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ABSTRACT

This report describes a project for improving reading comprehension through the use of multiple intelligences. The action research took place from September 2001 to January 2002. The targeted population consisted of fourth grade students living in two suburbs of a major metropolitan city. The two communities range from low income to upper middle class socioeconomic status. The problem was noted in literature by researchers that found that students were faltering in the area of reading comprehension. The problem was documented further through data collected from surveys, teacher-constructed tests, district-adopted tests, Illinois Standard Achievement Tests (ISAT), Burns and Roe's Informal Reading Inventories, and anecdotal records. Analysis of the probable cause data, as well as the professional literature revealed that several possible reasons existed for students' deficiency in the area of reading comprehension. Students lacked sufficient strategies to enable them to construct meaning from text. A review of the solution strategies suggested by experts in the field of reading, combined with an analysis of the problem setting, resulted in this intervention: the use of Multiple Intelligence strategies to improve reading comprehension. The effect of this intervention was demonstrated through improved reading comprehension as measured by district-adopted achievement tests, teacher-constructed tests, and Burns & Roe's Informal Reading Inventories, and anecdotal records. Across both sites, reading comprehension improved. Students focused upon new strategies and enhanced their current levels of performance in the academic area. Appendixes contain survey instruments, checklists, self assessment forms, and blank forms for reflective journal entries and a predicting chart. (Contains 77 references, and 7 tables and 4 figures of data.) (Author/RS)

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IMPROVING STUDENT PERFORMANCE IN READING COMPREHENSION THROUGH THE USE OF MULTIPLE INTELLIGENCES

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An Action Research Project Submitted to the Graduate Faculty

of the

School of Education in Partial Fulfillment of the

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This report describes a project for improving reading comprehension through the use of multiple intelligences. The action research took place from September 2001 to January 2002. The targeted population consisted of fourth grade students living in two suburbs of a major metropolitan city. The two communities range from low income to upper middle class socioeconomic status. The problem was noted in literature by researchers that found that students were faltering in the area of reading comprehension. The problem was documented further through data collected from surveys, teacher-constructed tests, district-adopted tests, Illinois Standard Achievement Tests (ISAT), Burns and Roe's Informal Reading Inventories, and anecdotal records.

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A review of the solution strategies suggested by experts in the field of reading, combined with an analysis of the problem setting, resulted in this intervention: the use of Multiple Intelligence strategies to improve reading comprehension.

The effect of this intervention was demonstrated through improved reading comprehension as measured by district-adopted achievement tests, teacher-constructed tests, and Burns & Roe's Informal Reading Inventories, and anecdotal records.

Across both sites, reading comprehension improved. Students focused upon new strategies and enhanced their current levels of performance in the academic area.

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CHAPTER 1

PROBLEM STATEMENT AND CONTEXT

General Statement of the Problem

The targeted students of Site A, students in an inclusive fourth grade class, and of Site B, students in an inclusive fourth grade class, all attended school in a western suburb of a major metropolitan city, and exhibited a deficiency in academic performance or difficulty in meeting the expectations in the area of reading comprehension. Evidence for the existence of such a problem included Illinois Standard Achievement Test scores, achievement test scores, school report card data, and anecdotal records.

Immediate Problem Context

This action research project took place in two schools in different elementary school districts. Site A and Site B were both elementary schools, with Site A serving grades Pre-Kindergarten through four and Site B serving grades kindergarten through fifth grade. The following information was obtained from the 2000 School Report Cards.

Site A was part of a small two school district consisting of one elementary school and one middle school. The elementary school contained students in grades Pre-Kindergarten through four. The total enrollment was 424 students. The average class size was 20 students. Ethnic background of the student population was as follows:

58.0% White, 25.9% Black, 4.5% Hispanic, and 11.6% Asian. The population included 18.9% of students from low-income families receiving public aid, being supported in foster homes with public funds, or eligible to receive free or reduced priced lunches. The school had a 95.4% attendance rate with a 24.4% mobility rate (State School Report Card, 2000).

The total number of staff employed by the district of Site A was 46. In addition to the staff members the district employed two principals and one superintendent. The average years of teaching experience for the district was 10.7 years. The percentage of faculty with bachelor's degrees was 48.8% and those with masters and above was 51.2%. The racial makeup of the faculty was 98.6% White and 1.4% Black Males made up 14.4% of the teacher population while 85.6% were female (State School Report Card, 2000).

The school building consisted of the original structure with additions to the existing facility in 1978 and in 1988. The entire facility is handicapped accessible. The structure consisted of nineteen classrooms, one large art room, several small classrooms for reading services and parent conferences, a learning resource center, one computer lab, and a double gym that may also be used as a multi-purpose room with music classes being held on the stage. The available space was filled to capacity. Resource teachers and special program teachers had their own classrooms. Besides the main computer lab, each classroom was equipped with one internet accessible

computer. The learning resource center also had four computers with internet access and offered an accelerated reading program.

The school provided a state funded at-risk Pre-Kindergarten program with both a morning and an afternoon section that served eighteen children in each session. Four sections of kindergarten were offered at this site. Four sections of first, second, third, and fourth grade were available. Two special education teachers serviced all classrooms in an inclusion setting. One art teacher who also served the gifted program, one part-time music teacher, one band teacher, one physical education teacher, one literacy coordinator, one social worker, one speech and language pathologist, and a media specialist comprised the remaining staff of the building. Support personnel and non-certified staff members constituted the balance. Other programs offered at Site A were: Behavioral Intervention, Accelerated Reader, Champions After School Club, Foundation for Excellence, literacy services, looping, safety patrol, and Safe To Learn Initiative.

Site B was part of a school district consisting of seven elementary schools and two middle schools. The elementary school contained students in kindergarten through fifth grade. The total enrollment was 328. The average class size was 20 students. Ethnic characteristics of the student population was as follows: 97.1% White, 1.6% Hispanic, and 1.3% Asian. The population consisted of 1.6% low-income

families with the majority of the population coming from middle to upper class homes. Limited English proficiency was characteristic of 1.3% of the student population. The school had a 96% attendance rate with a mobility rate of 7.6% (State School Report Card, 2000).

The total number of staff employed by the district of Site B was 220. In addition to the staff members, the district employed nine principals, two assistant principals, one superintendent, one associate superintendent for curriculum, a business manager, and a director of personnel. The average years of teaching experience for the district was 14.5 years. The percentage of faculty with bachelor's degrees was 37.3% and those with masters and above was 62.7%. The racial profile of the staff for the district was 99.5% White and 0.5% Black. Of the 220 staff members, the gender statistics were 9.1% male and 90.9% female.

The school building consisted of the original structure, several additions, and three mobiles. The original existing structure was handicapped accessible. The structure consisted of 15 classrooms, several small classrooms for special needs students, a school based resource center, one computer lab, and a multi-purpose room. Due to limited space, five classrooms were stationed in the mobile units. All available space was utilized. Besides the main computer lab, each class was equipped with two computers which had access to the internet. The learning center also had two computers with internet access and an accelerated reading program.

The school provided a reading tutorial program known as First Steps for at-risk first, second, and third grade students sponsored and supported by the district of Site B. One special education teacher and one part-time teacher serviced all classrooms in a push-in/pull-out program. One art teacher, one part-time music teacher who also served the gifted program, one band teacher, three part-time physical education teachers, one social worker, one speech and language pathologist, and a media specialist comprised the remaining staff of the building. Support personnel and non-certified staff members completed the balance. Many other programs, often led by the parents, were offered at Site B before and after school.

The Surrounding Community

The school district used in this study for Site A was a small western suburban community located in an unincorporated area. This heterogeneous community was made up of a multi-cultural representation of ethnic groups including White, Black, Hispanic, Eastern European, Arabic, and Asian. The district which was considered widely diverse had a majority population of 56% and a minority of 44%.

Recent verification of student files confirmed the following data for the 424 students enrolled in the elementary building. Seventeen percent of the children resided in a home with English as a second language and limited English usage, with 29 languages represented in the elementary building. Thirty percent of the children in the

district lived in single parent families. Contacts with DCFS, Department of Mental Health, Illinois State Police, and S.A.S.E.D.(the special education cooperative), further verified the social needs of the children and their families served by the school district of Site A.

The increased number of low socioeconomic families residing in nearby government housing further represented the diverse community. Twenty-one percent of the students in the elementary building of Site A received free or assisted lunch, and 22% of the student population were eligible for and received public aid services. The median family income could not be realistically represented due to data that could not be retrieved about this unincorporated area.

The operating expenditure per pupil for the 1999-2000 school year was $6,596, and the instructional expenditure per pupil was $3,142 for the district. The average teacher's salary was $37,468. Salaries included various monetary benefits and compensations such as tax-sheltered annuities, retirement benefits, health and life insurance, and extracurricular duty payments. The average administrator's salary for the targeted district of Site A was $101,261 (State School Report Card, 2000).

The school district and community joined forces to link learning and the community together. Community and school members offered programs such as Grandfriends Phone Line, Principals Tea, School-Based Resource Center, After-School

Tutorial Program, and Technology Nights to support the parents and the students within the district.

Due to the multicultural representation of ethnic groups within Site A and the magnitude of the diverse languages spoken, it can be concluded that reading success was greatly impacted. The low socioeconomic population and mobility levels within the district of Site A greatly effected the Illinois State Achievement Test scores. However, analysis of longitudinal test data indicated the longer students remain with the District, the higher they scored on the state test.

When analyzing a nearby community in comparison to Site A there were variables to compare. The surrounding community was made up of 76.9% White, 2% Black, 4.1% Hispanic, and 16.9% Asian. Only 3.7% of the neighboring district was classified as low income, with 2.5% of the student population having limited English proficiency. The student mobility rate for the surrounding community was 6.5%. This surrounding community would be considered to be fairly wealthy. The average home value was $384,600. The average median family income was $87,078. Most occupations within the surrounding community were in the executive administrative and managerial areas.

The school district used in this study for Site B was a medium sized western suburban community. This community consolidated district was made up of two towns and parts of three others. This heterogeneous community was almost

entirely comprised of Caucasians. The district served a majority population of 99.5% and a minority population of 0.5%.

Recent verification of student files confirmed the following data for the 328 students enrolled in the elementary building. Children residing in a home with limited English proficiency equated to 1.3%. Contacts with governmental agencies was viewed as rare.

The community of Site B was well established serving professional occupations. The residents who obtained four years of college education or more was 52.7%. The income level of residents and the percentage of the population that fell below the poverty level did not mirror the statistics of Site A. The percentage of the population that fell below the poverty level was 1.8%. The median family income for Site B was $60,421.

The operating expenditure per pupil for the 1999-2000 school year was $7,928, and the instructional expenditure per pupil was $4,753 for the district. The average teacher's salary was $55,040. The average administrator's salary for the targeted district of Site B was $94,906 (State School Report Card, 2000).

Considering the cultural make up of the district and the supported ISAT scores, it can be concluded that these variables alone impact academic achievement. The community

was supported by parental involvement, educated parents, business leaders, and tremendous parental classroom volunteers.

National Context of the Problem

The problem of student achievement has generated concern among many educators at the local, state, and national levels. Each year the number of school age children who cannot read and write continues to rise. In a comprehensive review of literacy programs in America's schools, many can argue that early academic achievement will predict future success or failure in life (Lyons, 2001). Reading deficiencies and meeting the expectations of parents has been a major issue of concern for many decades.

Research has shown that failure to read by third grade is associated with greater risks of juvenile delinquency, failure to graduate from high school, teenage pregnancy, and other problems. According to a 1997 report by the National Commission on Literacy, twenty-six million adults in America cannot read or write (NCL, 1985). In addition to that figure, 60 percent of incarcerated persons, 75 percent of the unemployed, and 47 percent of 17 year old minority youth had low levels of literacy. That number is estimated to grow by 2.3 million each year. Reflecting on these alarming statistics, teachers must provide their students with experiences that encourage and promote individual reading abilities.

Although many children learn to read with almost any instructional approaches, others falter when faced with reading instruction in school (Hicks & Villaume, 2001, p. 398). Particular difficulties in the area of reading may stem from the lack of preschool experiences, health factors, attention issues, or a reading curriculum that does not address the learning styles and needs of individual students. Reading is a complex developmental process involving many aspects. The education of parents, the reading environment at home, and the literacy of the parent are only a few issues effecting this complex process. Decades of learning and teaching demonstrate that students learn in many different ways. Given the unique nature of reading difficulties and the complexity of the reading process, it is no surprise that no one program or approach has proven effective for all children (Allington & Walmsley, 1995).

All children bring to the classroom many cultural experiences that differentiate them from others. When given an opportunity to learn content in many ways, the more capable students are able to find success in a world with much diversity and rapid, continual change (Kagan & Kagan, 1998). The pressure to produce academic results has never been greater in any other time in history.

