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ABSTRACT

Noting that poor student motivation and problematic social skills may interfere with the academic growth of elementary school students, this action research project examined the impact of a multifaceted intervention on student motivation and achievement. Participating in the study were second and third graders from 3 schools. The 12-week intervention was comprised of 3 elements: (1) use of the theory of multiple intelligences in instruction; (2) the incorporation of cooperative learning; and (3) the provision of an engaged learning environment. Students worked in teacher-selected base groups weekly for 15 minutes for data collection and reflection and in randomly-assigned cooperative learning groups at least twice weekly for 30 to 45 minutes. Cooperative learning activities taught appropriate social skills. Multiple intelligence activities and a series of engaged learning activities were incorporated into classroom practices. Data were collected through student surveys and journals completed weekly, teacher observation checklists, attendance records, and unit reading test scores. The findings of the post-intervention data illustrated that implementing the theory of multiple intelligences had a positive effect on the targeted classrooms. There were decreases in missed reading assignments for two sites, and an increase for one site. Students revealed positive attitudes toward themselves and their school. Students' reading scores increased moderately from first to second quarter. Participating teachers concluded that cooperative learning and engaged learning were used together to successfully increase student motivation and achievement. (Eleven appendices include data collection instruments and sample lesson plans. Contains 23 references.) (KB)

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IMPROVING STUDENT MOTIVATION THROUGH THE USE OF ENGAGED LEARNING, COOPERATIVE LEARNING AND MULTIPLE INTELLIGENCES

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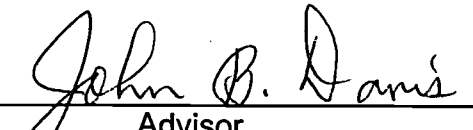

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Title: Improving Student Motivation Through the Use of Engaged Learning with Emphasis on Multiple Intelligences and Cooperative Learning

This report describes a way to increase student motivation through the use of multiple intelligences and engaged learning. The students in the targeted schools exhibited a lack of motivation and inappropriate social skills that interfered with their academic growth. Evidence for the problem included self-evaluations, students' peer- evaluations, students' surveys, teacher anecdotal records/checklists and assessments that indicated the level of student academic performance.

In addition to lack of student motivation, students also exhibited poor attendance and inappropriate social skills that interfered with their academic growth. This problem was documented using teacher records, attendance records, discipline referrals, student grades (including unit tests), student surveys, self evaluations and peer evaluations. Several site-based causes of the problem included increased negative behavior, increased student absenteeism and tardies, and inappropriate student social skills. According to research, underachievement is a serious problem in the United States. Additional research has indicated that social skills instruction can have a positive effect on students' interactions with others, their attitudes toward school, and academic achievement. Research has also shown that empathy and self-discipline provide the foundation upon which people build moral behavior. In conclusion, increased student motivation has been directly correlated to social skills instruction.

A review of professional literature and the evaluation of each classroom setting resulted in the selection of three interventions: the use of Gardner's theory of multiple intelligences, the incorporation of cooperative learning, and providing an engaged learning environment.

The results of the post intervention data illustrate that the implementation of Gardner's theory of multiple intelligences has had a positive effect on the research classrooms. The teachers also concluded that cooperative learning and engaged learning were used together to successfully increase student motivation and achievement.

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CHAPTER 1

PROBLEM STATEMENT AND CONTEXT

General Statement of the Problem

The students in the targeted schools exhibited a lack of motivation and social skills that interfered with their academic growth. Evidence for the existence of the problem included student self-evaluations, students' peer evaluations, student surveys, teacher anecdotal records/checklists, and assessments that indicated the level of student academic performance.

Immediate Problem Context

Site A is a 26 year-old school housing first grade through fourth grade. The building was internally renovated during the summer of 1997. The student population is currently 295. The students are housed in 14 classrooms. The classrooms consist of three classes of first, second, third and fourth grade. There is one self-contained cross-categorical special education room serving first and second grade children. The population is .07% Black, 96.6% White, 1.7% Asian/Pacific islander and 1.0% Hispanic. Students from low-income families represent 78.5% of the total student population. The attendance rate is 96%, with a chronic truancy rate of 0.0% and a mobility rate of 5.9%. Of the 12

teachers employed at this site, 92% are female, and 8% are male. The average years of teaching experience is 15 with 92.1% having a bachelor's degree and 7.9% having a master's degree or above. The facility is composed of 16 classrooms including the gym/lunchroom, library, computer lab and music room. All of the classrooms are built with four walls and a door compared to being open as in the past. A library and a computer lab are equipped with 22 computers, including Mac and PC. All the computers are networked. The network was completed and connected in February 1998. Special education services are offered and are as follows: LD/BD (Learning Disability/Behavior Disorder) resource, reading resource, social work, speech and occupational therapy. Most students at this site who receive special education services qualify for pull out resource help. Students with an IEP (Individualized Educational Plan) of 750 minutes or more a week are self-contained in a specialized instruction classroom. Students with an IEP of less than 750 minutes a week receive instruction from an LD/BD resource teacher. Speech and language specialists on staff offer services on an average of twice a week. Students at the second grade level receive 885 minutes of language arts (listening, speaking, reading, writing, spelling, and handwriting), 300 minutes of mathematics, 110 minutes of social studies, 110 minutes of science, 60 minutes of art, 70 minutes of music, 175 minutes of physical education, 70 minutes of computer instruction and 35 minutes of library sciences weekly. All state goals and objectives are met in accordance with the curriculum framework.

School wide testing, which includes all regular education students in grades two through four, takes place in the fall and spring. All regular education students in grades two through four are required to take standardized tests. All students from grades one through four take the district wide CRT (Criterion Referenced Test). The second grade students take an IQ test. The third grade students take the ISAT (Illinois Standard Achievement Test), which tests reading, math and writing. The fourth grade students take the CAT (California Achievement Test), which tests all subjects. They also take the ISAT, which includes science and social studies. Students receiving special education services complete the test outside of the regular classroom setting with assistance from the resource teachers. Students in grades one through four are assessed quarterly using a standardized school report card.

The school offers a variety of student centered clubs. Throughout the school year, there are after school clubs for each grade level. In first and second grade, students may participate in Computer Club. In third grade, the students may participate in the Young Astronauts Club. In fourth grade, the students may be involved in the Energy Club.

Three successful programs in the school are Star Lab, Young Authors' and Art Awareness. Star Lab takes place in a large dome, which accommodates one class and one instructor at a time. The students can view a model of the night sky and learn about the constellations. Young Authors' is an annual contest that encourages students to write an original story. For the Art Awareness program, a parent volunteer comes to the classroom once a month to teach the

students about a famous artist. Afterwards, the students do an art project that is similar to the artist's work.

The school provides other programs to help students develop their academic and social skills. To help students with a D or F average in reading, the school provides remedial reading tutoring before and after school, four days a week. During school and occasionally after school, the social worker pulls out students to help them cope with death and/or divorce. Once a quarter, the PIT (Parent Initiative Team) organizes a theme night to encourage parent and student involvement with the school.

The second grade classrooms at Site A have an average of 25 students. The teachers in the targeted classroom integrate the curriculum through the reading themes. The teachers in Site A focus on real world and hands on learning. Site A teachers place an emphasis on reading at the second grade level. In the classroom students read and create book reports for their monthly goal. Students also participate in the school wide 600 Minutes Club. The book report choices change monthly and always include a hands on verbal and written choice of book reporting for the students to select.

Site B is a pre-kindergarten through eighth grade school. The student population is 512: 13.5% Black, 50.5% White, and 36.1% Hispanic. Students from low-income families represent 78.5% of the total student population. The attendance rate is 93.9% with a chronic truancy rate of 1.6% and a mobility rate of 29.9%. Of the 23 teachers employed at this site, 78.3% are female, and 21.7% are male. The average years of teaching experience is six with 92%

having a Bachelors' degree and 8% having a Master's degree or above. The facility is composed of 20 classrooms, two special education rooms, a gym, a library, a lunchroom, a parent conference center, and an office. There are two heterogeneously grouped classes per grade level with the average class size being 27. Special Education services are offered and are as follows: Behavior Disorder (BD) or Mildly Mentally Impaired (MMI). Most students at site B who receive special education services qualify for pull out resource help. Speech and hearing specialists on staff offer services on a weekly basis. Students at the third grade level receive 720 minutes of Language Arts (listening, speaking, reading, writing, spelling and handwriting), 240 minutes of mathematics, 120 minutes of social studies, 120 minutes of science, 60 minutes of art, 60 minutes of music, 60 minutes of physical education, 40 minutes of health and 60 minutes of library sciences weekly.

Site B is a Junior Great Books facility. The teacher in the targeted classroom focuses on reading across the curriculum through in-depth thematic units. Reading instruction in the primary grades is a combination of phonics and whole language. Students are given instruction on various phonetic rules and decoding strategies as well as literature based instruction. Students are academically challenged through extracurricular activities. Students participate in a science club where they focus on discovery-based learning and Chess Club where emphasis is put on problem solving, planning, and strategizing. There is a homework lab and a peer tutoring program for students who need individualized help. Site B also offers a Book Club in which students create their own reading

goals and participate in literature circles. The school promotes interest in reading through the following reading programs: Book It!, Links to Literacy and 600 Minutes. Classroom activities are hands-on. Thematic units and enriched reading are used. The teacher focuses on activities that are relevant to the students and also meet the needs of the school curriculum. The students in this classroom are involved in a program with the Illinois Arts council to bring the fine arts into an integrated curriculum. This classroom also participates in an annual Skylab program brought in by the Adler Planetarium.

All state goals and objectives are met in accordance with the curriculum framework. School wide testing, which includes all regular education students in grades one through eight takes place in the spring. All regular education students in grades one through eight are required to complete the ITBS (Iowa Test of Basic Skills). Students in grades three, six and eight are also required to complete the ISAT (Illinois Standardized Achievement Test), which is also administered in the spring. Students receiving special education services complete the test outside of the regular classroom setting with assistance from resource teachers. Students in grades kindergarten through eight are assessed quarterly using a standardized school report card.

Site C is a pre-kindergarten through 5th grade school. The student population is 363. The population is 99.4% Black and 0.6% Native American. Students from low-income families represent 75.8% of the total student population. The attendance rate is 93% with no truancy and a mobility rate of 28.7%. Of the 54 teachers employed in the district, 90.7% are female and 9.3%

are male; 61.1% are White and 38.9% are Black. The average years of teaching experience are 12.2 with 77.8% having a Bachelor's degree and 22.2% having a master's degree or above. The average teacher's salary is $35,440 and the average administrator's salary is $71,770. The facility is composed of 20 classrooms, one multi-purpose room, a library, a lunchroom/gym, a teachers' lounge and an office. There are two heterogeneously grouped classes per grade level with the average class size being 25.4. Special Education services are offered and are as follows: one part-time LDR (Learning Disability Resource) teacher daily, and one speech and hearing specialist, counselor/social worker, and psychologist, most of whom offer services on a weekly basis. Services for students with special needs are provided by Exceptional Children Have Opportunities (ECHO), a special education cooperative. Students at the third grade level receive 145 minutes of Language Arts, 55 minutes each of mathematics and science and 49 minutes of social studies daily. In addition, they receive 45 minutes of art, music and physical education and 30 minutes of library science weekly.

