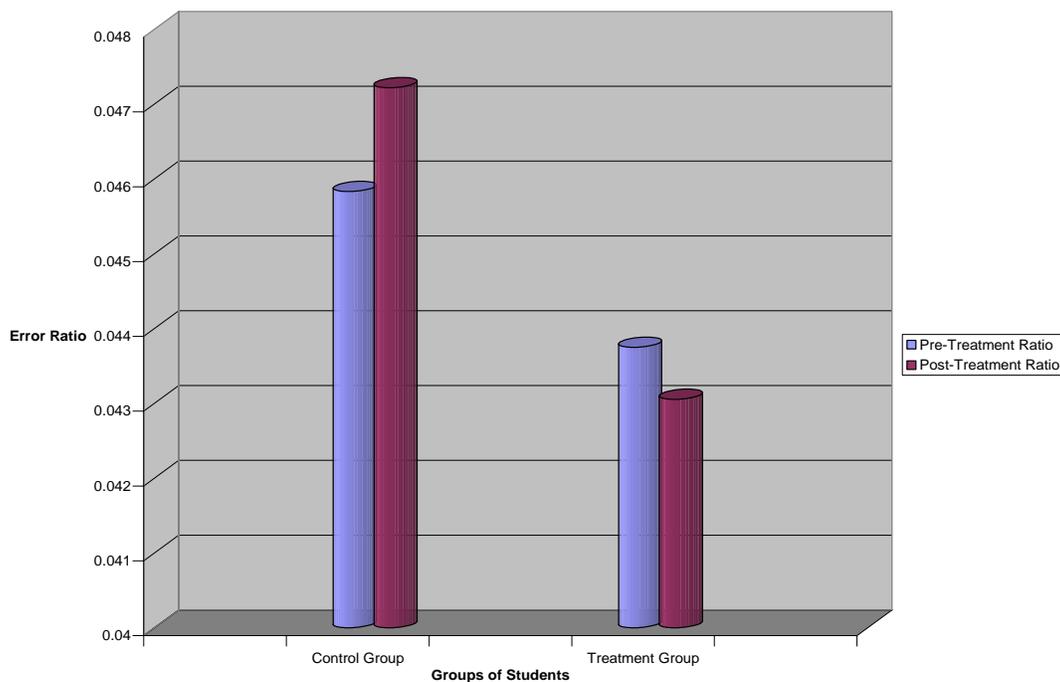
**Figure IV-Reading Accuracy**



The self-correction rate was a key factor in determining reading fluency. Adding both errors and the number of self-corrections together and then dividing by the number of self-corrections determined the self-correction ratio. This self-correction ratio is part of the reading running records (Appendix A). The self-correction ratio is used by the teacher to determine students' ability to extract meaning from the story, self-monitor while reading and the use of semantic and visual cues while reading. A ratio of 1:4 or less indicates that the student is using all reading cues appropriately. A ratio higher than 1:5 means that out of 5 misread words, the students are only correcting 1.

The mean of the control group's self-correction ratio was 1:6 pre-treatment and the treatment group's ratio was 1.3. After treatment, the control group ratio rose to 1:8 and the treatment group's was 1:2 (See Figure V).

**Figure V-Self Correction Ratios**



### Summary

Study results indicated that there were no statistically significant differences between the two groups post-treatment. Both groups demonstrated positive growth in their reading levels during the study. The treatment group students excelled in their learning in 'Upper Emergent' and 'Fluency' word recognition skills. Reading fluency and accuracy of reading in the treatment group were enhanced significantly compared to the control group. These results taken together indicate that portfolios affected the growth of the students in certain aspects of their reading skills. Each category of findings will be further discussed in Chapter 5 along with analysis of the study and potential enhancements to the method of research on this topic in the future.

## CHAPTER 5: CONCLUSIONS

### Introduction

The purpose of this study was to investigate the effects of portfolio assessment on reading skills development of second grade students. The study was action research of a quasi-experimental nature. The major questions addressed were 1) To what extent did portfolio assessment affect second grade students' reading comprehension skills? 2) To what extent did portfolio assessment affect second grade students' word recognition skills? 3) To what extent did portfolio assessment affect second grade students' reading fluency?

### Interpretation of the Findings

#### Reading Comprehension

The quantitative data collected suggest that the reading level change was not statistically significant for the treatment group during the course of the study. Both groups' reading levels increased during the study. The control group increased 5.8 levels while the treatment group showed less movement at 4.6 levels.

The difference in reading level progression could be attributed to the fact that each group had a different teacher assessing reading levels for both the pre and post evaluations. A reading specialist assessed pre and post reading levels for the control group. The reading specialist only met with students to assess their reading levels. The reading specialist was not familiar with the students' academic performance in any other area. Hargreaves, Earl and Schmit (2002) demonstrated the need to harmonize assessment expectations between home and school and across school levels. The cultural perspective in their study revealed an inter-play among points of view, values and beliefs.

The researcher provided the pre and post assessments for the treatment group. The researcher had this same student group for two years in a looping classroom setting and, thus had long-term knowledge of their reading abilities. The researcher's students are also in the same classroom all day, thus the teacher has a more comprehensive knowledge of the students' overall reading abilities.