CHAPTER 2

PROBLEM DOCUMENTATION

Problem Evidence

Reading is essential to success in our society. The ability to read is important for social and economic advancement in life. The first and foremost job of elementary teachers is to teach children to be fluent and strategic readers. Reading difficulties by students in the targeted schools was evident over a three-year period. Teachers, the building principals, and parents expressed concern about improving reading comprehension. Teachers at one targeted school reported a deficiency in reading strategies that good readers apply to make sense out of print. Results of standardized tests and Illinois Standard Achievement Test scores substantiated that a problem exists. Problem documentation included parent and student surveys, anecdotal records, and school report card data. Researchers studied and compared district achievement scores and Illinois Standard Achievement Test scores in the area of reading.

The students from the targeted schools were given a survey in late August (Appendix A). The survey was read orally to the participating students at each of the sites. Student responses on the survey were overwhelmingly positive for students believing they were good readers. Students did not recognize a problem with reading comprehension.

Site A

Table 1

Summary of Reader Self-Perception Survey

Survey Question	Frequency Distribution SA	A	U	D	SD
1. I think I am a good reader.	5	10	1	0	0
2. I can tell that my teacher likes to listen to me read.	7	4	4	0	0
3. My teacher thinks that my reading is fine.	7	6	3	0	0
4. I read faster than other kids.	1	2	6	6	1
5. I like to read aloud.	4	4	1	5	2
6. When I read, I can figure out words better than others.	1	6	4	3	0
7. My classmates like to listen to me read.	2	1	10	3	0
8. I feel good inside when I read.	8	6	1	0	0
9. My classmates think that I read pretty well.	3	5	6	0	0
10. When I read, I don't have to try as hard as I used to.	9	3	2	2	0
11. I seem to know more words than other kids when I read.	2	4	8	2	0
12. People in my family think I am a good reader.	15	1	0	0	0
13. I am getting better at reading.	14	2	0	0	0
14. I understand what I read as well as other kids do.	7	6	1	1	0
15. When I read, I need less help than I used to.	12	1	2	0	0
16. Reading makes me feel happy inside.	9	6	2	0	0
17. My teacher thinks I am a good reader.	7	5	4	0	0
18. Reading is easier for me than it used to be.	12	4	0	0	0
19. I read faster than I could before.	8	6	0	1	0
20. I read better than other kids in my class.	2	3	9	0	1

* Note: SA = Strongly Agree, A = Agree, U = Undecided (not sure), SD = Strongly Disagree, and D = Disagree.

Site B

Table 2

Summary of Reader Self-Perception Survey

Survey Question	Frequency Distribution SA	A	U	D	SD
1. I think I am a good reader.	14	5	2	0	0
2. I can tell that my teacher likes to listen to me read.	6	10	4	0	1
3. My teacher thinks that my reading is fine.	6	7	8	0	0
4. I read faster than other kids.	8	9	3	1	1
5. I like to read aloud.	6	6	1	3	4
6. When I read, I can figure out words better than others.	8	8	3	2	0
7. My classmates like to listen to me read.	2	7	10	0	1
8. I feel good inside when I read.	11	4	1	1	0
9. My classmates think that I read pretty well.	3	7	9	1	0
10. When I read, I don't have to try as hard as I used to.	12	7	0	2	0
11. I seem to know more words than other kids when I read.	8	10	3	0	0
12. People in my family think I am a good reader.	19	2	0	0	0
13. I am getting better at reading.	15	4	2	0	0
14. I understand what I read as well as other kids do.	10	7	2	1	0
15. When I read, I need less help than I used to.	15	4	1	1	0
16. Reading makes me feel happy inside.	6	11	4	0	0
17. My teacher thinks I am a good reader.	8	7	5	1	0
18. Reading is easier for me than it used to be.	16	4	1	0	0
19. I read faster than I could before.	20	1	0	0	0
20. I read better than other kids in my class.	11	3	6	1	0

* Note: SA = Strongly Agree, A = Agree, U = Undecided (not sure), SD = Strongly Disagree, and D = Disagree.

Of the students who participated in the survey for Site A, most children perceived themselves as competent readers. Students seemed undecided in their reading ability compared to other students in their classroom. Students indicated that reading was both enjoyable but difficult. Occasionally, no response was given or a double response was given. Therefore, those responses were not tallied.

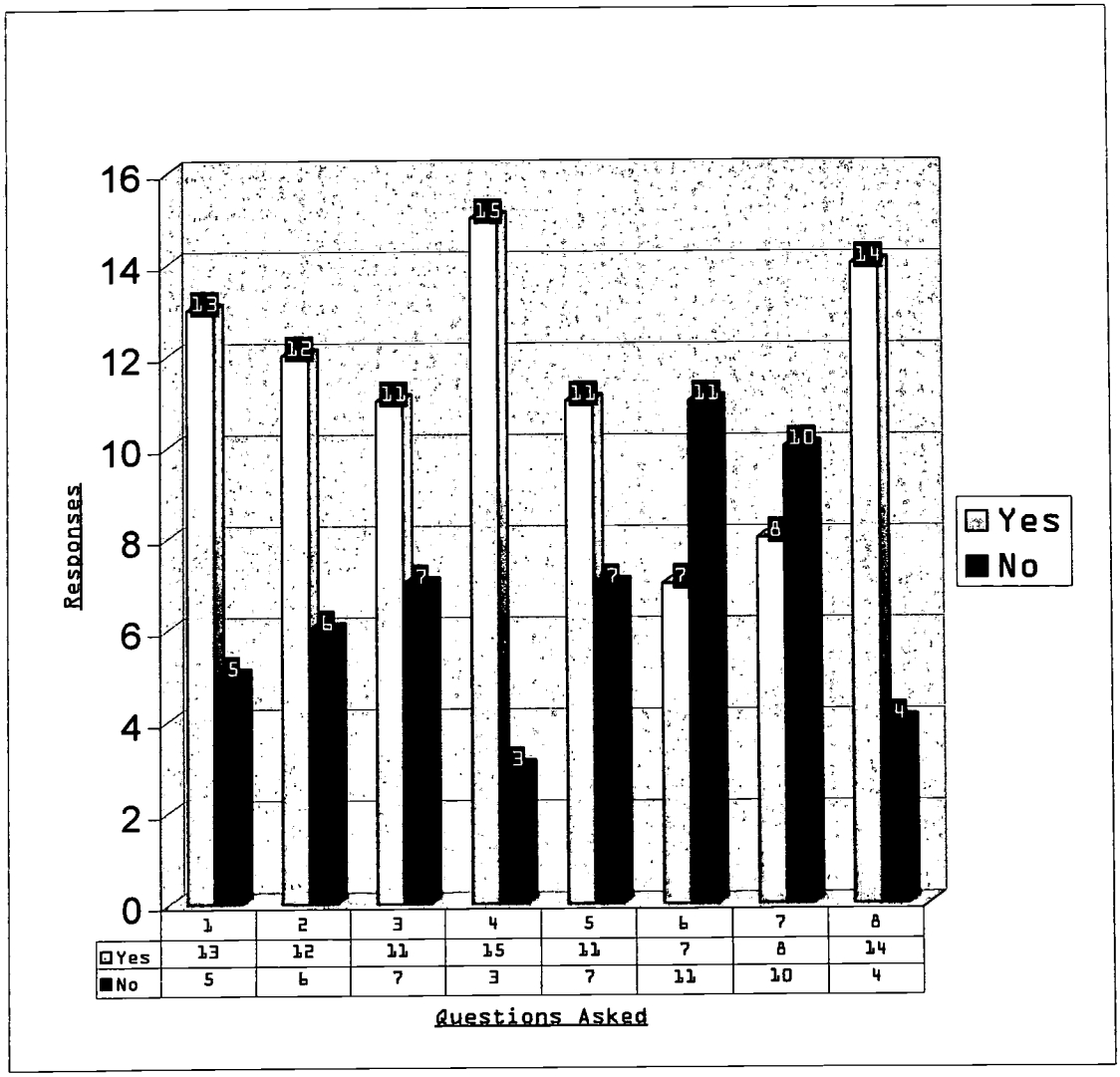
Most children at Site B perceived themselves as competent readers. Students at Site B also seemed undecided in their reading ability compared to other students in their classroom. Students at Site B indicated that reading was both enjoyable but difficult. Occasionally, no response was given or a double response was given. Therefore, those responses were not tallied.

Upon analyzing the frequency distribution of both sites, it was evident when students compared themselves to their classmates,that they lacked the confidence to view themselves as adequate readers as related to their peers. However, it was apparent that all students felt their family members believed them to be a good reader. An overwhelming 92% of the students surveyed believed their family members to be a strong advocate of their reading abilities. The majority of the students at Site B agreed that they were fluent readers, while a larger percentage of students at Site A felt they were unable to read faster than other students. According to the survey, students at Site B appeared more confident in knowing more words than the students at Site A. A higher

percentage of students at Site A felt unsure about their ability to read better than other children in their class. Students at Site B seemed fairly confident. The survey was easy to administer, and very few children had difficulty tracking each response.

Along with the student survey, a parent survey and checklist was administered in late August (Appendices B and C). Results of the survey varied between each site. Site A experienced difficulty in retrieving parent responses. On the other hand, Site B parents had a 100% return rate for the parent surveys.

AUGUST PARENT SURVEY RESULTS SITE A

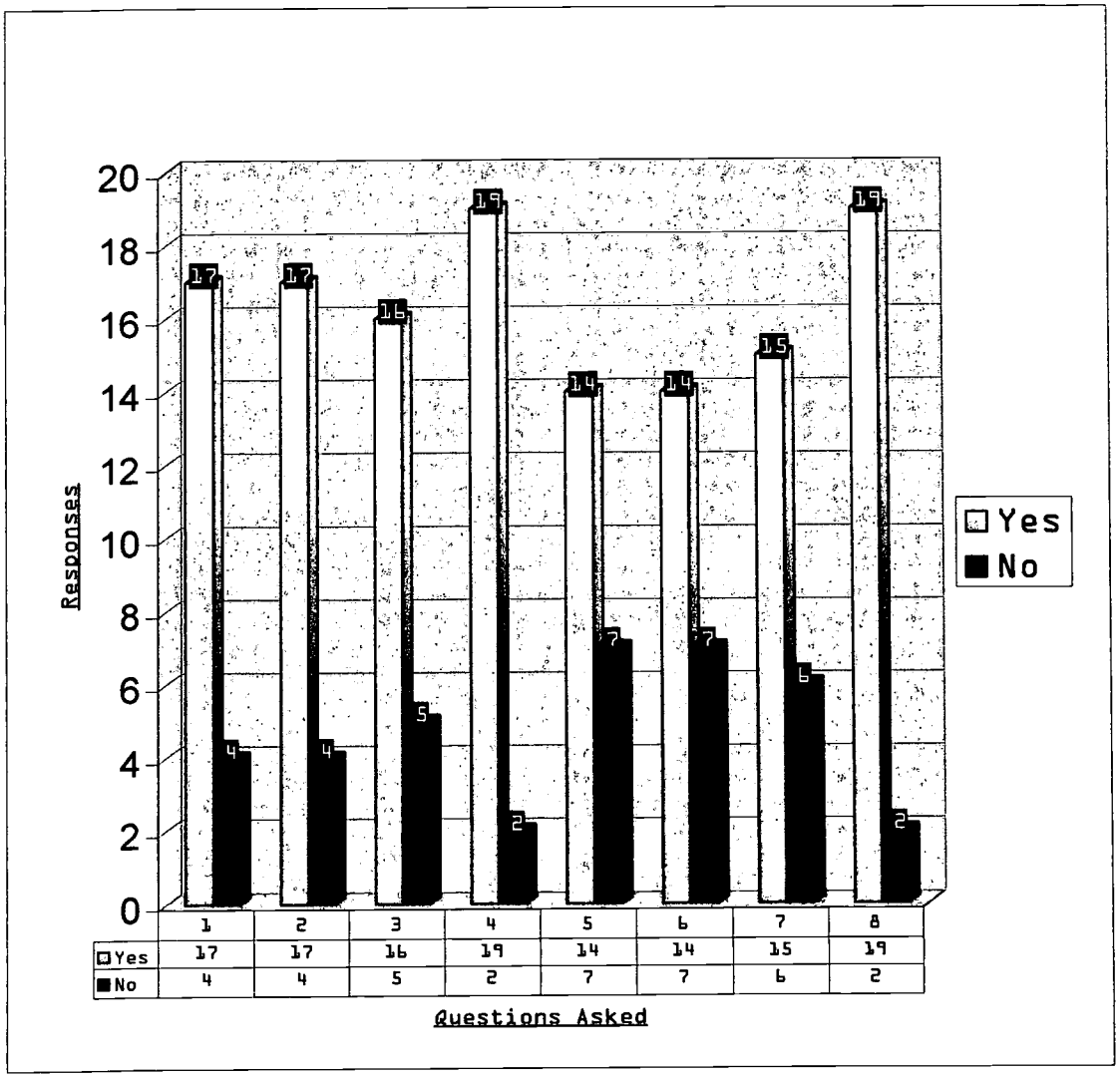


	1	2	3	4	5	6	7	8
Yes	13	12	11	15	11	7	8	14
No	5	6	7	3	7	11	10	4

Figure 1. Parent Checklist

Statement 1: My child likes to listen to me read to him or her.
Statement 2: My child likes to read to me.
Statement 3: My child attempts to read in daily situations.
Statement 4: My child understands books I read to him or her.
Statement 5: My child attempts to figure out the words.
Statement 6: My child sometimes chooses to write.
Statement 7: My child shares what he or she writes.
Statement 8: My child is provided with the opportunity to visit the public library often.