All state goals and objectives are met in accordance with the curriculum framework. School wide testing which includes all regular education students in grades one through five takes place in the spring. All students in grades one through five are required to complete the Stanford Achievement Test (SAT). Students in grades three, four and five are also required to complete the ISAT (Illinois Standard Assessment Test) which is also administered in the spring.

Students in kindergarten through fifth grade are assessed quarterly using a standardized school report card.

The third grade classroom at Site C has 29 students, with no classroom aide and minimal parent involvement. The principal is new to the school and there are five new classroom teachers. In addition, all of the district administrators are new to the district. The district has had six superintendents in the last eight years. The high turnover in administrative personnel has contributed to the district's instability. Classroom management continues to be an evolving process as both the building principal and classroom teachers work toward initiating an effective discipline plan. The method of teaching is generally direct instruction, with occasional use of cooperative learning. Several of the students in the class recently had their original poems published in the Anthology of American Poetry and received verbal recognition by the principal and written recognition in the school newspaper. A number of students also participated in the school Science Fair and were semi-finalists in the annual Spelling Bee.

The Surrounding Community

Site A is located in an unincorporated area. This is a growing south suburban community about 60 miles southwest of downtown Chicago, Illinois. The community is 29 years old. The housing for the school population consists of about 48 apartments, 232 town houses, and 710 single dwelling homes. The geographical area of site A consists of about three square miles. About 43% of the children are bused during the school year. The total population of the area comprising the district grew from 3,079 in 1970 to 8,097 in 1980, an increase of

163% during that ten year period. In 1990, the population was 9,970, an increase of 23% from 1980 through 1990 (Census Data, 1990). The total number of building permits issued increased from 86 for the period of October 1995 to September 1996 to 292 for the period of October 1997 to September 1998 (School Improvement Plan, 1998-99). The average age of the neighborhood population is 26 years. Married households account for 77.6% of the population. This year the citizens will be asked to approve a referendum which will allow for construction of new classrooms to accommodate the projected increases of enrollment. The median income of the neighborhood population is $51,896 (Century 21 Snapshot, Neighborhood Comparisons, 1998). There is a 7.39% chance of being the victim of a crime. There is a 0.86% chance of being the victim of a bodily crime (Century 21 Snapshot, Crime Comparisons, 1998).

Site B is located in the southeast section of Chicago. The community consists of single-family houses, apartments, and a large trailer court. Site B also has about 100 students who are bused in from other regions of Chicago. The community contains a total of four elementary schools. Two of the schools are parochial and two are public. There are many small business owners in the neighborhood including a grocery store, a florist, and many small restaurants. The community issues of site B focus on concerns and feelings toward the administration, lack of parent education, and a lack of auxiliary teachers (art, music, librarian). At this time the targeted school is suffering from disciplinary action taken against its principal that has caused a riff in the local community and

school staff. This split in parent and professional opinions has caused great anxiety in the school. This anxiety indirectly transferred to the students through their involvement with parents and teachers. The lack of parent education is also a concern at site B. Teachers feel that the lack of education results in poor parental support at home. This lack of support is also seen in a lack of true value placed on school. Teachers at site B report a concern for the fact that there are no auxiliary teachers. This lack of staff members puts added burden on the classroom teachers to address these subjects as well as added stress due to lack of classroom preparation time.

Site C is located in a suburb south of Chicago with a population of nearly 15,000. Although formerly considered a "bedroom community," the suburb must now rely upon an expanded commercial-industrial base in order to maintain the quality level of services that residents expect. This need prompted an economic development outreach activity within the community. The suburb now includes a hospital, nursing home, several small retail shopping areas, major food outlets, numerous small business centers and a 30-acre business/office park. The current enrollment is 1,134 students. Students attend fourschools: one kindergarten through fifth grade school, two pre-kindergarten schools and a sixth through eighth grade middle school. The district is a kindergarten through eighth grade district, which currently employs 66 certified staff and 34 support staff.

The district is run by a school board, which consists of seven community members who are elected to four-year terms. Elections are held in April of odd numbered years and members serve four-year overlapping terms.

The community's vision for the future is to continue its emphasis on the family by maintaining quality schools and good recreational facilities. Given the current limits of available resources, the effort will be toward increasing the volunteer base within the community. The future of the village will depend upon the continued efforts of its residents.

National Context of the Problem

Student motivation involves the students' desire to participate in the learning process. Although infants and young children appear to be propelled by curiosity, as children grow, their passion for learning often seems to decline (Lumsden, 1994).

The targeted classrooms each exhibited signs of a lack of student motivation and social skills that interfered with academic growth. Research has shown that traditional lecture methods dominate upper level classrooms. The use of active learning techniques, however, is vital because of its powerful impact on students' learning. In addition, by incorporating multiple intelligences, one not only awakens children's joy in learning, but also fuels the persistence and effort necessary for mastering skills and information for being inventive (Campbell, 1997). It has been proven that students must do more than just listen in the classroom. They must read, write, discuss and be engaged in solving problems (Bonwell and Eison, 1991).

The methods used to motivate students in the United States differ from those used in other cultures. Most American teachers introduce a lesson by presenting a basic problem or concept and then presenting a full lesson on how

to solve that particular problem or understand that concept. Teachers in the U.S. typically take responsibility for keeping students engaged and attentive. Frequent use of the overhead projector helps in achieving and maintaining student attentiveness. The projector's capability of focusing attention fits well with the teachers' belief about teaching (Stigler and Hiebert,1998).

In Japan, however, teachers introduce a lesson by beginning with a challenging concept and from there, help students to understand it so they can begin working on a solution themselves. Japanese teachers apparently believe that they are responsible for different aspects of classroom activity. They focus more on the students being able to go back and think again about earlier events and connections between different parts of the lesson; it is not as important for students to attend at each moment of the lesson. This explains why Japanese teachers prefer the chalkboard to the overhead projector.

An American term for the Japanese method could be "attribution learning" which involves modeling, socializing, and practice exercises. In order to have students who value learning for its own sake, it is critical for parents, teachers and school leaders to devote themselves fully to equalizing, maintaining and rekindling students' motivation to learn (Lumsden, 1994).

The targeted classrooms exhibit signs of disengaged/inactive learning. Students show signs of inattentiveness by continually going off task, daydreaming, acting out, and playing with materials. Evidence of this problem at sites A., B and C are based on teacher observation and standardized test scores. The problem of inattentiveness results in a low retention of material, a poor

attitude toward school, and a high level of stress/anxiety in the classroom environment. Therefore, by providing an engaged learning classroom, teachers can improve test scores, attitudes, and the general classroom environment.

CHAPTER 2

PROBLEM DOCUMENTATION

Problem Evidence

Three groups of students were involved in this study. The first group, Site A, consisted of a total of 50 second grade students. The second group, Site B, consisted of 28 third grade students. The third group, Site C, consisted of 21 third graders.

The students exhibited a lack of motivation, poor attendance and inappropriate social skills that interfered with their academic growth. Evidence for the existence of the problem included teacher anecdotal records/checklists, attendance records, discipline referrals, including unit tests, teacher grades, student surveys, self- evaluations and peer evaluations.

Probable Causes

Several site based causes of the problem included increased negative behavior, lack of motivation and effort, increased absences and tardies, lack of student social skills, and poor attitudes.

Rimm (1997) refers to the Carnegie Corporation's recent report certifying the seriousness of the underachievement problem in the U.S. Cummings and Haggerty (1997) wrote that social skills instruction can have a long-term positive effect on

students' interactions with others, on their attitudes toward school, and on their academic achievement.

In the targeted classes, site A had 42 Caucasian students (84%), 6 Hispanic (12%), and 2 Asian (4%) with 60% of the students male and 40% female. Site B had 14 Caucasian students (50%) and 14 Hispanic students (50%) with 57% male and 43% female. Site C had 21 African American students (100%). There were 10 male students (48%) and 11 female students (52%).

Table 1
Missing Reading Assignments

				TOTAL
First Quarter	26	31	24	81

The teachers used a record of missing assignments to reflect student motivation. Site A showed 26 missing reading assignments during the first quarter. Site B recorded 31 missing reading assignments during the first quarter. Site C recorded 24 missing reading assignments during the first quarter.

The following tables show the results of a student poll that was taken to reflect the most favorite subjects of these second and third grade students. The teachers used these preferences to determine the students' areas of interest. These areas allowed the teachers to diversify the subject matter to meet the needs of the students.

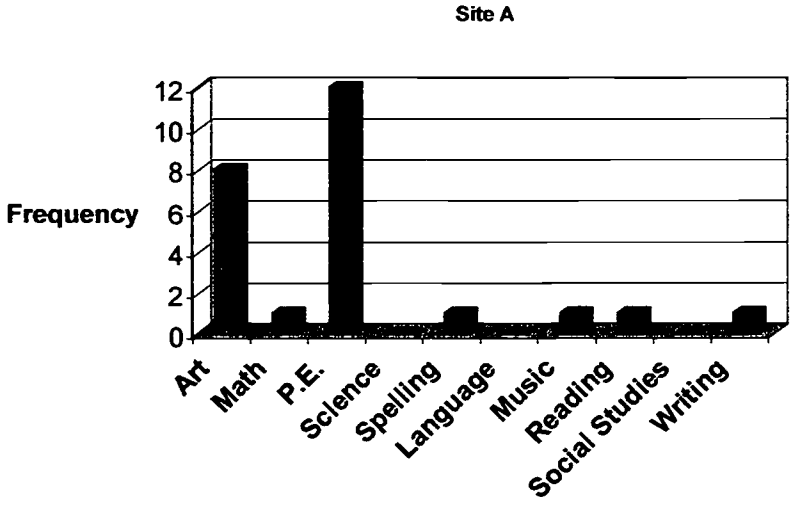

Figure 1. Site A: Most favorite subjects from quarter 1

In Site A, during the first quarter, the students' most favorite subjects included art and P.E. The least favorite subjects were science, language and social studies. The second grade students showed a comfort level in the areas of P.E. and art. They are familiar with the curriculum and instructors of these school wide subjects.