The use of reading portfolios also gave the researcher in-depth knowledge of the students' spelling ability, reading comprehension, word attack skills and writing abilities. These language skills are compiled in each student's reading portfolio. This documentation method does not just recognize that students have attained a standard but also demonstrates their progress toward that objective (Gronlund & Helm, 2000). The portfolio offers an enhanced view of every student's achievement in reading. The researcher was continually assessing each student's reading abilities and deficiencies and, in turn, was able to gear instruction accordingly. A balanced approach to reading instruction is the most effective in developing confident and proficient readers (Guthrie, Schafer, Huang, 2001; Taylor, Pearson, Clark, & Walpole, 2000; Brown, 1998). This could explain why the students in the treatment group progressed at a more gradual rate in reading levels.

#### Word Recognition

Both groups had a tendency to improve in all word lists because of continued exposure to print and the students' developmental maturity. The 'Early Emergent' word list received the same score in both the control and treatment groups, which could be related to the fact that they are second grade students who have had these words in both kindergarten and first grade. The treatment group's higher gains in the 'Upper Emergent'

and 'Fluency' word lists compared to the control group's could be attributed to the missed words being written in each of the treatment group's reading portfolios. This portfolio exercise resulted in a more structured focus on unknown words in every day reading as well as in practice word sessions. The control group's classroom teacher did not have the benefit of identifying or recording missed words.

The 'Early Fluency' words showed significantly lower gains in both groups. This could be credited to the high number of words found on this list that follow no phonetic rules in comparison to the other three word lists.

Finally, the results may have been affected by the fact that the two classroom teachers utilize different teaching methodologies. One method used by the control group's teacher was to have the students assessed by the reading specialist which was different from having this task conducted by the classroom teacher. Effective reading instruction tends to be integrated throughout the curriculum areas (Guthrie, et al, 2001). The control group's teacher, therefore, did not have the knowledge of the words that needed to be practiced since she was not involved in the assessment. The treatment group had the benefit of teachable moments throughout the curriculum in any given school day as the researcher would point out identified unknown words in any given piece of writing or reading that was being studied.

### Reading Fluency

The data indicate that the control group's reading accuracy stayed the same. The treatment group improved dramatically in accuracy of reading and this could be related to the use of the reading portfolio. The reading portfolio provided the researcher with multiple work samples on a student's progress toward fluency, expression and inflection

during reading and the self-monitoring habits of each student. This knowledge of students' needs influenced the researcher's instruction to address areas that needed improvement.

The researcher focused more on reading words correctly as indicated by the self-correction ratio scores. Knowing that a self-correction ratio of 1:5 is needed to demonstrate an independent reading level, the researcher did not move the students to a higher reading level if their ratio was greater than 1:5. This is not a consistent methodology between the two assessors as the assessor of the control group is removed from the regular classroom setting and administration of the reading curriculum.

#### Critique of the Study

There are several aspects of the study that could be improved if replicated. This study included a convenience sample size rather than a random sample. It was also a small sample size. Drawing inferences from this treatment would be more valid with a large, randomized student group.

The sample was further altered by excluding five students from the entire study due to extremes in reading ability. Four of these students were reading well above the fifth grade level at the pre-treatment time and one was at a pre-primer level. This exclusion of high and low reading students could be seen as an effort to control an extraneous variable. In a larger sample size, it may not be necessary to control for this variable as the size of the group would control for this variable in the normal distribution.

Another extraneous factor in this study was that different teachers taught the two groups of students. This created an operating variable and not the variable of interest identified in the study. This was compounded by the introduction of a third teacher, the

reading specialist, to do the assessment of the control group. The reading specialist's lack of overall knowledge of the students' reading abilities in the classroom experience created a more systematic approach to her assessment rather than a global individualistic view of the students' overall reading development.

The time allotted to the study also makes it difficult to draw inferences to a more global student population. Conducting this study during the first semester of the 2002-2003 academic year may have been an insufficient time period to evaluate true changes in the students' reading development. It would have been more appropriate to study the groups over a full academic year and then compare them longitudinally in an additional assessment one year after the conclusion of the portfolio intervention.

The researcher created the portfolio assessment tool. The tool had not been tested for validity. Keeping the records for reading portfolios is constant. There is a need to meet with the students frequently as well as allocating time and effort to the management of their folders. It is a worksheet that tracks the students' progress in a variety of reading skills, but it has not been measured for the accuracy of the picture being portrayed of the student's progress.

#### Directions for Future Research

As a result of participation in this study, the researcher has learned the value of being more aware of what district standards are for second grade readers as well as which activities, tools, and methodologies define mastery of stated standards versus assuming that the researcher "just knows they know it". In addition, the use of the reading portfolios has given the researcher a greater communication tool to use with parents when discussing or reporting the student's reading progress.

Furthermore, the use of the portfolios and the experience of this study have enabled the researcher to get to know students better, one-on-one, as readers and young learners. The researcher's prior misunderstanding or misinformation about the reasons for a student's deficiency area was more easily identified by the portfolio assessment. In future studies, the researcher would include an attitudinal survey to help the children to develop a level of confidence in their reading ability.

Future research would also include having the researcher or the same individual complete all the assessments for the control and the treatment group. Differences in scoring of reading assessments by separate assessors led to misleading information about the control and the treatment group. At a minimum, the same individual who provides the ongoing instruction or administers the reading curriculum should conduct the assessment.

A new study could include more student involvement in selecting the work samples for the portfolios. The students would then have more ownership and pride in the learning achieved. Student works to enhance the reading portfolio would include a reading log of books read at home, a reading interest survey, and a record of books read in class.

There seems to be a need for assessment methods to measure the vast array of concepts learned in a balanced literacy approach to reading. More study is needed in this area to determine the most effective tools to assess the continual progression of young readers using authentic work samples.

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