AUGUST PARENT SURVEY RESULTS SITE B



	1	2	3	4	5	6	7	8
Yes	17	17	16	19	14	14	15	19
No	4	4	5	2	7	7	6	2

Figure 2. Parent Checklist

Statement 1: My child likes to listen to me read to him or her.
Statement 2: My child likes to read to me.
Statement 3: My child attempts to read in daily situations.
Statement 4: My child understands books I read to him or her.
Statement 5: My child attempts to figure out the words.
Statement 6: My child sometimes chooses to write.
Statement 7: My child shares what he or she writes.
Statement 8: My child is provided with the opportunity to visit the public library often.

Figures 1 and 2 depict the results of the parent checklist completed by parents in late August. Of the parents at Site A and Site B who completed the survey, high percentages of parents overwhelmingly marked yes for questions 1, 2, 4, 5, and 8. Regardless of the differences of socioeconomic status at both sites, parents felt that their child liked to be read to and that their child liked to read to them. However, it was evident at both sites that question three suggested that parents believed children were not attempting to read on a daily basis. In the words of Anna Quindlen, "Book are the means to immortality. Through them all we experience other times, other places, other lives. We manage to become much more than our own selves" (Harvey & Goudvis, 2000, p.1). The parent survey suggested teachers should provide the strategies and skills to promote reading comprehension and to motivate students to a passion of reading. Questions 6 and 7 are quite staggering with the number of no responses at both sites. Writing is an extension of the reading process. Students should have opportunities to write. Writing shows the thinking and the mental processes a reader goes through when they read (Harvey & Goudvis, 2000,p. 30). Of the parents surveyed, many stated reading and writing on a daily basis needed improvement. The understanding of written text can motivate students to read printed material.

Table 3

ISAT Reading Scores for Grade 3

Spring 2001

	Site A	Site B
Exceeds	22%	50%
Meets	43%	39%
Does Not Meet	35%	11%

Spring 2000

	Site A	Site B
Exceeds	22%	50%
Meets	43%	39%
Does Not Meet	35%	11%

Spring 1999

	Site A	Site B
Exceeds	22%	50%
Meets	43%	39%
Does Not Meet	35%	11%

Illinois Standardized Achievement Test (ISAT) data for the last three years demonstrated that some students fell below the does not meet category as seen in Table 3. It was evident that Site A had a greater percentage of students who were not meeting the Illinois Standards in the area of reading. Upon analyzing the ISAT reading scores, the percentage of students in the not meets category continued to increase over a three-year period. Building principals, teachers, and parents expressed concern with students falling in these lower categories. The percentage of students scoring in the meets and exceeds category at Site B demonstrates high performance according to Illinois State Standards. However, the percentage of students in the does not meet category increased over the last academic school year. Although the change is small, parents were concerned with the decrease in numbers.

Probable Causes

The targeted schools demonstrated an inadequate level of student performance in meeting the expectations in the area of reading comprehension. A majority of teachers, parents, and students indicated that reading should be a priority in school with an emphasis placed on the ability to apply reading strategies to any content area.

Children bring to the classroom many cultural and environmental experiences. Making connections to text through the world around them enables a reader to gain understanding of the written text. An inadequate use of prior knowledge

inhibits a child not only to make their own connections, but to bridge gaps in their own learning in the area of reading.

> Children vary widely in the amount and type of literacy experiences they have had, but because they live in our print-rich world, all have some awareness of the function of written language. Encounters with literacy in school have meaning because children use their previously acquired knowledge of language and the world to make sense of printed symbols. Children who have had limited experiences do not need to wait to participate fully in classroom literacy; they will acquire knowledge quickly as they use reading and writing in functional ways (Fountas & Pinnell, 1996, p.11).

Students may lack the necessary strategies to construct meaning from text. Reading is a dynamic process in which the reader must actively participate. A good reader is one who can apply various reading skills independently and flexibly in a variety of reading situations. "Numerous research studies have concluded that good readers are less dependent on context cues for word identification than poor readers. These findings have led many educators to advocate beginning reading instruction that leads children directly into a full alphabetic phase of reading with decodable text and that discourages use of context cues" (Hicks & Villaume, 2000-2001).

A good reading teacher highlights the importance of a reader having knowledge of the reading process, knowledge about strategies and skills that are essential to constructing or comprehending text, and knowledge about how to appropriately apply strategy.

Walk into any classroom where all of the children are destined to learn to read and what do you see? There will be reading materials, books, and evidence that the teacher and children love to read. The classroom environment that fosters a love of reading is surrounded by a variety of materials that range from the reluctant reader to the advanced critical thinker. A warm inviting reading environment provides and offers reading materials to meet the needs of all students. "To create powerful classroom environments in which all children learn to read, teachers need to be concerned with models, materials, and motivation" (Cunningham & Allington, 1999, p. 45). Children of all ages need to see reading demonstrated and need to be continuously engaged in real reading experiences. In addition to chapter books there are other relatively easy materials you might try to add to your classroom collection. Some teachers may want to consider collecting newspapers, magazines, poetry, joke and riddle books. It is imperative that children recognize words in various print. However, not all students have equal access to books in or out of school. While educators would love to wave their wand and make every home literacy-rich, this is not within our power. What is in the power of every teacher is

the ability to create literacy-rich environments within their own classrooms.

Failure to provide non-traditional methods of instruction will foster children to fail or lower their expectations to succeed. Effective teachers facilitate students' learning by providing engaging learning experiences, which are both intrinsically motivating and challenging to students. "Effective teachers intuitively know that student attitudes and academic achievement are improved when learning experiences revolve around the interests, talents, and needs of students" (Gardner, 1993, p.12). Effective teachers who are able to provide students with fun-filled meaningful activities teach learning strategies while fostering students higher order thinking skills and strengthening their multiple intelligences. There aren't any two children in a single classroom that learn the same way. There are many children in a classroom that do not learn the way the teacher learns or teaches. It is the responsibility of the classroom teacher to explore teaching methods that actively engages and meets the learning styles of all students.

An organized and inviting classroom environment provides an atmosphere that encourages students to have a desire to learn and read. A failure to provide an environment that is conducive to motivate reading will result in students who do not want to read. Your classroom not only says much about you as a teacher, but also about your attitude towards reading.

Instead of merely telling your students how important reading is, demonstrate the importance by surrounding students in an environment that promotes enthusiasm and encourages reading (English, 1996, p. 14). Teachers purposefully design comfortable floor plans that invite students to read without distraction. Ample,easy to acquire books encourage the student to spend more time on reading rather than on looking for reading materials.

Lack of parental education or low-socioeconomic status of the family are factors that may cause reading difficulties in children. Characteristics of parental education greatly influence and impact reading performance of children. Factors such as education of mother, family wealth, race, ethnicity, mobility, and the family unit tend to be related to one another when looking at academic success of students. A greater number of minority children in this country live in poverty. Poverty is not the only factor that determines if a child is at risk for reading difficulties, but it is the most pervasive one.

> The parents in poor families are more likely to be high school dropouts.Although coming from a poor family is strongly associated with poor reading achievement, factoring out minority status,the apparent reading achievement gap between the rich and the poor is reduced by two-thirds. The educational attainments of both mothers and fathers influence reading comprehension over and above

other aspects of family background (Reading literacy in the United States: Executive Summary, 2001).

Schools that reach out and make extra effort to reach the parents of struggling readers find larger gains of success. Acquiring the trust of parents of at-risk children so they are more eager to come to school is often not an easy task. Many of the parents did not succeed in school themselves, or they may have memories of school that are not favorable. Many of these parents may have limited literacy levels or lack proficiency in English. When the school and community come together for the child, the increased support can act as a powerful source for the teacher. Research shows that low-income parents were often very willing to work with their children, but often lacked the skills to help their child. If the schools and communities work together to reduce the factors that may cause early reading difficulties, there may be a shift towards a more proactive parent with an increase in student achievement.

Children need a variety of language experiences before entering school. Early intervention programs attempt to fill the gap for young children who need specific prereading skills in order to learn to read on schedule. Children who arrive in school with few experiences with books, stories, and print benefit from an effective early-intervention program. It prepares them for their future learning experiences.

> Preliminarily, it is important to reiterate that skills should be taught in combination with regularly occurring rich oral language activities: reading good stories and informational text to children and then discussing them; having students tell and retell stories; listening to,reciting, or singing nursery rhymes or songs, including the Alphabet Song; pretend reading, picture reading, and shared reading; playing with magnetic letters; discussing word meanings and group and individual story writing (Honig, 1996, p.26).

Parental and family influences regarding literacy can greatly increase or decrease the success of a child's literacy experiences before kindergarten. It is of equal importance that children are read to by family members on a daily basis. Some researchers have found that parents who believe that reading is a source of entertainment have children with a more positive view about reading than do parents who emphasize the skills aspect of reading development (Cunningham, 1999). Well before formal reading instruction is in place, many informal opportunities for learning about literacy should be made available to all households. For most children, engaging them in literacy rich activities, one-one-one conversations, and playful environment around literacy activities will ensure that they are ready for formal reading instruction upon entering school.

CHAPTER 3

THE SOLUTION STRATEGY

Literature Review

Educators have agreed for generations that students can often read the words, but they don't comprehend the text. Donald Graves stated that during his childhood when he came to his reading group, he lacked precision in answering precise questions about the text. For most of his life he viewed himself as a defective reader. In one sense he was a problem reader because he couldn't match his meaning with the text to be discussed (Harvey & Goudvis, 2000, p.5). Through the years educators have agreed that children need to make sense of the world around them through reading. However, the routes taken to achieve this goal have had educators in a state of dissonance as to the correct path for success in reading comprehension.

Profound changes have taken place in reading and the way reading has been taught in the past two decades. "In earlier times, social change was relatively slow and the school was generally viewed as the institution to teach children the information and skills of the adults so the the children would be able to take their places and carry on successfully the activities of their parents' generation" (Tyler, 1992, p.xiii). Costa, Bellanca, and Fogarty (1992) tell about the middle ages when the teacher stood before a classroom as the

sage dispensing knowledge. The teacher continued to stand before the classroom as the sage dispensing knowledge even in the mid 19th century.

In the 1950s "the teacher stood at the head of the class, read a lengthy set of directions, and assigned a variety of tasks. Questions were more likely to be used to clarify procedures than to enhance understanding. In many classrooms, assigning was the norm; teaching was conspicuously absent" (Harvey & Goudvis, 2000, p. 37). From the middle ages and even into the 1950s the teacher spouted out his knowledge until technology came into being.

With the growth of technology and behavioral psychology between 1920 and 1960, educators and researchers put great faith in these areas as they focused on instructing students in reading and language. Although teachers were confident they knew more about their pupils than tests could show, they relied heavily on standardized reading tests. Learning to read meant scoring better on tests of bits and pieces of isolated words and sentences, or paragraphs pulled out of the middle of longer coherent texts. Basals and their controlled vocabulary were everywhere. With the use of technology, workbooks, ditto masters, and extra practice sheets were produced for students who got low test scores and supplementary enrichment materials were produced for the high scorers. Not much time was left for actual reading after skills, drill exercises, phonic drills, and workbook exercises. "In 1979, Dolores Durkin jolted the reading world

when she concluded, after hundreds of hours of observation in classrooms, that the questions in basal readers and on worksheets were the primary focus of comprehension instruction in classrooms. Teachers thought they were providing instruction in comprehension through the use of story questions" (Harvey & Goudvis, 2000, p. 24). Durkin suggested that teachers were not really teaching students specific strategies to better comprehend what they read, but actually assessing their students' literal understanding.