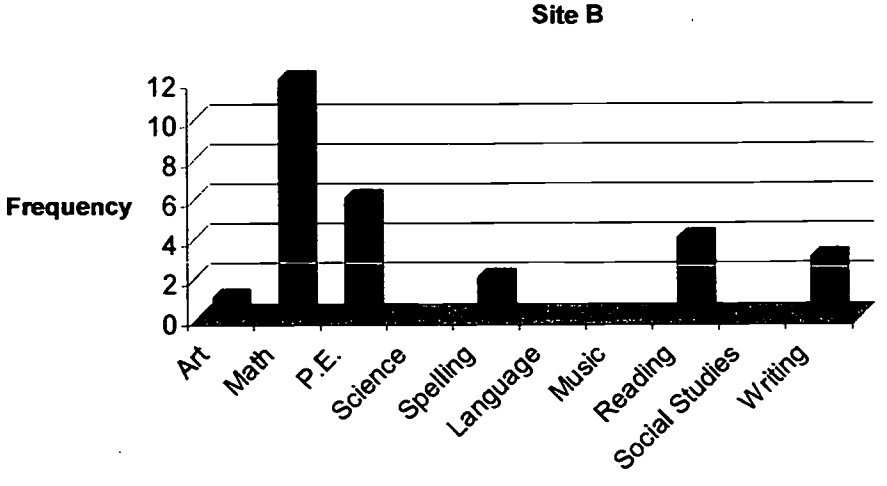

Figure 2. Site B: Most favorite subjects from quarter 1

During the first quarter, Site B found that the most favorite subjects math, P.E. and reading. The least favorite subjects were science, language arts, music, and social studies. Some of this is due to the fact that Site B does not have an art or music teacher. The teacher at this site teaches art and music in an integrated matter. These students do not view art and music as separate subjects, but rather as extensions of their core subjects.

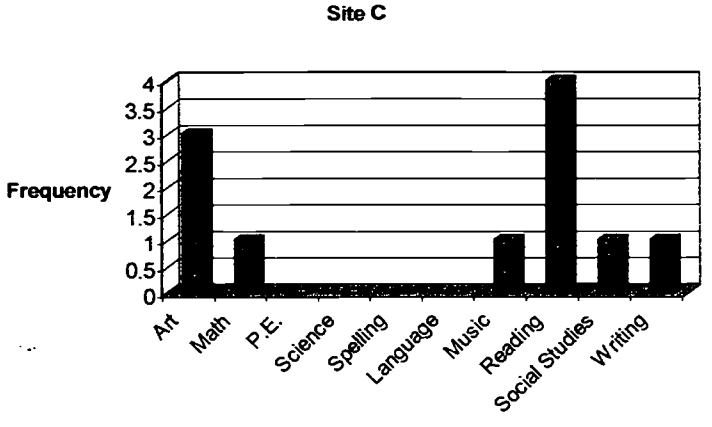

Figure 3. Site C: Most favorite subjects from quarter 1

Site C found that, for the first quarter, the most favorite subjects were art and reading and the least favorite subjects were P.E., science, spelling and language.

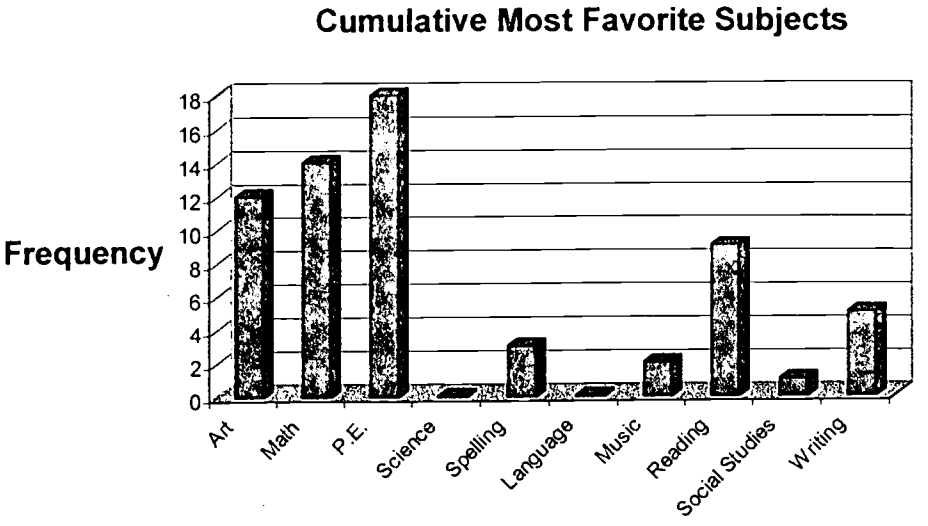

Figure 4. Cumulative: Most favorite subjects from quarter 1

The cumulative data illustrate that the students chose preferred subjects based highly on their past positive experiences.

Table 2
Site A: Student Survey Quarter I

	Always	Sometimes	Never
1. I listen to the teacher	35	11	0
2. My parents make sure I do my homework	41	5	0
3. It is important for me to do well with my school work.	42	4	0
4. My teachers care about me.	44	2	0
5. I feel safe at school.	33	13	0
6. I like to work with others in my class.	30	15	1
7. I share.	35	11	0
8. I follow directions.	35	11	0
9. I listen to other students' ideas.	37	8	1
10. The students in my school like each other.	23	23	0
11. I hand in my work on time.	24	22	0

Table 3
Site B: Student Survey Quarter I

	Always	Sometimes	Never
1. I listen to the teacher	20	8	0
2. My parents make sure I do my homework	14	14	0
3. It is important for me to do well with my school work.	22	6	0
4. My teachers care about me.	23	5	0
5. I feel safe at school.	20	7	0
6. I like to work with others in my class.	21	6	1
7. I share.	15	12	0
8. I follow directions.	11	17	0
9. I listen to other students' ideas.	17	9	2
10. The students in my school like each other.	19	7	2
11. I hand in my work on time.	21	7	0

Table 4
Site C: Student Survey Quarter I

	Always	Sometimes	Never
1. I listen to the teacher	11	6	0
2. My parents make sure I do my homework	8	9	0
3. It is important for me to do well with my school work.	14	3	0
4. My teachers care about me.	8	7	2
5. I feel safe at school.	6	8	3
6. I like to work with others in my class.	10	9	0
7. I share.	7	10	0
8. I follow directions.	6	11	0
9. I listen to other students' ideas.	8	7	5
10. The students in my school like each other.	5	10	3
11. I hand in my work on time.	12	5	0

Table 5
Cumulative: Student Survey Quarter I

	Always	Sometimes	Never
1. I listen to the teacher	66	25	0
2. My parents make sure I do my homework	63	28	0
3. It is important for me to do well with my school work.	78	13	0
4. My teachers care about me.	75	14	2
5. I feel safe at school.	59	28	4
6. I like to work with others in my class.	61	30	1
7. I share.	57	33	1
8. I follow directions.	47	39	5
9. I listen to other students' ideas.	62	24	5
10. The students in my school like each other.	47	40	4
11. I hand in my work on time.	57	34	0

To assess the students' feelings about their classrooms, a survey was given to the targeted second and third grade students (see table 5). Sixty-six students, or 73%, always listened to the teacher. Sixty-three students, or 69%, felt that their parents always made sure that they did their homework. Seventy-eight students or 86% always felt it was important for them to do well with their schoolwork. Seventy-five students, or 82% sensed that teachers always cared about them. Fifty-nine students, or 65%, always experienced a feeling of safety at school. Sixty-one students, or 67%, always liked to work with others in their class. Fifty-seven students, or 73%, of the students always shared. Forty-seven students, or 52%, always followed directions. Sixty-two students, or 68%, always listened to other students' ideas. Forty-seven students, or 52%, sensed that the students always liked one another. Fifty-seven students, or 63%, of the students always handed in their work on time.

Table 6
Site A: Student Tardies Quarter I

Site	Quarter I
A	25
B	17
C	28
Total	70

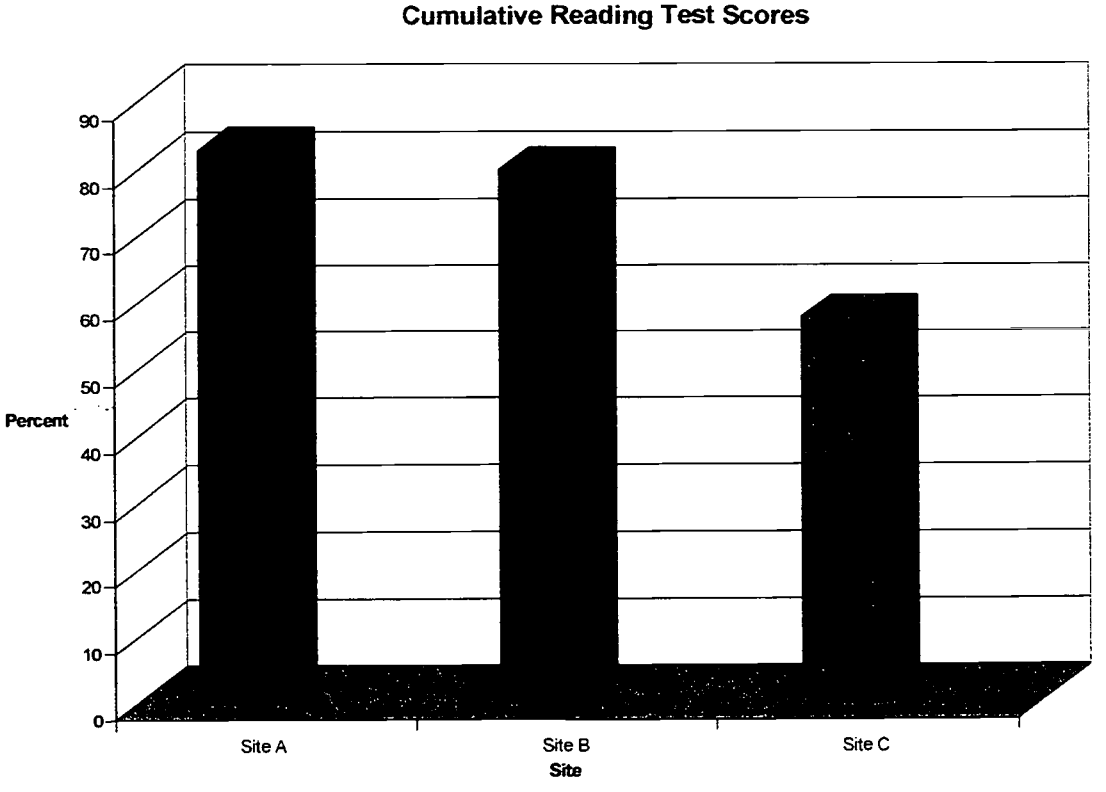

Figure 5. Cumulative: Reading Test Scores

During the first quarter the average reading test scores of site A were 75%. Site B achieved a 73% test average first quarter. Site C had a cumulative average of 52% for the first reading test.

The following conclusions were drawn from the data of the surveys. Overall, students preferred subject areas which traditionally allowed for more freedom of choice, expression, and movement. The multiple intelligences related to the subjects students enjoyed the most are visual/spatial (art), bodily/kinesthetic (P.E.), and logical/mathematical (math). The students seemed less comfortable in areas which traditionally involved more structure. The areas of multiple intelligences that were least enjoyed are verbal/linguistic (reading and Language Arts), naturalistic (science), intrapersonal (journal writing), interpersonal (social studies), and musical/rhythmic (music) see Figure 4. There was also a lack of importance placed on working together (34% responded negatively), sharing (37% responded negatively), and getting along (48% responded negatively). Being exposed to various learning strategies in multiple intelligences and cooperative learning would seem to be a logical solution for increasing student motivation and achievement.

Chapter 3

THE SOLUTION STRATEGY

Literature Review

Research has shown that students learn in different ways. In order to reach all students, teachers must be prepared to address these differences.

> Teachers are now working on assimilating this knowledge into their strategies for helping children learn. While it is too early to tell all the ramifications for this research, it is clear that the day is past where educators teach the textbook, and it is the dawn of educators teaching each child according to their orientation to the world (McKenzie, 1999 p.3).

Webster's Third International Dictionary gives this definition of motivation: "to stimulate the active interest in a study through appeal to associated interests or by special devices: to make a study interesting or otherwise appealing to students." One thing is certain, high motivation will help one get the most of life and, more specifically, get the most of our school, whether that motivation is provided by the student, the teacher, or both.

Student motivation naturally has to do with students' desires to participate in the learning process (Lumsden, 1994). Researchers often refer to two types of student motivation, intrinsic motivation and extrinsic motivation. A student who is intrinsically motivated learns for the sake of learning, the enjoyment it provides and for its feelings of accomplishment. A student who is extrinsically motivated learns in order to gain a reward or to avoid a negative consequence or punishment. In school, teachers begin extrinsic motivation conditioning with the goal being to produce students who will start to motivate themselves intrinsically (Johnson and Johnson, 1997). As a result, the student will see the importance of self-motivation in their lives and try to emulate it. Unfortunately, not all students can be motivated by the same technique.

Recent research has determined that if students are to be more deeply engaged and intrinsically motivated, educators need to re-evaluate the current ideas about motivation. One theory addresses the challenge of motivating the increasing culturally diverse student population by building on their experiences. Finding out about children's experiences outside of school can reveal valuable information about interests and skills and provide the foundation for classroom activities that motivate and engage urban learners (Williams and Woods, 1997).

To simplify matters from an educational perspective, learner experience originates from two sources: in-school and out-of-school. The learner develops in-school learning experience through interactions with school culture (i.e., curriculum, rules, etc.). The learner develops outside-of-school learning experience through daily life apart from school activities. Research suggests that

teachers who learn about and use out-of-school learning experience are able to create a classroom environment where students are motivated, engaged, able to learn, and have positive feelings about themselves.

According to Johnson and Johnson (1996), the theory of motivation centers around the students and how to make them successful in life by achieving self-motivation and learn how to become the very best they can be. The term "flow" is used to describe a specific state of mind that one develops while working on a project of interest. The flow is a state in which one becomes so completely engrossed in the mechanics of the project so that any other thoughts or concerns are set aside to prevent any distraction from the engaged activity. In order to achieve a state of flow one must be highly motivated and also be able to enjoy the activity. "How do we get students intrinsically motivated? By offering activities in the seven intelligences, by getting them to understand that they can have fun and learn at the same time" (Staten, 1995).

Gardner's theory of multiple intelligences points out that educators tend to restrict their instruction primarily on the verbal/linguistic and logical/mathematical intelligences. Although these two intelligences are important, there are at least six other intelligences. All together, these eight intelligences contribute to the development of intrinsically motivated students. Gardner believes that all humans possess these intelligences and one must explore and exercise to develop their full potential. Using multiple intelligences generally means allowing students to make choices about their learning. Developing an engaged learning unit incorporates the students' interest and focuses on the questions students

have on a particular subject. For example, while studying a unit on communities a student may begin to wonder about the working of a community office. The engaged learning classroom would then set out to find answers rather than having the teacher lecture on the technical aspects. The class would most likely begin in a brainstorming session to pinpoint the extent of their curiosity as well as possible avenues of inquiry. The result might be several weeks for role-play, guest speakers, field trips, internet searches, and reading books and newspapers. This theory of engaged learning also promotes that the students now use their knowledge to complete a related project. For example, if the original question were related to the department of water, the students might choose to begin a water conservation campaign in their school and neighborhood. If their questions related to the condition of the local parks, they might favor a clean-up program. In all, the purpose is to instill in the children the importance of seeking out knowledge for a purpose rather than memorizing items for a test.

> ...it is important to encourage children to explore and exercise all of their intelligences. Creating a rich, nurturing, and stimulating environment filled with interesting material, toys, games, and books lays the foundation for healthier, happier, brighter children! Students who have these kinds of experiences know many ways to learn almost anything! (Dickinson, 1998, p. 1).

When students learn through reading a textbook and answering the questions, they learn facts. Some also learn that school is boring, that knowledge is meaningless, or that their ideas are unimportant. When students learn through exploring, inquiring, and using manipulatives, they begin to understand that learning is an evolving process. If teachers want to promote learning as a life long process they must begin focusing on the process and not the facts.

Third grade teacher Campbell (1989), documented his multiple intelligence-based classroom during the 1989-90 school year and observed an increased independence, responsibility, and self-direction. He also noted that students previously identified with behavior problems showed improvement in their behavior and that all students improved their cooperative skills.

"Some educators use the theory of multiple intelligences to promote self-directed learning. They prepare students for their adult lives by teaching them how to initiate and manage complex problems" (Campbell, 1997, p.4). This relates specifically to the concept of engaged learning as used by this research group. The intent in applying multiple intelligences in an engaged learning setting is to make learning meaningful as well as allow students to take the process of problem solving and understanding into their own lives and rely on it as a permanent intrinsic motivator.

Engaged learning has a powerful impact upon student's learning. According to Bonwell and Eison (1991), students prefer strategies promoting engaged learning to traditional lectures. Cognitive research has shown that a

significant number of individuals have learning styles best served by instructional techniques other than lecturing. (Schrimshire, 1997).

Engaged learning provides opportunities for students to work cooperatively with a purpose. Learning groups are formed according to the purpose of instruction, common needs, and interests. Working cooperatively allows students to develop social skills and problem solving skills. (Judy, 1999).

Teachers and students have important roles when engaged learning is involved. The teacher acts as a guide facilitator. The teachers create opportunities for students to work cooperatively, to solve problems, do authentic tasks, and construct their own meaning. They learn along with the students.

In an engaged learning environment, the students are allowed to explore, discover, and interact. According to Talbot (1998), students should have choices in learning activities whenever possible, and they should be allowed to formulate questions and explore topics that interest them.

The tasks that are involved in engaged learning are challenging, authentic, and multidisciplinary. Learning activities should be structured so students see real-life applications for what they are learning, and they need to be given a forum for sharing what they learned when the task is related to their lives. (Judy, 1999).

One of the most common complaints heard among educators today is students' lack of social skills. In addition to the teaching of the usual academic subjects, teachers are now being asked to teach basic social skills to their

students. Often, these skills must be introduced before the regular curriculum can begin and must be reinforced frequently throughout the school year.

Social skills instruction can have a long-term positive effect on students' interactions with others, on their attitudes toward school, and on their academic achievement (Cummings and Haggerty, 1997). In other words, there is a definite link between student behavior and student achievement. In the wake of increased accounts of school violence, the need to teach social skills has increased greatly. School discipline is a concern not only because of the issue of increased violence, but because of the direct relationship between misbehavior, school policies, and student achievement.

As a result, it has become necessary to teach skills such as listening, giving compliments, problem solving, anger management, sharing, recognizing feelings, reporting versus tattling, and good manners. Many school districts are providing training to help teachers integrate social and emotional learning into their classrooms.

Social skills training is often beneficial to teachers as well. The past two decades have shown great advances in social research, finding that the training is an effective intervention for children with learning disabilities or emotional or behavioral disorder (Eckberg, 1998).

Several valuable lessons have been learned from teachers who have successfully implemented social skills training in their classrooms. First, be careful when listening to other teachers tell stories about students. Although it is

important to have some background information on students, it is also important to remain objective and to keep an open mind.

Second, a feeling of acceptance and respect must be present before any learning can occur. When students are teased and laughed at by fellow classmates, it is almost impossible to expect them to "sit, look, and listen" like a contented, interested student when he is actually angry and lonely. Students must feel accepted and respected before they can learn.

Third, social skills must be under control before any learning can occur. As students learn to interact in a classroom environment, their academics generally improve. The consequence of student disorder is not merely more disorder; disorder also erodes the learning environment for all students as indicated by lower student achievement gains. This finding suggests that disciplinary policy is not a side by side issue, distracting educators from more academic goals; rather a sound disciplinary policy is prerequisite for a sound academic policy (Dweck, 1998).

In an effort to educate students to become productive members of society, teachers must begin to focus on cooperative learning. Cooperative learning teaches students to work together toward a common goal. Students do not instinctively know how to interact effectively with others. In order to assure high quality cooperation, teachers must provide opportunities for social skills instruction.

The extensive research comparing these student-student interaction patterns clearly suggests that cooperation among students produces higher

achievement, greater acceptance of differences, higher self esteem, and a number of other outcomes than do competition or working individually (Johnson and Johnson, 1988).

Researchers have shown that students involved in cooperative learning show greater achievement than those taught through competitive motivational systems. In addition to preparing students for high academic achievement, cooperative learning also prepares students to assimilate into culturally diverse society. Educators need to utilize existing classroom and school diversity to enhance students' education while teaching them the skills and procedures required for effective interaction with diverse peers (Johnson and Johnson, 1999).

It is obvious that educators need to embrace the philosophies and elements of cooperative learning in order to provide a transition from academic environment to the real world.

Schools need to change from a mass-production, competitive/individualistic organizational structure to a high-performance, cooperative, team-based organizational structure (Johnson and Johnson, 1994).

Problem Objectives and Processes

A number of solution components will be used at various points throughout the implementation of the action plan. For example, multiple intelligences will be discussed and a simple inventory will be administered. In addition, students will write in their journals on a weekly basis.