Although change was slow in coming, many teachers and researchers began thinking about effective approaches to reading as long ago as 1964. The late Dr. Anne H. Adams began her doctoral dissertation with the idea of teaching reading without the use of basal readers. It wasn't until 1976 that her ideas and programs were initiated (Sumner and Berholz, 1992, p. 7). Many teachers quickly embraced Dr. Adams' ideology. By 1977-78 these same teachers and Dr. Adams created lessons causing educators to shift their ways of teaching and thinking.

These slow changes, with the ideas of Anne Adams and others like Ken Goodman, didn't really take off until the late 80s and early 90s when many teachers and schools began abandoning their basal readers, workbooks, skills sequences, and practice materials that fragmented the process. They began building their programs around children's literature, often in thematic units where the teacher organized the whole or a large part of the curriculum around topics or themes.

This movement became known as whole language. Whole language was an attempt to get back to basics in the real sense of the word. Teachers set aside basals, workbooks, and tests, and returned to inviting kids to learn to read and write by reading and writing real stuff (Lipton, 1992, p. 91). In whole language classrooms, there were books, magazines, newspapers, directories, signs, packages, labels, posters, and every other kind of appropriate print all around. What was appropriate was anything the children needed or wanted to read or write. Lots of recreational books were needed, fiction and non-fiction, with a wide range of difficulty and interest, and resource materials of all kinds.

Cognitive psychologists, during the 1980s, concocted the term *schema theory* to explain how our previous experiences, knowledge, emotions, and understandings have a major effect on what and how we learn. "Our schema - the sum total of our background knowledge and experience - is what each of us brings to our reading" (Harvey & Goudvis, 2000, p. 34).

The last 20 years have brought tremendous changes in literacy education. New information on how children learn language and become literate; the writing process and whole language movements; the negative aspects of ability grouping; and the growing popularity of children's literature captured the attention of committed educators. New ideas have been formed into policy and teachers have started implementing changes. Thomas Kuhn's concept of "paradigm shift" from his book in 1962 (as cited in Clark, 1992) and schema theory has

definitely had an impact on these reading changes as well as other educational changes. With increased research we have come to rely on the assumptions of educators in teaching reading.

Most recently in the past decade, teachers have shifted from the "basal vs. whole language dilemma when attending meetings and reading professional materials" (Collins & Cheek, 1993, p. 173). Teachers have taken the philosophy that the answer to successful reading instruction does not reside in an either-or-approach. Effective teachers now view a balanced approach to teaching reading as the key. This idea encompasses a little of all worlds fulfilling the idea that as teachers we must do what it takes to teach children to read and understand their reading.

"There have been many debates about teaching practices and how we can reach all our students. Some educators believe the problem is an emphasis on phonics versus no phonics, basal readers versus literature-based instruction, homogeneous grouping versus heterogeneous grouping, early intervention versus wait-and-see, accepting approximations versus expecting correctness, and direct (explicit) instruction versus discovery" (Fountas & Pinnell, 1996, p.202). Today the most important variable in teaching reading is the individual classroom teacher who understands how children acquire the ability to be good readers and the role she plays in helping each student achieve his potential.

Evaluating students through dialogue, observations, and informal and formal assessments as well as modeling by the teacher and providing strategies for comprehension is where reading teachers are placing their focus today. The ideas for teaching reading comprehension using reading strategies came about in the 1980s when "researchers identified and systematically investigated the reading strategies that proficient readers used to understand what they read. Building on this work, researchers then explored the strategies that active, thoughtful readers use when constructing meaning from text" (Harvey & Goudvis, 2000, p.72). Later others added to this list of comprehension strategies. It has taken over two decades since the 1980s for the educational focus to change.

Research suggested several effective strategies to help students develop and improve skills in reading comprehension. Increasing a readers ability to use prior knowledge, teaching strategies, exposing students to appropriate materials, nurturing an environment conducive to motivate reading, encouraging parent education, promoting early intervention and early experiences with reading, and providing non-traditional methods of instruction seem to be the key elements in producing successful readers who understand what they read.

Increasing a child's ability to use prior knowledge will enhance reading understanding. Marie Clay (1991) said a child has developed models of his own about what goes on in the

world through his interactions with people and things to make language match with what he experiences in the environment. A child can act out or talk out, make predictions, and connect to what will happen based on his prior experiences in the world.

Children who have limited outside experiences have difficulty making connections to bring meaning to print. Children bring with them a vast variety in the amount and type of literacy experiences. "Helping greater numbers of children find meaning and success in school requires first that teachers understand how meanings are formed, why they sometimes are so difficult to communicate, and the crucial role language plays both in the formation and the sharing of meaning" (Fountas & Pinnell, 1996, p. 96).

Children who come to school with very few literature-rich experiences don't have to wait to participate in the literature program. If literacy is "personal, functional, and enjoyable, the young child will simultaneously learn what written language is, how it works, and how to use it for many purposes" (Fountas & Pinnell, 1996, p. 98).

According to the research, reading strategies taken from a study of proficient readers proved effective for struggling readers as well (Harvey & Goudvis, 2000, p. 11). A good reading program uses a balance of strategies for the reader to construct meaning. Teachers must constantly adjust the activities and texts so that children's knowledge and their willingness to apply it develops in balanced ways. Children

learn to talk because they see and hear talk in action. Children learn to read in the same way. They learn to read by seeing and hearing others read, listening to others read to them, reading with others, and reading by themselves. "Readers of all ages tend to connect text to their experiences. They also brim with questions when they read, which keeps them reading and searching for answers. Beginning strategy instruction supports readers to become aware of their connections and questions and articulate them clearly" (Harvey & Goudvis, 2000, p. 79). When referring to strategies the reader uses to construct meaning, we often think of improving text comprehension.

Making connections to build understanding is a strategy often used by good readers. "When we begin strategy instruction with children, stories close to their own lives and experiences are helpful for introducing new ways of thinking about reading" (Harvey & Goudvis, 2000, p. 93).

There is more to reading then just connecting with what you already know. Readers can learn new things and wonder about others. A student should not only be able to connect to a global lesson but to his personal world as well to support him in making sense of his reading (Jeroski and Brownlie, 1992).

Harvey and Goudvis (2000) suggested that strategy lessons in making connections should move from close to home to more global issues. Using text-to-text, text-to-world, and

text-to-self connections should have a common purpose: to use personal experience to enhance understanding.

The importance of true comprehension in reading or understanding the printed word does not stop after a word has been analyzed and pronounced. The process has only really just begun. Questioning is a strategy that propels readers to higher-order thinking. Creating a classroom environment that celebrates curiosity will spawn good questioning by the reader. "When our students ask questions and search for answers, we know that they are monitoring comprehension and interacting with the text to construct meaning, which is exactly what we hope for in developing readers" Harvey & Goudvis, 2000, p. 56).

Rhoades and McCabe (1992) suggested that teachers move students beyond asking questions that require mere recall of facts. They believed that Bloom's taxonomy (1956) in designing lessons would promote higher-level thinking and should be a part of every teacher's plan.

Two strategies that enhance understanding are visualizing and inferring. "Visualizing and inferring don't occur in isolation. Strategies interweave. Inferring occurs at the intersection of questioning, connecting, and print. Visualizing strengthens our inferential thinking" (Harvey & Goudvis, 2000,
p. 78).

Determining importance in text is a strategy designed to help readers sort information and make decisions about what

they need to remember and what they can disregard. "Determining important ideas and information in text is central to making sense of reading and moving toward insight. When we teach the strategy of determining importance, we often introduce it in nonfiction. They go together. Nonfiction reading is reading to learn. Simply put, readers of nonfiction have to decide and remember what is important in the texts they read if they are going to learn anything from them" (Harvey & Goudvis, 2000, p. 32).

Synthesizing information is the most complex of comprehension strategies. When we synthesize information, we take individual pieces of information and combine them with prior knowledge. "Synthesizing lies on a continuum of evolving thinking. Synthesizing runs the gamut from taking stock of meaning while reading to achieving new insight" (Harvey & Goudvis, 2000, p.68). Furthermore, introducing the strategy of synthesizing in reading involves teaching the reader to stop every so often and think about what has been read.

"Our intent, and that of other researchers dealing with learning strategies, is to provide students with a repertoire of concrete ways they can use to plan their reading, to regulate their comprehension, and to evaluate their progress. In short, we want students to become actively involved in reading" (Winograd & Gaskins, 1992, p. 229). A strategy becomes effective when a learner uses it to fit his purpose and to fit his need to perform a particular task. When a

strategy is used appropriately and flexibly by the reader its action is purposeful.

Students need to be exposed to appropriate materials for reading to be effective and meaningful. "In New Zealand a reading program is not limited to any package, or series of materials, or set of teaching steps. "Program" means everything that is planned for and happens in a school or classroom: the philosophy; the way it is implemented; the resources; and the management of time, people, resources, and space. New Zealand teachers do not restrict their reading programs to one set of materials, but all material used reflects one set of principles" (Mooney, 1990, p. 23).

Providing an environment conducive to motivating reading can assist students in improving reading comprehension. An organized and well-designed classroom enables the teacher to observe, facilitate, support, and meet the learning needs of each child. "The classroom organized for literacy learning is built upon the following theories about literacy: all children can learn to read and write, children learn about written language in an environment that is print rich, learning is a social process, learning is a constructive process, an organized environment supports the learning process, powerful demonstrations are an important part of the learning process, and children learn best when they are responsible for their own learning" (Fountas & Pinnell, 1996, p. 10).

Managing group or individualized reading is easy when the teacher is prepared and the classroom is appropriately designed. An organized, warm, and inviting classroom environment provides an atmosphere that encourages students to work in groups or independently. "A comfortable floor plan invites students to read and write without distraction. Ample, easy to acquire supplies guarantee you and your students spend more time on instruction and less time on program management" (English, 1996, p. 57). When designing the classroom floor plan, one needs to consider the wants and needs of all students.

All research indicates that the provision of education for parents and supporting the community improves reading skills in students. Teachers recognize that children's home backgrounds can influence failure or success. Classroom teachers are probably the most important component in the success or failure of at-risk children in schools. "The number of children living in poverty rose from 16% in the late 1970's to 25 % - one out of every four children! In spite of recent legislation, we can also expect that 40% of all children will live on Aid to Dependent Children (ADC) for at least one year before reaching the age of eighteen" (Cunningham & Allington, 1999, p. 96). Poverty is not the only factor that determines if a child is at risk for reading difficulties, but it is the most pervasive one" (Cunningham & Allington, 1999, p. 90).

A crucial component in the success or failure of readers is their early reading experiences. Successful readers have many opportunities to hear language, be exposed to print, and have opportunities to interact with literature. There are many skills that are threaded together to create a competent reader. Success depends on the exposure children have in their early school years. "According to David Dickinson (1994), one of the key elements distinguishing effective preschools and kindergartens from less effective ones is the nature of teacher-student talk. The more effective teachers use discussions about books, behavior, or even giving directions as opportunities for encouraging children to think, predict, extend, or make personal connections" Honig, 1996, p. 24).

As educators, we have seen many children learning to read in the early years with almost any instructional method, others falter when faced with reading instruction. "There difficulties may stem from lack of preschool, literacy experiences, biological factors that make the processing of print difficult, attention problems, or a school reading curriculum that does not adequately address their instructional needs" (Hicks & Villaume, December 2000/January 2001).

The reading process is a difficult one. It is no surprise that schools try many approaches that have proven effective to teach children to read. Reading Recovery is an early intervention program that has received much attention

in recent years. Reading Recovery is a one-on-one intervention unlike many other interventions that does not follow a predetermined curriculum. "Reading Recovery teachers work within a defined instructional framework as they make instructional decisions that focus on the confusions and frustrations experienced by an individual child" (Hicks & Villaume, December 2000/January 2001).

An extremely successful comprehensive reading program by Robert Slavin's entitled "Success for All" has produced significant measurable results. It teaches children to retell stories in order to develop an active engagement with books (Honig, 1996, p. 14).

Early intervention programs that are successful target the needs of children versus a one size fits all effort. It is apparent that children who arrive at school with few experiences with books or print would greatly benefit from an early intervention program. "There are several national early intervention projects that deserve mention: Reading Recovery, Success for All, and Learning Network" (Cunningham & Allington, 1999, p. 78).

Successful reading programs should begin with an effective preschool, head start, or kindergarten curriculum. "Early reading programs must explicitly include activities that teach the names and shapes of letters and, as much as possible, their simplest sounds, since some have more than one. It must include beginning phonemic awareness and print and syntactic awareness, in addition to the strands that

stress oral language; listening to, discussing, and retelling stories; and writing group stories" (Honig, 1996, p. 19).

Teachers choose a career in education largely because of the ability to make a difference in the life of a youngster. Most teachers want students to succeed. Based upon the notion to help all students succeed forces teachers to explore non-traditional methods of instruction. Multiple Intelligences (MI) is a theory that makes it possible for more children to succeed in school. As suggested by Gardner, the Multiple Intelligence theory teaches us that all kids are smart, but in different ways. "Teachers and principals are finding that using Multiple Intelligences not only increases the opportunities for students to learn, but also gives adults and children more avenues and ways to grow professionally and personally" (Hoerr, 2001, p. 34).

Educators gladly embrace MI theory because it calls for us to do what we know is good for our students. We know our students become alert, become engaged, like class, like each other more, and learn more when we include movement, pictures, music, nature, introspection and interaction as part of our instruction and curriculum. MI is providing education with a rationale for doing what we know is good for kids. "The more diverse learning experiences we provide our students, the more robust their education will be, the more ways they will learn each topic, hence the more they are

prepared to succeed in a world marked by increasing diversity and an accelerating change rate" (Kagan & Kagan, 1998, p.xxi).

Project Objectives and Processes

As a result of increased instruction in the area of reading by utilizing Multiple Intelligences, during the period of September 2001 and January 2002, the fourth grade students from the targeted classes will increase their reading comprehension, as measured by teacher-constructed tests, running records, and reviews of anecdotal records.

In order to accomplish the project objective, the following processes are necessary:

1. Materials that improve reading comprehension will be developed.

2. A series of teaching strategies that address comprehension will be developed for reading.

3. Multiple intelligence lessons reflecting reading comprehension will be constructed.

Project Action Plan

September

After assessing the students in the area of Multiple Intelligences, additional intelligences will be explored to engage and enhance the reading curriculum.

Week 1

- Give and review student survey (Appendix A)
- Give and review parent survey (Appendix B)
- Give and review parent checklist (Appendix C)
- Send home parent consent forms

Week 2

- Introduce theory of Multiple Intelligences (MI)

- Assess strengths/weaknesses of students in areas of intelligence according to Gardner's theory of MI (Appendix D)
- Review returned parent consent forms and discuss action plan with students
- Administer reading running record (passage one)

Week 3
- Introduce the reading strategy connecting text to prior experiences to strengthen comprehension (strategy #1)

Week 4
- Continue implementing strategy #1
- Teach students self-evaluation strategy to evaluate own reading (Appendix E)

Activities:
- Building Relations (Kagan) Interpersonal
- Making Analogies (Kagan) Intrapersonal
- Thinking Aloud to introduce connection making (Interpersonal)
- Linking text to personal life (Character/setting) (Intrapersonal)

October

Week 1
- Introduce the reading strategy making connections to build understanding (strategy #2)

Week 2
- Teach the strategy of questioning to promote higher-order thinking (strategy #3)

Week 3
- Continue implementing the strategy of questioning

Week 4
- To increase text understanding teach the strategies of visualizing and inferring (strategy #4)

**As new strategies are introduced previously taught strategies will continue to be revisited.
Activities:
- Text to text connections
- Collecting information and listing prior knowledge to build a store of knowledge about particular events in a story. (K-W-L)

- Sharing personal experiences to build connections to the world (Text to world)
- Share questions for thinking
- Monitor comprehension to clarify confusion about text (sticky notes)
- Create Wonder Books to support inquiry to explore thinking
- Fat and Skinny Questions
- Question Webs (graphic organizer to expand thinking) carousel on chart paper
- Illustration of mental images from a given story
- Use the five senses to comprehend text (I see, I hear, I feel, I smell, I can taste)
- Text overview of illustrations
- Differentiating between plot and theme (inferring the big idea)
- Use PC chart (predict/confirm) to move through text
- Stop, Drop, and Predict activity page
- Creative Connector
- Connect Two
- Question Evaluation Sheet (authentic questions)
- Questioning Before, During, and After
- Kagan Structure "Who Am I?" for characters in a novel (Bodily/Kinesthetic and Interpersonal)
- Kagan Structure "Inside Outside Circle" for questions in a story (Bodily/Kinesthetic and Interpersonal)
- Student self-evaluation checklist while silent reading to target specific strategy

November

Week 1

- Continue implementing reading strategy #4
- Administer reading running record (passage #2)

Week 2

- Teach students how to sort and sift through text to determine the importance in text (strategy #5)

Week 3

- Continue implementing strategy #5

Week 4

- Teach the complex strategy of synthesizing (strategy #6)

Activities:

- Teach the skills of skimming, scanning, highlighting

- Text preview/text structure (Venn diagram - Visual/Spatial)
- Create nonfiction convention book to demonstrate the difference between narrative and expository text structure
- Reading specific information to answer specific questions
- Discussion about how synthesizing is similar to baking (Read ingredients to bake a cake)
- Use sticky notes to recall details of a story in order to retell the story in own words
- Use Venn diagram to compare/contrast elements of a story
- Use *Time for Kids* to evolve thinking by summarizing the content and adding a personal response
- Create two-column note taking sheet to connect present with past (Mathematical/Logical)
- Fiction/Nonfiction Summarizations
- Story Maps
- Character charades (Bodily/Kinesthetic)
- Create a song about key events or characters (Musical/Rhythmic and Interpersonal)
- Timelines to summarize the events in the story (Mathematical/Logical and Visual/Spatial)
- Kagan structure, "Find-someone-who," for comprehension of story events (Interpersonal and Bodily/Kinesthetic)
- Student self-evaluation checklist while silent reading to target specific strategy (Appendix F)

December

Week 1

- Synthesizing

Week 2

- Synthesizing
- Administer reading running record (passage #3)

Week 3

- Students complete reflective reading self assessment (Appendix G)
- Tabulate results of final assessment
- Analyze the increase/decrease of student performance in the area of comprehension
- Teacher completes reflective summary (Appendix H)
- Conduct classroom discussion talking about results of action plan
- Student self-evaluation checklist while silent reading to target specific strategy

Methods of Assessment

In order to effectively assess the results of the intervention, teacher-constructed tests covering reading comprehension will be developed. In addition, anecdotal records will be kept throughout the intervention. Teacher and student reflective summaries, student self-assessments, Informal Reading Inventories, MI self-assessments, and student-parent surveys are tools that will be used to conduct authentic assessments to evaluate student growth. Interviews with students will be held as part of the assessment process.

CHAPTER 4

PROJECT RESULTS

Historical Description of the Intervention

The objective of this project was to improve student performance in the area of reading comprehension. The implementation of Multiple Intelligences and the use of specific reading strategies were incorporated to attain the desired changes.

Multiple Intelligences was used as an instructional technique in delivering reading content as a means of improving reading comprehension. Multiple Intelligence Assessments were given during the second week of the school year at both sites to assess strengths and weaknesses of students according to Gardner's Theory of MI (Appendix D). After assessing the students in the area of Multiple Intelligences, additional intelligences were explored to engage and enhance the reading curriculum. Teaching through the use of MI was maintained throughout the entire action plan.

To enhance the understanding of reading, six specific reading strategies were designed in the action plan. Original plans called for these reading strategies to be taught over a period of three months. Five weeks into the action plan, the number of reading strategies was clearly too many due to the level of thinking required per strategy. Due to the complexity of certain strategies, the ambition of the

researchers concluded to be excessive. Observations made by the classroom teachers at both sites concluded that student skill development did not allow for certain strategies to be taught in depth. The reading skills chosen for the action plan included: connecting text to prior experiences, making predictions, questioning to promote higher order thinking, visualizing and inferring, skimming text for relevance, and synthesizing. Prior to teaching particular strategies, parent notification was sent explaining the process in using that strategy in reading. At home activities pertaining to the specific strategy were supplied to the parents. At both sites, researchers determined that specific strategies were not being taught in depth, but rather to accomplish the completion of the action plan. In order to reinforce the quality of the reading strategies being taught, the last two strategies were abandoned. With a greater quantity of time, all reading strategies could have been implemented to enhance deeper understanding by all students. As a result of reducing the reading strategies, the researchers were able to teach and reinforce the existing strategies throughout the course of the action plan. Inserting MI into the curriculum noticeably improved the level of engagement during reading instruction.

Presentation and Analysis of Results

In order to assess reading comprehension, students were given a variety of assessments. Teacher-constructed tests varied between the two sites. The same reading strategies

were tested according to the action plan, but through the use and study of different reading curricula. The researchers administered running records and reviewed anecdotal records. Students input during guided reading lessons was also used to determine an increase or decrease in applying reading strategies to bridge comprehension over the three month period. A reading strategy checklist was maintained during guided reading and used as a review with the students during the student-teacher conference (Appendix F). The students from the targeted schools were given a post-survey in mid-December. Student responses on this survey were similar, but found reading to be a more positive experience in the school setting. Students continued to view reading comprehension as not an immediate problem. The survey was read orally to the participating students at each site, and students were given a device to track their response.

Site A

Table 4

Summary of Reader Self-Perception Post Survey

Survey Question	Frequency Distribution SA	A	U	D	SD
1. I think I am a good reader.	6	6	2	1	0
2. I can tell that my teacher likes to listen to me read.	5	5	5	0	0
3. My teacher thinks that my reading is fine.	3	8	3	0	0
4. I read faster than other kids.	3	3	4	2	2
5. I like to read aloud.	4	4	2	4	1
6. When I read, I can figure out words better than others.	4	5	3	3	0
7. My classmates like to listen to me read.	1	3	9	1	1
8. I feel good inside when I read.	7	4	3	1	0
9. My classmates think I read pretty well.	3	5	7	0	0
10. When I read, I don't have to try as hard as I used to.	10	4	1	0	0
11. I seem to know more words than other kids when I read.	5	5	3	1	1
12. People in my family think I am a good reader.	12	3	0	0	0
13. I am getting better at reading.	9	6	1	0	0
14. I understand what I read as well as other kids do.	6	8	0	0	0
15. When I read, I need less help than I used to.	12	3	0	1	0
16. Reading makes me feel happy inside.	6	6	1	1	1
17. My teacher thinks I am a good reader.	4	5	6	0	0
18. Reading is easier for me than it used to be.	10	5	0	0	0
19. I read faster than I could before.	11	2	0	1	1
20. I read better than other kids in my class.	4	3	5	1	2

*Note: SA = Strongly Agree, A = Agree, U = Undecided (not sure), SD = Strongly Disagree, and D = Disagree.

Site B

Table 5

Summary of Reader Self-Perception Post Survey

Survey Question	Frequency Distribution SA	A	U	D	SD
1. I think I am a good reader.	15	4	2	0	0
2. I can tell that my teacher likes to listen to me read.	11	4	6	0	0
3. My teacher thinks that my reading is fine.	10	6	5	0	0
4. I read faster than other kids.	9	5	4	1	2
5. I like to read aloud.	8	6	3	0	3
6. When I read, I can figure out words better than others.	9	4	7	1	0
7. My classmates like to listen to me read.	5	4	10	2	0
8. I feel good inside when I read.	14	4	3	0	0
9. My classmates think I read pretty well.	8	3	9	1	0
10. When I read, I don't have to try as hard as I used to.	13	6	1	1	0
11. I seem to know more words than other kids when I read.	10	4	6	1	0
12. People in my family think I am a good reader.	17	4	0	0	0
13. I am getting better at reading.	15	3	3	0	0
14. I understand what I read as well as other kids do.	10	7	4	0	0
15. When I read, I need less help than I used to.	17	2	1	1	0
16. Reading makes me feel happy inside.	14	2	3	1	0
17. My teacher thinks I am a good reader.	10	7	4	0	0
18. Reading is easier for me than it used to be.	14	3	4	0	0
19. I read faster than I could before.	16	3	2	0	0
20. I read better than other kids in my class.	8	4	6	3	0

*Note: SA = Strongly Agree, A = Agree, U = Undecided (not sure), SD = Strongly Disagree, and D = Disagree.

After the reader self-perception survey was tabulated, the frequency distribution demonstrated that the students at both sites felt better about themselves as competent readers. The results at Site A and Site B showed that students viewed reading to be easier than before, less dependent on the teacher for help, and an improved self perception about reading. Upon analyzing the frequency distribution it was evident that students improved their confidence to view themselves as adequate readers.

During guided reading lessons researchers at both sites maintained reading strategy checklists for each student (Appendix F). This checklist was used to document how students were using the strategies taught in class to better improve their comprehension during the reading passage. Students showed growth in the areas of text structure which included text-to-self, text-to-text, text-to-world, and making predictions. The success of these two strategies can be interpreted as to the amount of time that was devoted to teaching these two strategies. Text structure and making predictions are also considered lower level thinking skills which evidently showed growth over time. As the hierarchy of thinking skills became more difficult, it came as no surprise that higher order reading strategies also confirmed the decrease in numbers of students using these strategies while reading. The researchers felt that given more time to teach higher order reading strategies on a continuum, greater application of these strategies would be evident.