Teachers will choose base groups that will meet once a week for approximately fifteen minutes. The underlying purpose of these groups is to collect data and provide weekly reflection as well as to provide support for the group members. Students will be randomly assigned to two or three person cooperative task groups at least twice a week for thirty to forty-five minutes to work on extension activities. These groups will be followed with either a discussion of a designated social skill being worked on that week or a metacognitive activity related to the group assignment.

Lesson plans will be adapted to explore the different intelligences and make students aware of the type of intelligence being used. To expand on this, hands-on work will be used primarily to tap the various intelligences. Using ideas from Armstrong (1990), work that is done in cooperative groups draws on interpersonal intelligence; the hands-on approach uses the bodily/kinesthetic intelligence plus the visual aspects draw out visual/spatial intelligence; while the questions and conclusions that are derived draw out logical/mathematical skills plus the reflection of the information follows up verbal/linguistic skills. If music is played in the background, musical/rhythmic is enhanced (Armstrong, 1990). The weekly journaling provides the time for reflection for intrapersonal intelligences.

As a result of the use of cooperative learning during the period of August through December of 1999, students in the targeted classrooms will show an increase in appropriate social skills as measured by student surveys and journal entries.

In order to accomplish this, teacher materials and actions that foster appropriate social skills will be developed. A series of cooperative learning activities that teach appropriate social skills through small group and classroom

interaction will be used. Within the teachers' lesson plans, time will be scheduled to include cooperative activities and to communicate appropriate social skills.

As a result of the use of multiple intelligences during the period of August through December of 1999, students in the targeted classrooms will show an increase in positive motivation as measured by student surveys and journal entries.

The teacher will develop multiple intelligence materials and model actions that foster positive motivation. A series of multiple intelligence activities that increase positive motivation will be incorporated into classroom activities. Within the teachers' lesson plans, time will be scheduled to include multiple intelligence activities to increase positive motivation.

As a result of the use of engaged learning during the period of August through December of 1999, students in the targeted classrooms will show an increase in academic achievement as measured by student surveys, teacher checklists, and classroom grades.

Teacher materials and actions that foster increased academic achievement through engaged learning will be developed. A series of engaged learning activities will be used to increase student academic achievement. Within the teachers' lesson plans, time will be scheduled to include engaged learning activities.

Action Plan

1) Preparation
   a) Gather teacher materials and duplicate necessary pages.
   b) Gather teacher materials and duplicate necessary pages.
   c) Make or purchase appropriate bulletin board materials.
   d) Establish classroom procedure for cooperative learning.
   e) Establish ground rules for classroom and introduce social skills.
   f) Establish base groups.
   g) Give pre- surveys for MI and motivation data.
2) Begin cooperative learning, multiple intelligences, and engaged learning program.

Week 1

Set the tone.

- Do activities to provide an awareness of social skills.
- Make banners to display in room which illustrate appropriate social skills.
- Divide students into base groups
- Design and discuss a list of social skills with definitions.

Week 2

- Promote awareness of multiple intelligences.
- Complete MI surveys for parents and students.
- Prepare MI portfolios using graphic organizers. (paint palette)
- Discuss different ways people learn.

Week 3

- Discuss how social skills and multiple intelligences apply to cooperative learning.
- List and define cooperative learning roles.
- Create and illustrate list of cooperative learning rules.

Week 4

- Execute first complete cooperative learning lesson plan which incorporates multiple intelligences.
- Allow time for classroom processing.
- Reflect on first cooperative learning lesson and address any difficulties.

Week 5 and 6

- Practice the cooperative learning format with students performing tasks in reading.
- Allow students to begin processing in small groups and sharing with the teacher or whole class.

Week 7-10

- Work on an engaged learning theme using cooperative learning and multiple intelligences.
    - An engaged learning theme begins with a problem and requires the students to seek solutions. A key element in the execution of an engaged learning project is the consideration of the community. Students should begin to develop a sense of community responsibility and the idea that communities work together to solve problems.

Week 11

- Review portfolios.
- Complete rubric.
- Take time for self-assessment and self-reflection.

Week 12

- Survey students to establish changes in use of appropriate social skills and increased positive motivation.

Methods of Assessment

A combination of assessment tools will be used at the completion of these interventions. Teachers will report on the combined classroom averages of two unit reading tests to show if any changes in achievement occurred. Teachers will also complete observation checklists to document changes in the use of social skills, cooperative learning, and motivation. Students will record their own ideas and attitudes through classroom surveys, discussions, and journals. And finally, a record of attendance habits will also be used to assess student motivation.

CHAPTER 4

PROJECT RESULTS

Historical Description of the Intervention

The objective of this project was to improve the students' social skills and academic motivation through the use of engaged learning with emphasis on multiple intelligences and cooperative learning.

There were two teachers at site A. The teachers implemented a variety of strategies. Those directed toward the students included student surveys, curriculum based engaged learning lessons, cooperative learning assessments and reflections, a social skills incentive plan, and lessons involving multiple intelligences. Additionally, the teachers used two evaluation tools. First, a checklist of characteristics of engaged learning to self-evaluate their lessons with respect to the diversity of the engaged lessons. Second, an engaged learning/cooperative learning assessment form used to assess student group work.

These strategies were implemented chronologically. Each strategy was introduced at a specific time during the semester so as to have the greatest effect on the students' social skills and motivation. It is important to note that as time progressed students were expected to use the skills and strategies previously taught. In week one

the students were focused on cooperative learning lessons designed to teach social skills. They were grouped in pairs in the beginning of the school year. Towards the end of the intervention, they were in groups of four. The social skills that were taught included: using a twelve inch whisper, listening to each other, taking turns and using encouraging words. The teachers at site A used a "We/Me" class book to show students their individual and group strengths. Also, a teacher generated "I See/ I Hear" chart was used during each cooperative lesson. This was designed to illustrate appropriate and inappropriate social skills.

In week two the students were made aware of multiple intelligences through a graphic organizer, class discussion, and examples. The purpose of this activity was twofold: to teach the students that different students have different ways of learning (multiple intelligences, or MI) how people learn information, and to have the students discover their MI strengths and weaknesses.

In weeks three through six the students were taught the structure of cooperative learning groups as applied to MI. Cooperative learning lessons were modified so that they were also engaging and included multiple intelligences. These lessons were employed three to four times a week in either reading, language arts, math, science or social studies. During this time the students learned cooperative roles, processing, and reflecting through the use of role playing.

Engaged learning and MI were emphasized during weeks seven through ten. To facilitate the integrity of the engaged learning process (assure that the important aspects of engaged learning were included in each lesson) a checklist of engaged learning characteristics was recorded for each lesson.

While continuing the use of these learning methods, during weeks eleven and twelve the students also reviewed, reflected, and assessed their progress. The teacher used a Keep Improving Social Skills (KISS) incentive jar. When the students used appropriate social skills a chocolate Hershey Kiss was placed into the jar. This was done as a visual aid to help the students evaluate their progress. The action plan as designed was implemented with no deviations.

The teacher at Site B implemented a cooperative learning environment at the very start of school. The first two weeks were devoted to the discussion of social skills and appropriate behaviors. Students learned these concepts as a class, discussed real life situations, role played various confrontations, and practiced these skills in groups.

The teacher also set up a curriculum base that allowed the use of all eight multiple intelligences. This curriculum plan was adapted by using the reading series as a core. In weeks four through ten the class implemented an engaged learning unit which integrated reading, language arts, science, social studies, music, and art. The students studied communities through fiction and non-fiction books, newspapers, and field trips. They incorporated what they knew and what they learned into a drama/musical production. The story was developed by students and incorporated science by focusing on insect communities. Through the play they demonstrated that they learned the important parts of communities, why communities are important, and how communities are established. The classroom used cooperative groups to work on smaller projects under the same theme. These smaller task projects allowed students to choose activities that they enjoyed and allowed them to learn the same material as everyone else and stay within their comfort zone. They also participated in activities

chosen by the teacher that allowed them to experience all eight areas of Gardner's multiple intelligences. The students used their foundation in social skills to allow the program to run smoothly. Students showed that they were able to monitor their behavior as well as their academic progress. The teacher wrote and administered a pretest and posttest for areas studied through the engaged learning project. The results of this testing, as well as student journals, surveys, observation checklists, and reading unit tests showed that the implementations had a positive effect on classroom learning, motivation, and behavior.

During weeks eleven and twelve the students participated in reflection activities. The students organized their journal entries and selected items to contribute to a classroom scrapbook. Groups also spent time discussing ideas and observations from the previous weeks. During these final weeks the teacher also administered posttests and surveys.

In the third grade classroom at Site C, implementation of the action plan began with the establishment of base groups and an overview of social skills. During the first two weeks, base group activities were kept at a minimum until students became familiar with teacher expectations and classroom rules. In the following weeks, the students at Site C focused on working together cooperatively using the appropriate social skills and the action plan was followed as scheduled.

One of the most noticeable improvements in the students during implementation of the action research was their ability to get along with one another and work together cooperatively without arguing. Students were increasingly more receptive to the ideas and suggestions of their fellow classmates, and less likely to be impolite when others

disagreed with them. Most of these students were able to follow directions the first time (one of the classroom rules) and eventually acknowledged the fact that the teacher was there to provide support and encouragement and was sincere in her efforts to help them achieve to their highest potential.

Presentation and Analysis of Results

Table 7
Missing Reading Assignments Quarter 1 and 2

	SITE A	SITE B	SITE C	TOTAL
First Quarter	26	31	24	81
Second Quarter	32	19	42	93

The teachers used a record of missing assignments to reflect student motivation. Site A showed 26 missing reading assignments during the first quarter and an increase to 32 in the second quarter. This illustrates a 23% increase. Site B recorded 31 missing reading assignments during the first quarter and decreased to 19 in the second quarter. This illustrates a 63% decrease. Site C recorded 24 missing reading assignments during the first quarter and 42 missing assignments in the second quarter. This illustrates a 75% increase. Overall this is a 15 % increase in missing reading assignments from first quarter to second quarter.

A record of missing assignments was chosen as a reflection of the students' academic motivation because it is something that each student is independently responsible for on a daily basis. Factors such as group work and parent help were not considered variables.

The number of missing reading assignments is shown in Table 8. Although the number of missing assignments at Site A increased by six from first quarter to second quarter, the results are deemed inconclusive because of the age of the students (second grade, seven years of age). During this time of development it is important that the teacher models study skills and work habits. Therefore, during the first quarter much modeling takes place; during the second quarter students are given more independence and responsibility to complete assignments. For this grade and age level the data were not significant.

The teacher at Site B implemented a homework incentive program which included rewards for those teams with the most homework points. Points were earned by turning in work on time and extra points were given if the whole table received perfect scores. A popular reward was additional choice time during the day.