Site A

Table 6

Summary of Strategies Used by Students

Strategies	Not Much	A Little	Most of the Time	Almost Always
Used text structure.	3	3	6	6
Made predictions.	2	3	7	7
Made pictures in my mind.	5	3	5	5
Fixed problems by rereading, looking ahead, and checking the importance.	7	4	4	3
Asked myself questions.	6	5	4	3
Synthesizing.	0	0	0	0
Skimming.	0	0	0	0

Site B

Table 7

Summary of Strategies Used by Students

Strategies	Not Much	A Little	Most of the Time	Almost Always
Used text structure.	2	4	6	9
Made predictions.	1	2	5	13
Made pictures in my mind	3	4	3	11
Fixed problems by rereading, looking ahead, and checking the importance	2	4	7	8
Asked myself questions	4	5	5	7
Synthesizing	0	0	0	0
Skimming	0	0	0	0

According to the data shown on the checklists for both sites, fewer students were willing to fix problems, look ahead, and check for relevance while reading an assigned passage. However, anecdotal records demonstrated that many students used a repertoire of reading strategies other than the ones targeted during guided and independent reading. As the reading strategies required a greater depth of thinking, it appeared that the scores decreased. Time permitting, the completion of all strategies in accordance with the original action plan, the researchers could predict that the last two strategies, skimming and synthesizing, would also show lower numbers.

ISAT Testing is common practice for schools in the state of Illinois. The Illinois Standard Achievement Test (ISAT) data for the last three years, as shown in Chapter 2, demonstrated that students fell below the does not meet category or the expectations held by their sites. Currently, the ISAT Tests are given to both sites in early spring. The data is unavailable to determine whether the action plan set forth by the researchers increased or decreased the reading scores for 2002.

Along with the student survey, a post-survey and checklist was administered to the parents after the completion of the action plan in late December (Appendixes B and C). Results of the survey varied between each site. Although Site A experienced difficulty in retrieving parent responses, all were completed after the action plan than

before the action plan was implemented. The researchers believe this was due to the parent information given to parents during the course of the action plan. Parents became aware and more interested in the results for their student. Site B parents continued to have a 100% return rate for the parent surveys.

PARENT SURVEY RESULTS SITE A

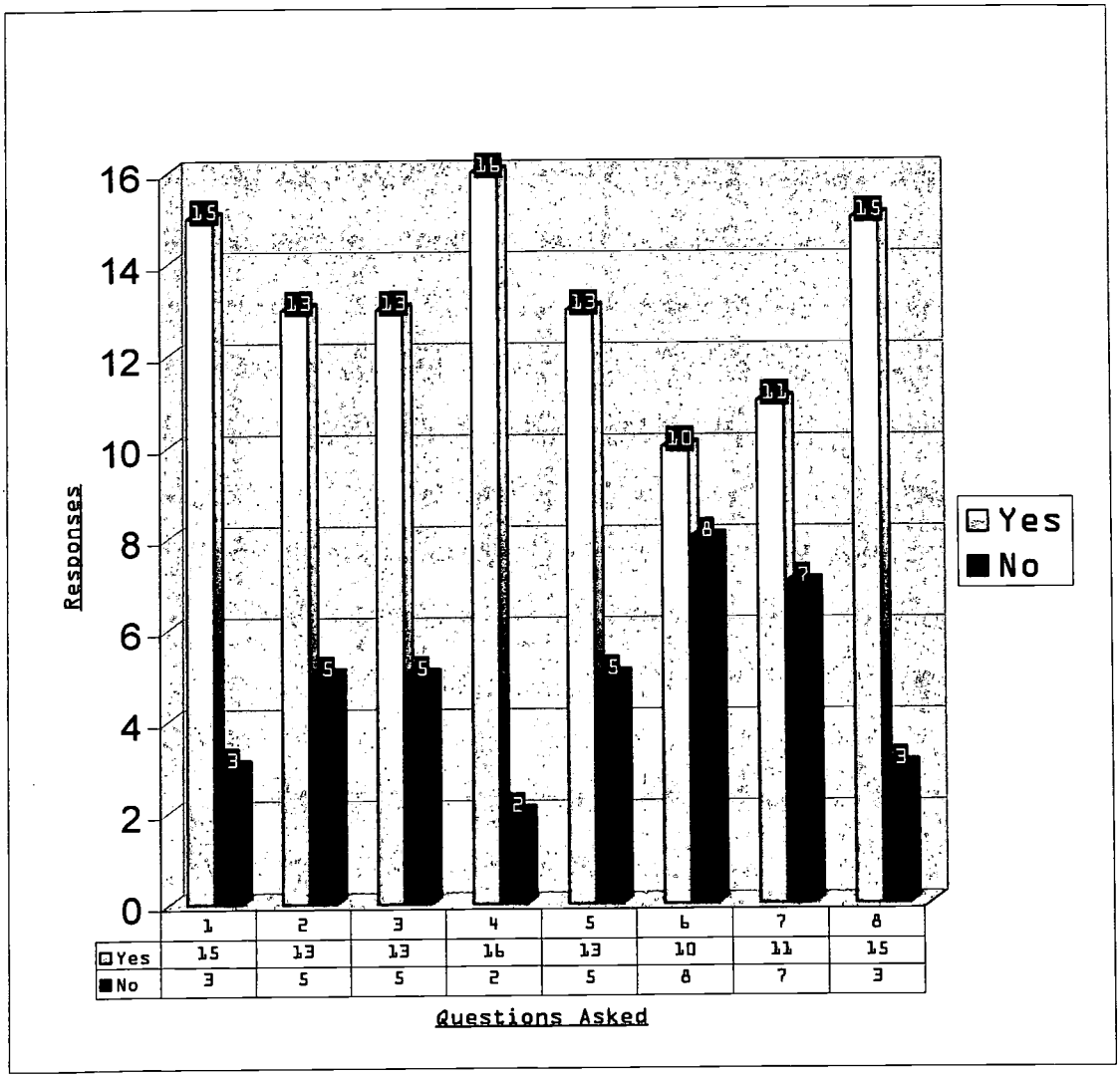


Figure 3. Parent Checklist

Statement 1: My child likes to listen to me read to him or her.
Statement 2: My child likes to read to me.
Statement 3: My child attempts to read in daily situations.
Statement 4: My child understands books I read to him or her.
Statement 5: My child attempts to figure out the words.
Statement 6: My child sometimes chooses to write.
Statement 7: My child shares what he or she writes.
Statement 8: My child is provided with the opportunity to visit the public library often.

PARENT SURVEY RESULTS SITE B

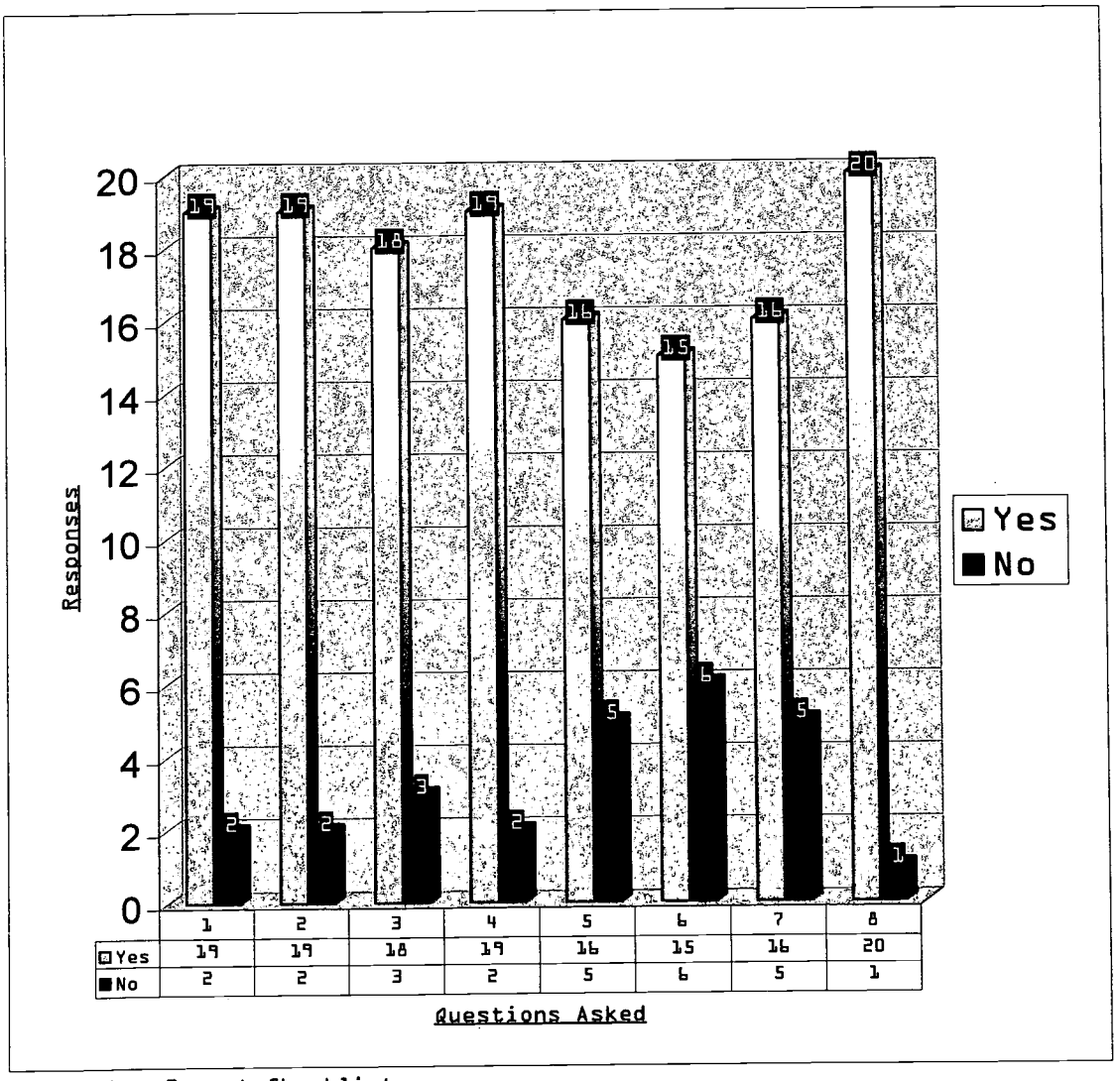


Figure 4. Parent Checklist

Statement 1: My child likes to listen to me read to him or her.
Statement 2: My child likes to read to me.
Statement 3: My child attempts to read in daily situations.
Statement 4: My child understands books I read to him or her.
Statement 5: My child attempts to figure out the words.
Statement 6: My child sometimes chooses to write.
Statement 7: My child shares what he or she writes.
Statement 8: My child is provided with the opportunity to visit the public library often.

Figures 3 and 4 depict the results of the survey completed by parents at the completion of the action plan. Of the parents who completed the survey, high percentages of parents overwhelmingly marked yes for questions 1, 2, 4, 5, and 8. Parents continued to feel that their students liked to be read to and that their students liked to read to them. Question three, according to the parent survey, suggested a slight improvement in children attempting to read on a daily basis. Although the data collected for Questions 6 and 7 slightly changed for the post survey, the overall interpretation of the two questions remains the same. With the additional parent responses collected and the slight improvement in yes answers, the researchers contributed the small gains as an indication towards a more positive outlook on reading due to the implementation of the action plan.

The parent survey results from Site A continue to show overwhelming responses to particular questions. Parents felt that their child enjoyed listening to them read orally and seemed to understand the text of books read to them. The data represented from Site A also showed an increase in children reading to parents, reading more frequently in daily situations, and using strategies to bring meaning to unfamiliar words. It is evident that parents continue to provide opportunities for the children to visit the public library. However, the parent survey suggested that students continue to look at writing as an isolation process. The

writing component seemed to be lacking according to the parents perception.

Site B also participated in a parent post-survey. There was noticeable improvement in most areas that required children to be active listeners or participants in daily reading activities at home. Many opportunities are also provided for the children to visit their public library. The survey indicates a better percentage of children participating in the writing process as seen through the eyes of parents. However, parents would like to see their children connecting writing with the reading process.

A mandatory running record was required to be given at both sites during the second quarter. The results indicated that the fluency of the reader had improved over time. The comprehension of a small percentage of students increased to some extent at Site A, while the results at Site B remained fairly constant. As indicated earlier on the student teacher conference checklist, students were able to use lower level reading strategies to bridge the gap to better understanding of a reading passage.

Conclusions and Recommendations

Based on the presentation and analysis of the data on reading comprehension, the students' showed a positive gain in using reading strategies to aid in the understanding of reading. The reading strategies learned through the integration of Multiple Intelligences appear to have transferred into other content areas. Although the amount of

teacher time devoted to the action plan was intense, students have become more independent thinkers questioning as they read. The strategies learned during reading instruction increased the level of performance of most students. The multi-faceted reading lessons allowed students to be engaged while learning the complicated reading process of understanding text.

As a result of three months of intense reading instruction, the students at both sites showed a reasonable amount of improvement. As students become better strategic readers, the learner can use a specific strategy independently and reflect on and understand how it works. When a reading skill becomes a strategy, the student becomes what we consider a strategic reader. The action plan that was implemented proved to be an attempt at viewing reading as an encompassing process involving thinking, application, and construction.

There are some recommendations for other teachers who might be exploring a similar project to improve reading comprehension. The researchers recommend teaching reading as a process while targeting specific reading strategies. We recommend looking at what proficient readers in the classroom do to begin understanding the difficulties of the reluctant reader. It is imperative to teach students to search for connections between what they know, and new information they encounter in the texts they read. Students should ask questions of themselves, the authors they experience, and the

text they read. Although a complex skill, teaching the skill of inferencing during and after reading will continue to be a specific strategy to better comprehension. Distinguishing important from less important ideas in text, synthesizing information within text, and positive reading experiences will begin to repair faulty comprehension. The skills of determining importance or synthesizing information will help students as they read for information, particularly in social studies and science content areas. The researchers know that proficient readers visualize and create images using the different senses to better understand what they read, therefore, recommending this complex strategy be taught in depth. Furthermore, monitoring the adequacy of student understanding is the key to better transfer of strategies during independent reading.

The researchers also recommend a significant amount of time be spent modeling reading strategies to show students how to learn. Constructing meaning is a goal of comprehension through the use of a strong foundation of reading strategies. We want students to use strategies to enhance their understanding, acquire and use their knowledge, monitor their understanding, and learn to develop insight into what they read. Tapping into a child's Multiple Intelligences enhances understanding by going beyond the story in a purposeful way to make it meaningful and real.

The only reservation that was shared between the researchers was that the action plan was overly ambitious due

to the complexity of the reading process as it relates to certain reading strategies. We highly recommend teaching the strategies mentioned over a longer period of time to allow for in-depth instruction and transfer of learning. Students felt a strong desire to improve their reading comprehension, therefore they actively participated in all reading lessons set forth by the action plan. It is strongly recommended to extend the teaching of the strategies over an entire school year to ensure a continuum of progression for each reading strategy that is taught.

With some modifications to the length of time given to each specific strategy, the proposal mentioned can be used as a successful way to improve student performance in the area of reading comprehension.

References

Allington, R., & Walmsley, S. (1995). No quick fix: Rethinking literacy programs in America's elementary schools. New York: Teachers College Press.

Armstrong, T. (1994a). Multiple intelligences in the classroom. Alexandria, VA: Association for Supervision and Curriculum Development.

Armstrong, T. (1994b). Multiple intelligences: Seven ways to approach curriculum. Educational Leadership, 55, 8-13.

Barkman, R. (1998). Patterns and the eighth intelligence. The Building Tool Room [On-line]. Available: URL http://www.newhorizons.org/trm_mipattern.html

Burns, P. & Roe, B. (1999). Informal reading inventory: Preprimer to twelfth grade. Boston & New York: Houghton Mifflin.

Campbell, B. (1990). The research results of a multiple intelligences classroom. New Horizons for Learning [On-line] Available: URL http://www.newhorizons.org/art_m ireserch.html

Campbell, L. (1997). How teachers interpret MI theory. Educational Leadership, 55(1), 14-19.

Campbell, L., & Campbell, B. (1999). Multiple intelligences and student achievement: Success stories from six schools. Alexandria, VA: Association for Supervision and Curriculum Development.

Campbell, L., & Campbell, B. (1999). Why MI? In Multiple intelligences and student achievement: Success stories from six schools [On-line]. Available: URL http://www.ascd.org/readingroom/books/campbell99.html

Campbell, L., Campbell, B., & Dickinson, D. (1999). Teaching and learning through multiple intelligences. Needham Heights, MA: Allyn & Bacon.

Cantrell, M.L., Ebdon, S.A., Firlik, R., Johnson, D., & Rearick, D. (1997). The summer starts program. Educational Leadership, 38-41.

Carter, C.J. (1997). Why reciprocal teaching? Educational Leadership, 54(6), 64-68.

Chapman, C. (1993). If the shoe fits...: How to develop multiple intelligences in the classroom. Palatine, IL: IRI/Skylight Training and Publishing.

Checkley, K. (1997). The first seven...and the eighth. Educational Leadership, 55(1), 8-13.

Clark, Jr., E. (1992). The search for a new educational paradigm. In A. Costa, J. Bellanca, & R. Fogarty (Eds.), If minds matter: A foreword to the future Vol. I: Rationale for change (pp. 25-39). Arlington Heights, IL: Skylight Training & Publishing, Inc.

Clay, M. (1991). Becoming literate: The construction of inner control. Portsmouth, NH: Heinemann.

Collins, M. D. & Cheek, E. H. (1993). Diagnostic-prescriptive reading instruction: A guide for classroom teachers. Dubuque, IA: Brown & Benchmark.

Costa, A., Bellanca, J., & Fogarty, R. (Eds.). (1992). If minds matter: A foreword to the future Vol. I: Rationale for change (p. 1). Arlington Heights, IL: Skylight Training & Publishing, Inc.

Cunningham, P. & Allington, R. (1999). Classrooms that work: They can all read and write. New York: Longman.

Desombre, A. (1997). Telling parents about MI. Classroom Leadership Online [On-line]. Available: URL http://www.ascd.org/readingroom/classlead/9709/class9c.html

Developing higher order thinking skills and multiple intelligences. Metronet [On-line]. Available: URL http://www.metronet.com/~bhorizon/teach.htm

Dickinson, D. (2001). Intelligence in seven steps. [On-line] Available: URL http://www.newhorizons.org/crfut_gardner.html

Donoahue, Z. (1998). Giving children control: Fourth graders initiate and sustain discussions after teacher read-alouds. Networks [On-line]. Available: URL http://www.oise.utoronto.ca/~ctd/networks/journal/Vol%201(1).1998sept/article4.html

Ellison, L. (1992). Using multiple intelligences to set goals. Educational Leadership [On-line], 50. Available: URL http://www.ascd.org/readingroom/edlead/9210/ellison.html

Emig, V. (1997). A multiple intelligences inventory. Educational Leadership, 55(1), 47-50.

English, E. (1996). Individualized reading: A complete guide for managing one-on-one instruction. Cypress, CA: Creative Teaching Press.

Fountas, I. & Pinnell, G. (1996). Guided reading: Good first teaching for all children. Portsmouth, NH: Heinemann.

Gardner, H. (1993). "Choice points" as multiple intelligences enter the school. Intelligence Connections [On-line]. Available: URL http://www.multiintell.com/articles/gardner2.htm

Gardner, H. (1993). Frames of mind: The theory of multiple intelligences. New York: Harper Collins.

Gardner, H. (1991). Intelligence in seven steps. Intelligence Connections [On-line]. Available: URL http://www.multi-intell.com/articles/gardner.htm

Gardner, H. (1997). Multiple intelligences as a partner in school improvement. Eucational Leadership, 55(1), 20-21.

Gardner, H. (1993). Multiple intelligences: The theory in practice. New York: Harper Collins.

Greenhawk, J. (1997). Multiple intelligences meet standards. Educational Leadership, 55(1), 62-64.

Guignon, A. (1998). Multiple intelligences: A theory for everyone. Educational World [On-line] Available: URL http://www.education-world.com.html

Guild, P. (1997). Where do the learning theories overlap? Educational Leadership, 55(1), 30-31.

Harvey, S. & Goudvis, A. Strategies that work: Teaching comprehension to enhance understanding. York, ME: Stenhouse Publishers.

Hicks, C., & Villaume, S. (December 2000/January 2001). Finding our own way: Critical reflections on the literacy development of two reading recovery children. The Reading Teacher, 54(4), 398-412.

Hoerr, T. (2000). Becoming a multiple intelligences school. [On-line] Available: URL http://www.ascd.org/readingroom/books/hoerr00.html

Hoerr, T. (1997). Frog ballets and musical fractions. Educational Leadership, 43-46.

Hoerr, T. (1994). How the new city school applies the multiple intelligences. Educational Leadership, 52(3) [On-line] Available: URL http://www.ascd.org/reading room/edlead/9411/hoerr.html

Hoerr, T. (1992). How our school applied multiple intelligences theory. Educational Leadership, 50(2) [On-line] Available: URL http://www.ascd.org/reading room/edlead/9210/hoerr.html

Honig, B. (1996). Teaching our children to read: The rold of skills in a comprehensive reading program. Thousand Oaks, CA: Corwin Press.

Jeroski, S. & Brownlie, F. (1992). How do we know we're getting better? In A. Costa, J. Bellanca, & R. Fogarty (Eds.), If minds matter: A foreword to the future Vol. II: Designs for Change (pp. 321-336). Arlington Heights, IL: Skylight Training & Publishing, Inc.

Kagan, S., & Kagan, M. (1998). Multiple intelligences: The complete MI book. San Clemente, CA: Kagan Cooperative Learning.

Knodt, J. (1997). A think tank cultivates kids. Educational Leadership, 55(1), 35-37.

Lazear, D. (1994). Seven pathways of learning: Teaching students and parents about multiple intelligences. Tucson, AZ: Zephyr Press.

Lambert, W. (1997). From crockett to tubman: Investigating historical perspectives. Educational Leadership, 55(1), 51-54.

Latham, A. (1997). Quantifying MI's gains. Educational Leadership, 55(1), 84-85.

Lazear, D. (1998). "Actions speak louder than words!": Explorations of bodily/kinesthetic intelligence. [On-line] Available: http://www.multi-intell.com/articles/bk_article.html

Lazear, D. (1998). Getting to know you & me?: Exploration of interpersonal and intrapersonal intelligences. [On-line] Available: http://www.multi-intell.com/articles/inter_intra_article.html

Lazear, D. (1998). "Seeing is believing" (and knowing!): Explorations of visual/spatial intelligence. [On-line] Available: http://www.multi-intell.com/articles/vs_article.html

Lipton, L. (1992). Meaning is the method: Whole language in the thoughtful classroom. In A. Costa, J. Bellanca, & R. Fogarty (Eds.), If minds matter: A foreword to the future Volume II: Designs for change (pp. 91-100). Arlington Heights, IL: Skylight Training & Publishing, Inc.

Lyons, C. (2001). Reading recovery in the united states: More than a decade of data. [On-line] Available: URL http://www.readingrecovery.org/Reading RecoveryInfo/Articles/rrusa4.html

Merrefield, G. (1997). Three billy goats and gardner. Educational Leadership, 55(1), 58-61.

Meyer, M. (1997). The greening of learning: Using the eighth intelligence. Educational Leadership, 55(1), 32-34.

Mooney, M. (1990). Reading, to, with, and by children. Katonah, NY: Richard C. Owen Publishers.

Reading literacy in the united states: Executive summary. (2001). [On-line] Available: URL http://nces.ed.gov /pubs/96258-2.html

Reid, C., & Romanoff, B. (1997). Using multiple intelligence theory to identify gifted children. Educational Leadership, 55(1), 71-74.

Rhoades, J. & McCabe, M. (1992). Cognition & cooperation: Partners in excellence. In A. Costa, J. Bellanca, & R. Fogarty (Eds.), If minds matter: A foreword to the future Vol. II: Designs for Change (pp. 43-52). Arlington Heights, IL: Skylight Training & Publishing, Inc.

Silver, H., Strong, R., & Perini, M. Integrating learning styles and multiple intelligences. Educational Leadership, 55(1), 22-27.

Silver, H., Strong, R., & Perini, M. (2000). So each may learn. Alexandria, VA: Association for Supervision and Curriculum Development.

Sloane, M. (Winter 1998/99). Engaging primary students: Learning resource centers. Childhood Education, 76-82.

Sumner, P. H., & Bernholz, J. F. (1992). Success in reading and writing. Glenview, IL: Good Year Books.

Tyler, R. (1992). Introduction. In A. Costa, J. Bellanca, & R. Fogarty (Eds.), If minds matter: A foreword to the future Vol. II: Designs for Change (pp. xiii-xiv). Arlington Heights, IL: Skylight Training & Publishing, Inc.