The teacher of Site C students reported an increase in missing assignments and cited less teacher intervention, more independent work by students, and a less structured classroom environment as possible causes. Site C also experienced a classroom turnover with a few students transferring out and several new students registering which may have added to the problem.

The following tables show the results of a student poll that was taken to reflect the most favorite subjects of these second and third grade students. The teachers used these preferences to determine the students' areas of interest. These areas allowed the teachers to diversify the subject matter to meet the needs of the students. The teachers used the various subject areas to represent the various multiple intelligences with which they are most closely related.

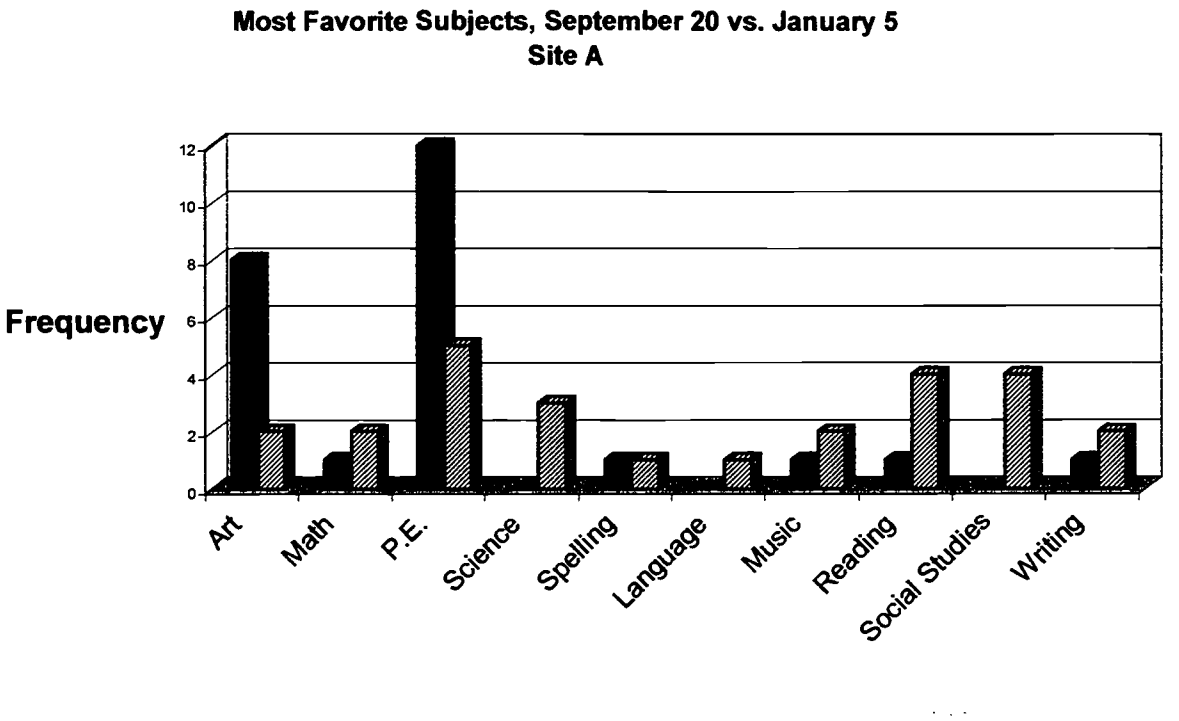

Figure 5. Site A: Most favorite subjects from quarter 1 and 2

In Site A, during the first quarter, the students' most favorite subjects included art and P.E. The least favorite subjects were science, language and social studies. At the end of the second quarter, the most favorite subjects were P.E., social studies and science. The least favorite subjects were spelling and language arts. The students at Site A showed a significant change in their interest of various subject areas. The graph shows a more diverse representation of these students' interest at the end of the second quarter in comparison to the first quarter. The teachers at Site A reported that these students illustrated a greater awareness of the various ways in which learning was achieved. Students who had been previously centered on one specific area of achievement became more confident in other areas and were able to expand their interests as their comfort level increased.

Two surveys were administered to determine the most favorite subjects of the students. The first survey was given before the students were taught cooperative learning social skills and before they knew about their various multiple intelligences. As Figure 5 shows, 80 percent of the students favored art and physical education. At the conclusion of the second quarter, after the students were taught the above skills and concepts, the second survey was given and the diversity of subjects that were most liked increased significantly. The strategies implemented resulted in the students compensating for their MI weaknesses and therefore enjoying a much wider variety of subjects. Also, as their social skills increased they were much more cooperative which allowed them to learn in each subject area and therefore enjoy them more than they did the first quarter.

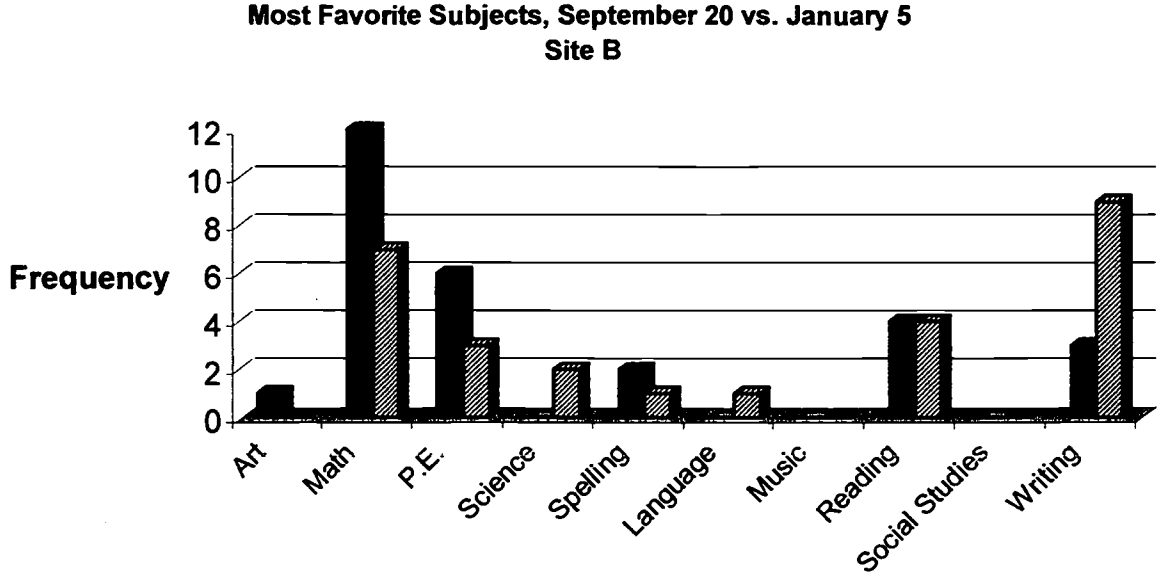

Figure 6. Site B: Most favorite subjects from quarter 1 and 2

During the first quarter, Site B found that the most favorite subjects were math, P.E. and reading. The least favorite subjects were science, language arts, music and social studies. At the end of the second quarter the most favorite subjects shifted to writing, math and reading. The least favorite subjects were social studies, art, and music. Some of this is due to the fact that Site B does not have an art or music teacher. The teacher at this site teaches art and music in an integrated fashion. These students do not view art and music as separate subjects, but rather as extensions of their core subjects. Through the process of drawing students' awareness to the various multiple intelligences, the teacher felt that students developed a more holistic attitude toward their studies. When students realized that the subject areas could freely overlap they were able to become less restricted and more open to learning in the most naturally available way. For example, in the beginning of the year students perceived a reading lesson as strictly reading. Sometimes the activities involved creating pictures, murals, or models, but the students still remained focused on the lesson as a reading lesson. Through the introduction of multiple intelligences and making them aware of new ways to learn, they were able to open up to the possibility that a lesson could fall under several categories all at once.

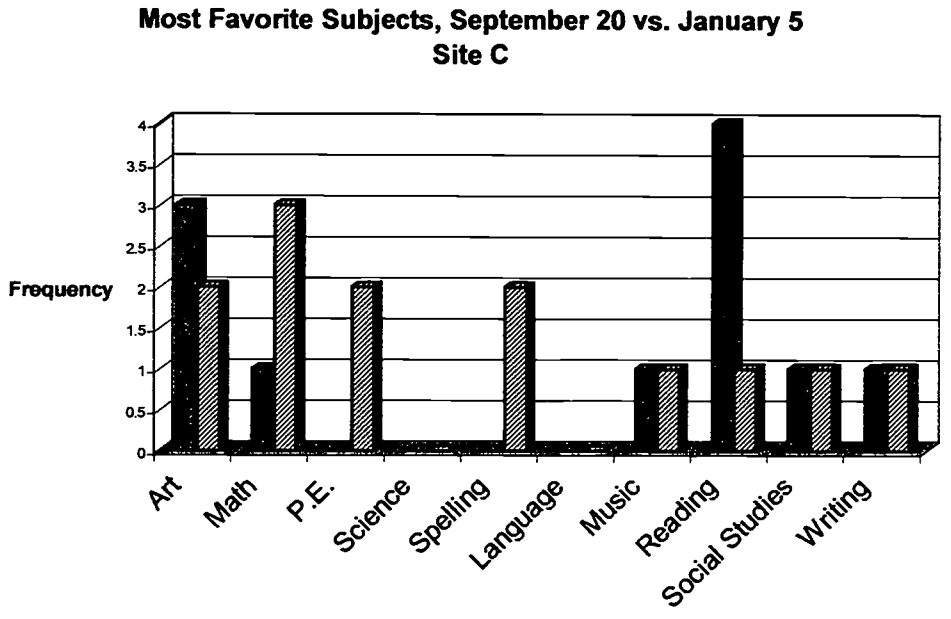

Figure 7. Site C: Most favorite subjects from quarter 1 and 2

The teacher at Site C observed attitudes very similar to the teachers of Site A. Again, the students started the year with their interests drawn toward subject areas that typically allowed them more freedom of choice and expression. Through the introduction of multiple intelligences and a wide variety of activities, these students were able to find new talents and interests in a broad range of subjects.

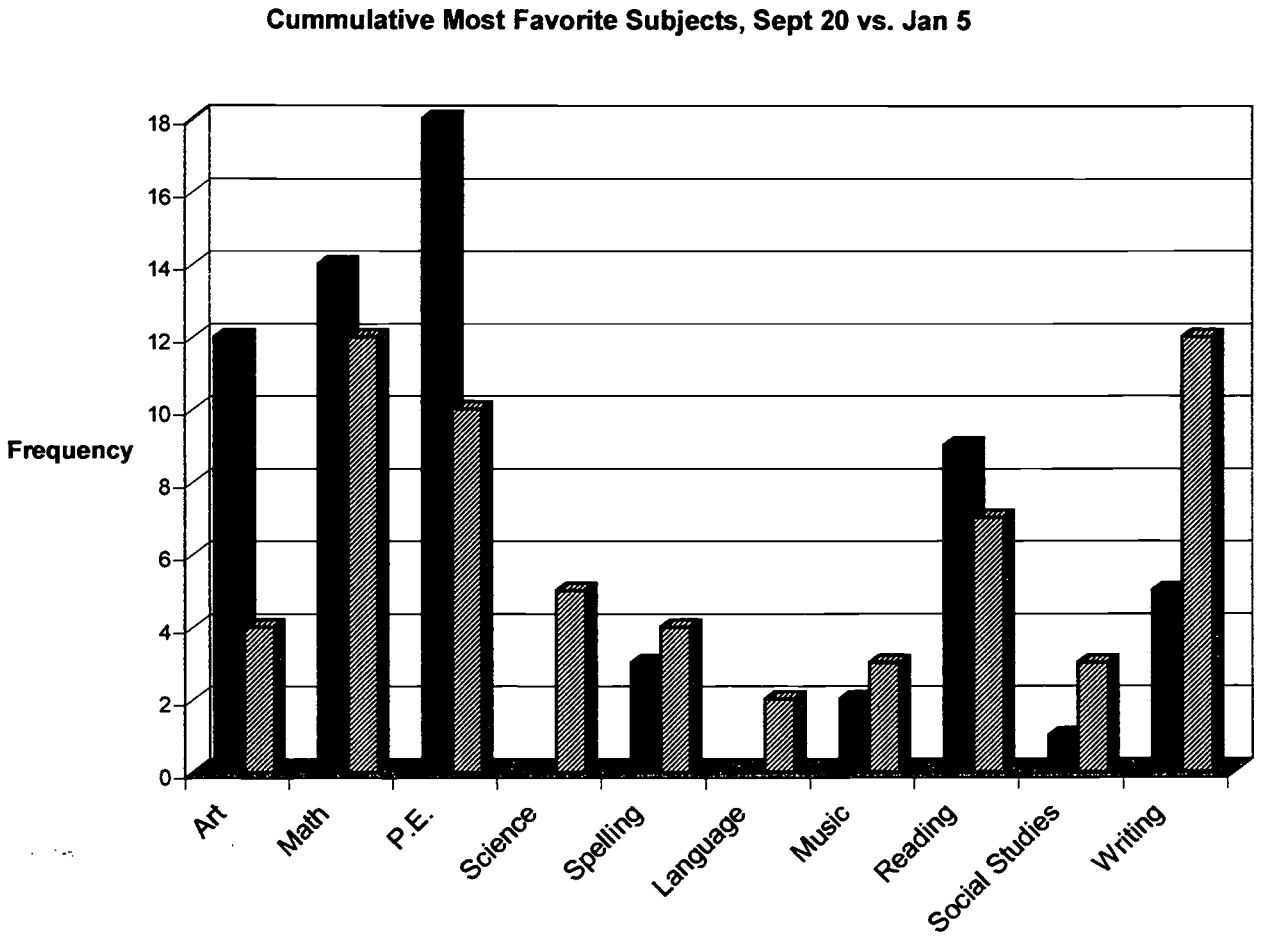

Figure 8. Cumulative: Most favorite subjects from quarter 1 and 2

The cumulative data illustrate that through the use of blended teaching techniques, the students' most favorite subjects have become more diverse. The cumulative data also reflect a better understanding of using different intelligences to learn core curriculum material. Providing a wider range of activities and choices tended to increase students' interest in learning and allowed them to function confidently in new areas.

Table 8
Student Survey Site A, Quarter II

	Always	Sometimes	Never
1. I listen to the teacher	39	9	0
2. My parents make sure I do my homework	38	10	0
3. It is important for me to do well with my school work.	44	4	0
4. My teachers care about me.	48	0	0
5. I feel safe at school.	37	11	0
6. I like to work with others in my class.	36	12	1
7. I share.	44	4	0
8. I follow directions.	43	5	0
9. I listen to other students' ideas.	40	8	1
10. The students in my school like each other.	29	19	0
11. I hand in my work on time.	27	21	0

Table 8 shows the results of a survey of students' opinions of themselves and their school environment. Each category shows a desirable outcome when compared to the baseline data (see table 2). The students had a better opinion of their own social skills as well as the social skills of others in the school as evidenced by items 1, 4, 5, 6,7,8, 9, and 10. They also indicated better academic self-evaluation through items 2 and 11. Item 2 is considered positive, although the number responding always decreased, because the students were more on task as evidenced by item 11.

To assess the students' feelings about their classrooms, a survey was given to the targeted second and third grade students.

Table 9
Site B: Student Survey Quarter II

	Always	Sometimes	Never
1. I listen to the teacher	22	6	0
2. My parents make sure I do my homework	16	12	0
3. It is important for me to do well with my school work.	20	8	0
4. My teachers care about me.	24	4	0
5. I feel safe at school.	28	0	0
6. I like to work with others in my class.	25	3	0
7. I share.	21	7	0
8. I follow directions.	14	14	0
9. I listen to other students' ideas.	22	6	1
10. The students in my school like each other.	15	13	1
11. I hand in my work on time.	19	9	0

Table 9 shows the results of a student survey completed at the end of the implementation period. Many changes were noticed in the student responses which verify improvement in areas closely related to cooperative learning. For example, items 6, 7, 8, and 9 all depict types of social skills necessary when working in cooperative groups. The fact that there was a marked increase in these items during the research period allowed the teacher to conclude that these students benefited from these activities. Item 1 also showed a positive increase. The survey results paired with student comments again showed that the improvement was due specifically to the intervention. One student commented that he valued what the teacher had to say more because she recognized him for sharing interesting ideas. Another student mentioned that it was important to listen to the teacher because she knew she would get valuable information to share with her group later. Item 5 was discussed in class and students were asked to volunteer some of the reasons they chose to respond positively. One student answered that he felt safe in school because he knew no one would laugh at his

ideas. Another boy interpreted the question differently and responded that he felt safe because there are now three security guards at school.

Table 10
Site C: Student Survey Quarter II

	Always	Sometimes	Never
1. I listen to the teacher	9	8	0
2. My parents make sure I do my homework	14	3	0
3. It is important for me to do well with my school work.	14	3	0
4. My teachers care about me.	11	5	1
5. I feel safe at school.	7	9	1
6. I like to work with others in my class.	10	7	0
7. I share.	7	10	0
8. I follow directions.	9	8	0
9. I listen to other students' ideas.	10	7	0
10. The students in my school like each other.	11	2	4
11. I hand in my work on time.	8	9	0

Item 10 shows that the students eventually came to look upon the classroom as somewhat of a safe haven from negative activities that might be occurring outside of the school building. Most of the students seemed to like one another and care about each other.

The return on homework assignments (item 11) showed some improvement in the second quarter, but this might be attributed to teacher interventions such as notes home, phone calls, and removal of privileges when homework was not turned in on time.

To assess the students' feelings about their classrooms, a survey was given to the targeted second and third grade students. The teachers found that students were somewhat open to sharing and working together in school, but there was still apprehension. Many students (28%) were not completely comfortable with sharing

(item 7) in school. Some students expressed that their answers depended on what they were being asked to share. For example, a third grader responded that sharing crayons is okay, but sharing answers is called cheating. Another problem area seemed to be getting along with others (item 10) in which 44% of the students polled answered with trepidation on whether they can get along with others in school. The teachers reported that through discussions with their classes they realized that some of the activities witnessed in other areas of the school skewed the responses of students. For example, in a school with a high rate of racial diversity students interpreted a separation of racial groups on the playground as a lack of unity. Another example came from a teacher who reported that although her students admit to getting along with each other, they were often picked on by older children and therefore feel that school wide unity is lacking. Item 11 also appeared to be a problem with 35% of the students not turning in assignments on time. Student discussion of this problem revealed that there was a lack of responsibility on the part of the students. Students often felt it was the responsibility of a parent to check for homework (65% answered that parents check on their homework, item 2). Students also placed blame on the teacher and other students if homework was late (i.e. "Susie didn't give me my spelling list" or "Mrs. Thomas didn't write _____ on the board").

Table 12
Cumulative: Student Survey Quarter II

	Always	Sometimes	Never
1. I listen to the teacher	70	23	0
2. My parents make sure I do my homework	68	25	0
3. It is important for me to do well with my school work.	78	15	0
4. My teachers care about me.	83	09	1
5. I feel safe at school.	72	20	1
6. I like to work with others in my class.	71	22	1
7. I share.	72	21	0
8. I follow directions.	66	27	0
9. I listen to other students' ideas.	72	21	4
10. The students in my school like each other.	55	34	4
11. I hand in my work on time.	54	39	0

Seventy students, or 75%, always listened to the teacher. Sixty-eight students, or 73%, experienced positive parental support on homework. Seventy-eight students, or 84% always felt it was important for them to do well with their schoolwork. Eighty-three students, or 89% sensed that teachers always cared about them. Seventy-two students, or 77%, always experienced a feeling of safety at school. Seventy-one students, or 76%, always liked to work with others in their class. Seventy-two students, or 77%, of the students always shared. Sixty-six students, or 71%, always followed directions. Seventy-two students, or 77%, always listened to other students' ideas. Fifty-five students, or 59%, sensed that the students always liked one another. Fifty-four students, or 58%, of the students always handed in their work on time.

Table 13
Cumulative Student Tardies Quarter I and II

Site	Quarter I	Quarter II
A	25	28
B	17	1
C	28	50
Total	70	79

Table 14 indicates the relative increase or decrease in tardies during the first and second quarters. At site A this number increased slightly. The data proved inconclusive due to the students' developmental stage; they have yet to internalize the concept of time. It is the opinion of the teachers at Site A that the data were more reflective of the parents than the students.

The teacher at Site B recorded definite improvements in students' motivation to be on time to school every day. Through classroom discussions it was revealed that students enjoyed the integrated units and looked forward to free choice activities. One student commented that when she was late she felt she let her group down and was frustrated with missing the morning progress check.

At Site C, the number of tardies increased significantly. This could be attributed to a number of students who live out of the district. Another explanation might be lack of parent concern regarding school attendance policies.