Vialle, W. (1997). In australia: multiple intelligences in multiple settings. Educational Leadership, 55(1), 65-70.

Wallach, C. (n.d./2001). Putting it into practice. [On-line] Available: URL http:// www.newcityschool.org/practice.html

Weber, E. (1992). Curriculum for success. New Horizons for Learning [On-line], 12. Available: URL http://www.newhorizons.org/article_weber92.html

Wilcox, E. (2000). Music, brain research, and better behavior. The Education Digest, 65(6), 10-15.

Winograd & Gaskins, (1992). Metacognition: Matters of the mind, matters of the heart. In A. Costa, J. Bellanca, & R. Fogarty (Eds.), If minds matter: A foreword to the future Vol. I: Rationale for Change (pp. 225-238). Arlington Heights, IL: Skylight Training & Publishing, Inc.

Wolfe, P., & Brandt, R. (1998). What do we know from brain research? Educational Leadership. 8-13.

APPENDICES

Appendix A
The Reader Self-Perception Scale

The Reader Self-Perception Scale

Listed below are statements about reading. Please read each statement carefully. Then circle the letters that show how much you agree or disagree with the statement. Use the following code:

SA = Strongly Agree A = Agree
U = Undecided (not sure) D = Disagree
SD = Strongly Disagree

Example: I think pizza with pepperoni is the best. SA A U D SD

If you are *really positive* that pepperoni pizza is best circle SA (strongly agree).
If you *think* that is good but maybe not great circle A (agree).
If you *can't decide* whether or not it is best circle U (undecided).
If you *think* that pepperoni pizza is not all that good circle D (disagree).
If you are *really positive* that pepperoni pizza is not very good circle SD (strongly disagree).

1.	I think I am a good reader.	SA A U D SD
2.	I can tell that my teacher likes to listen to me read.	SA A U D SD
3.	My teacher thinks that my reading is fine.	SA A U D SD
4.	I read faster than other kids.	SA A U D SD
5.	I like to read aloud.	SA A U D SD
6.	When I read, I can figure out words better than others.	SA A U D SD
7.	My classmates like to listen to me read.	SA A U D SD
8.	I feel good inside when I read.	SA A U D SD
9.	My classmates think that I read pretty well.	SA A U D SD
10.	When I read, I don't have to try as hard as I used to.	SA A U D SD
11.	I seem to know more words than other kids when I read.	SA A U D SD
12.	People in my family think I am a good reader.	SA A U D SD
13.	I am getting better at reading.	SA A U D SD
14.	I understand what I read as well as other kids do.	SA A U D SD
15.	When I read, I need less help than I used to.	SA A U D SD
16.	Reading makes me feel happy inside.	SA A U D SD
17.	My teacher thinks I am a good reader.	SA A U D SD
18.	Reading is easier for me than it used to be.	SA A U D SD
19.	I read faster than I could before.	SA A U D SD
20.	I read better than other kids in my class.	SA A U D SD

Appendix B
Reflective Parent Survey About Reading

Reflective Parent Survey About Reading

****

Dear Parent,

Please take a few minutes and reflect on what you have observed about your child's reading at home. Your information can help me provide more appropriate instruction to your child. I appreciate your help.

Sincerely,

Child's Name_____

1. What strengths do you think your child has in reading?

_____

2. Please list your child's interests.

_____

3. What types of literature or authors does your child like?

_____

4. What concerns do you have about your child's reading?

_____

5. What magazines, books, or newspapers do the adults in your home generally read?

_____

6. Does your child often choose to read for recreation? If so, please estimate the approximate time he/she spends reading.

_____

Appendix C
Parent Checklist About Reading

Parent Checklist

Student Name_____ Date_____

Please indicate your observation of your child's learning in the following areas and comment where appropriate.

	Yes	No	Comments
My child likes to listen to me read to him or her.			
My child likes to read to me.			
My child attempts to read in daily situations.			
My child understands books I read to him or her.			
My child attempts to figure out words.			
My child sometimes chooses to write.			
My child shares what he or she writes.			
My child is provided with the opportunity to visit the public library often.			

Appendix D
Multiple Intelligence Survey

The MIT

Multiple Intelligences Test

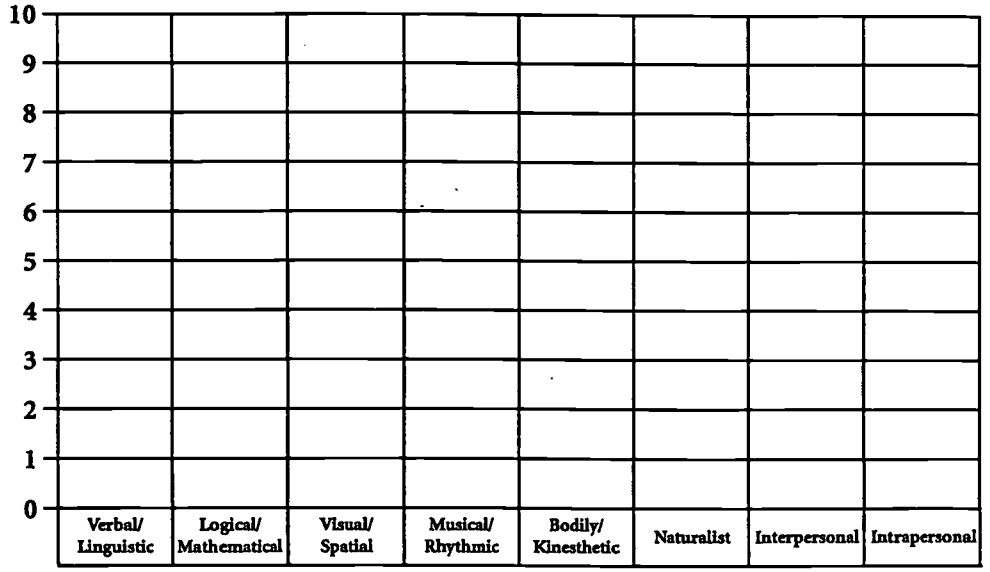
	Verbal/ Linguistic	Logical/ Mathematical	Visual/ Spatial	Musical/ Rhythmic	Bodily/ Kinesthetic	Naturalist	Interpersonal	Intrapersonal
1 For recreation, you like to...	Read, write, play word games	Play logic games	Paint, draw, go to a gallery	Play an instrument, sing, listen to music	Be active, play sports, dance	Garden, attend to pets	Be with friends, family, teammates	Spend quality alone time
2 To memorize facts, you...	Create a phrase or saying	Make a logical sequence	Visualize the answer or draw it	Create a rhyme or song	Associate them with a gesture or movement	Use nature analogies	Work with a partner	Relate the facts to personal experience
3 If something breaks or won't work, you...	Read the instruction book	Examine the pieces to figure how it works	Study the diagram	Snap, tap your fingers, hum, or whistle while trying to fix it	Tinker with the parts	Examine the parts carefully	Work with someone to fix it	Weigh if it's worth fixing, fix it yourself
4 For a team presentation, you...	Write the lines	Analyze the data, present the statistics	Create the visual aids	Put words to a tune	Create movement, action	Choose a nature topic	Lead the presentation, coordinate efforts	Work alone on your part
5 In conflict, you...	Use a clever saying to make your point	Devise a winning strategy	Picture a solution	Look for a "harmonic" solution	Move, gesture	Study relations among parties	Mediate, look for amicable solution	Get away from others
6 To make the next board game move, you...	Talk yourself through the move	Weigh the consequences of each move	Visualize what the next move will look like	Keep with the rhythm of the game	"Try out" a number of moves	Think in terms of predator and prey	Analyze motives of others	Make the move that feels right
7 You like games if you can...	Talk, use your linguistic skills	Use math, analyze the possibilities	Picture the moves, draw	Have music playing	Be active, use fine motor skills	Play outside	Play with others	Play solitaire, decide your moves alone
8 To add to your portfolio, you...	Write an essay	Include math, logic	Create a picture or graphic organizer	Write or record a song or tune	Act on a video, or perform	Work with plants or animals	Perform with others	Write a private journal or evaluation
9 For a present, you like a...	A book or magazine	Logic games, logic puzzles	Art, art supplies, jigsaw puzzle	Music, concert tickets	Sports equipment	A pet, flowers, outdoor gear	Big party	Journal or diary
10 During free time, you like to...	Read or write	Solve problems	Draw, paint, make models	Listen to music, play music, sing	Work with your hands	Enjoy nature	Spend time with friends, socialize	Be alone
Top Right (✔) SCORE 1: Forced-Choice The Most True Alternative								
Bottom Left (✗) SCORE 2: Free-Choice All True Alternatives								

Spencer & Miguel Kagan: *Multiple Intelligences*

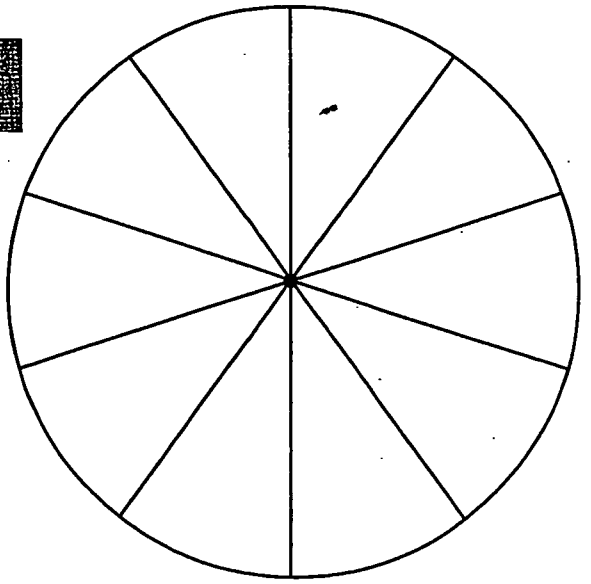
My MI Profile

Follow the directions to create a bar, pie, and line graph of your Multiple Intelligences Test (MIT).

Score 1: Forced Choice Bar Graph & Score 2: Free Choice Line Graph



Score 1: Forced Choice Pie Graph



Spencer & Miguel Kagan: *Multiple Intelligences*

Appendix E
Student Self-Assessment (Reflection Stem)

Student Reading Self-Assessment

September 2001 - Grade 4

Thinking about myself as a reader as I enter fourth grade. . . . .

Appendix F
Reading Strategy Checklist

Reading Strategy Checklist
(What I Did While Reading)

Name_____Date_____

Title of book or story_____

Place a check in each category demonstrating the strategies you used while reading.

Strategies	Not Much	A Little	Most of the Time	Almost Always
Used text structure.				
Made predictions.				
Made pictures in my mind				
Found problems like hard words and did not understand them				
Fixed problems by rereading, looking ahead, and checking the dictionary				
Summarized				
Asked myself questions				
Here are other strategies I used:				

Appendix G
Student Self-Assessment (Post Reflection)

Student Reading Self-Assessment

December 2001 - Grade 4

Thinking about myself as a reader now.....

Appendix H
Teacher Reflective Summary

Teacher Reflective Summary
December 2001

As a result of the Action Research conducted in my classroom. . . . .

I feel. . .

I wonder. . .

I foresee. . .

Appendix I
Comprehension Strategies Assessment

Name _____ Date _____

Book Title _____

Comprehension Strategies

1. Underline all the strategies you used today to help yourself understand the book you are reading. Circle the strategy you used the most.
   - I thought about what I already knew.
   - I made predictions and read to find out if they came true.
   - I reread what I didn't understand.
   - I made pictures in my head.
   - I asked someone to explain what I didn't understand.

2. Give an example of how you used one of the strategies you underlined or circled.

_____

_____

_____

Cut here----------

Name _____ Date _____

Book Title _____

Comprehension Strategies

1. What strategies did you use today to help yourself understand the book you are reading?

_____

_____

2. Explain how one of the strategies you listed helped you understand something in the book.

_____

_____

_____

_____

Appendix J
Reflective Journal

Name _____

What I Do Well in Reading

Date	

What I'm Working on in Reading

Date	

Appendix K
Predicting Chart

Name: _____

When you think about what will happen in a story, you are **predicting**.

1. Look at the pictures. Read the title and the first sentence.
2. Then fill out the chart.

CLUE	PREDICTION
Predicting Clue #1 Title	
Predicting Clue #2 Pictures	
Predicting Clue #3 First Sentence	

Appendix L
Visualizing Self-Assessment

Name _____ Date _____

Title of reading material _____

Visualizing

1. For the last week, we have been working on making pictures in our heads. How often were you able to do that when you read by yourself today?

   _____

2. Give an example of a picture you made in your head while you were reading today.

   _____

   _____

   _____

   _____

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