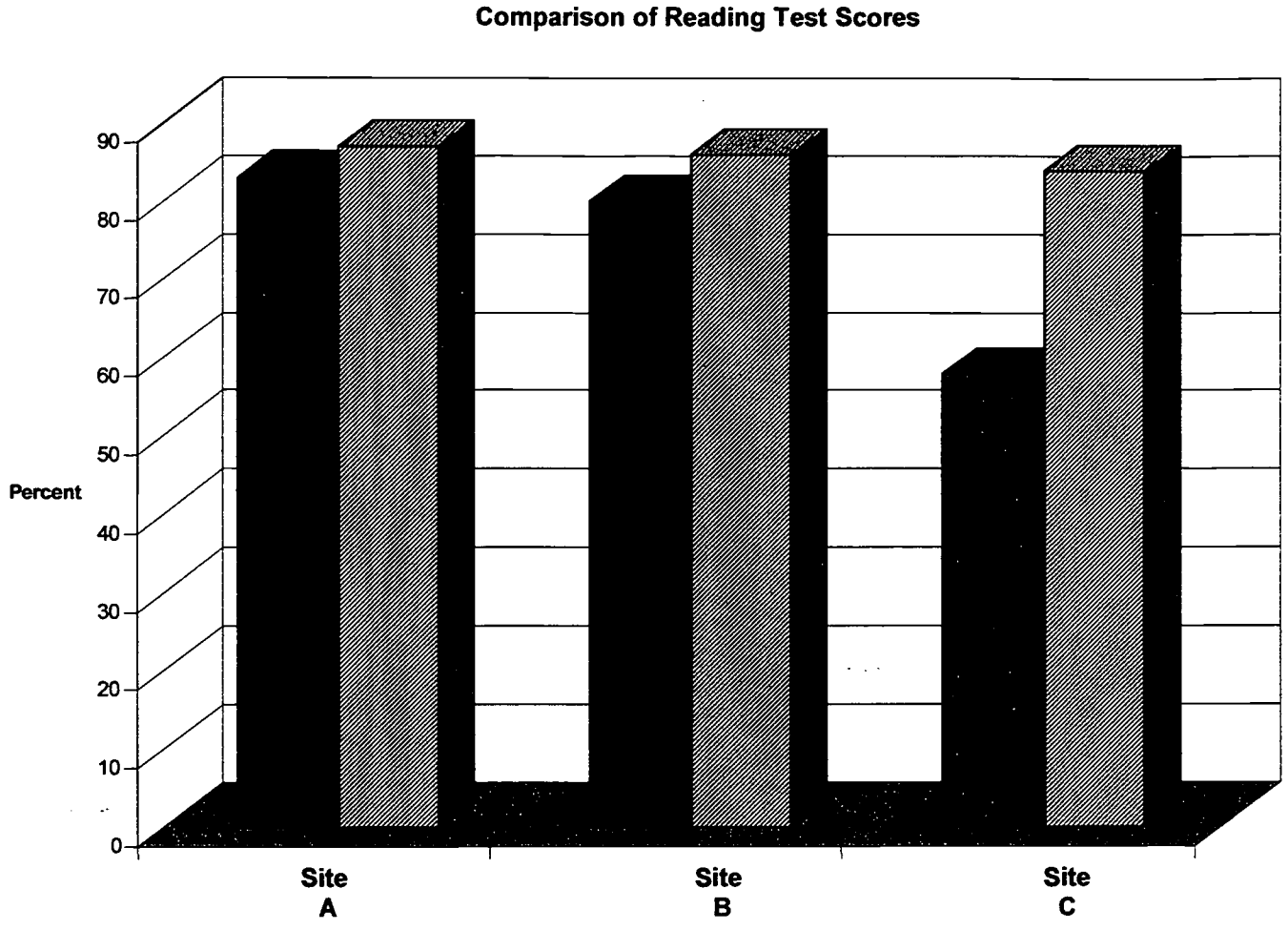

Figure 9. Reading test scores from quarter 1 and 2

During the first quarter the average reading test scores of site A was 83%. This percentage increased to 87% for the second quarter. This shows an increase for the second grade students. Site B achieved an 80% test average first quarter and increased to 86% the second quarter. Site C achieved a 60% average the first quarter and increased the class average to 79% second quarter. This illustrates an overall increase in reading test scores.

A significant academic indicator is shown in Figure 9. In the targeted classrooms students' reading scores increased from first quarter to second quarter. Reading as a

topic was integrated into engaged learning lessons, by the use of MI, throughout the curriculum. Students found reading to be useful and therefore academic success followed as a natural consequence. An improvement in social skills also followed.

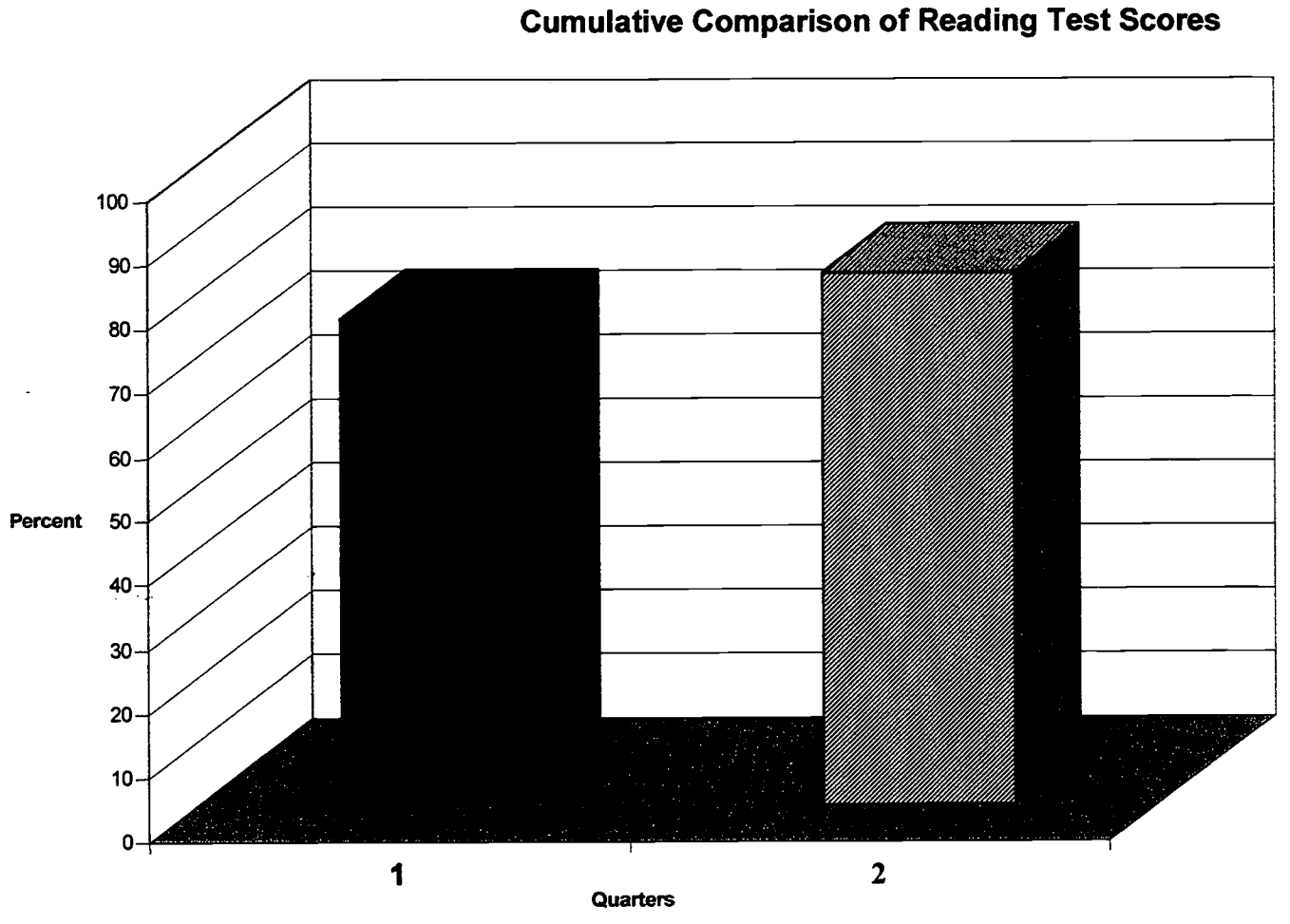

Figure 10. Cumulative Reading Test Scores

The cumulative Comparison of Reading Scores bar graph above shows an increase in reading scores taking all students from all three sites into account. Although site C showed a larger increase (60% to 79%), they only represent 25% of the entire student population within this study. The remaining 75% of the students, from sites A and B, showed a more moderate average increase.

Through the teacher's implementations of interventions a significant increase in student achievement was documented. The data also show a general rise in student motivation as documented through attendance and student surveys. It appears as though this information shows that the use of multiple intelligences and cooperative learning produces a positive effect on classroom achievement and motivation.

Through the use of several interventions, the students demonstrated an improvement in motivation. Many of these interventions involved multiple intelligences, cooperative and/or engaged learning. Improvements in student motivation from first quarter to second quarter have been recorded through teacher observation, anecdotal records and student surveys.

By using engaged learning, the students were motivated because they were given choices of how and what they wanted to learn. Several cooperative learning activities were used, which improved the students' social skills. The surveys also indicated that they enjoyed working with others and learned from each other. Many activities involved the multiple intelligences. The students were able identify their strongest intelligence and apply it to their learning. Learning centers allowed student choice and independent work. The students were able to work at their own level with learning centers. Student work portfolios were used as an assessment. They helped to identify the students' strengths and weaknesses.

The students' performance on the reading test increased from first quarter to second quarter and their social skills improved. This is an indication that the interventions which were used were likely factors in the improvement of the students' motivation to learn.

Conclusions and Recommendations

The students were taught social skills to be used during cooperative learning lessons. They were involved in engaged learning activities that used multiple intelligences. The results indicate that they showed an increase in the desired behaviors, namely motivation and social skills (initiative, effort, participation, on task behavior, cooperation) which resulted in greater achievement (quality of work).

The students arrived at the beginning of the year without necessary grade level social skills and academic abilities. This included the inability to set independent goals, self-evaluate, problem solve (with self and others), be intrinsically rewarded, and to be confident in one's own abilities. Most beginning second grade students have these attributes and, historically, many have entered third grade with these same characteristics.

Several reasons can be cited for the improvement found in this study. First, cooperative interventions helped the students become more socially adept and academically successful; these interventions included direct teaching of cooperative roles (responsibility) energizers/cheers (self-esteem, working as a team), think-pair-share (achievement) , talk and listen chair (problem solving). Second, the teaching of MI to the students, along with execution of MI/engaged learning lesson plans resulted in greater achievement (graphic organizers – visual/spatial; peer tutors-interpersonal; hands on activities and field trips – bodily/kinesthetic; musical enrichment throughout the curriculum – musical/rhythmic; journals and cooperative learning reflections - verbal/linguistic, interpersonal and, intrapersonal; technology – logical/mathematical and visual/spatial; field trips, learning centers and, hands on projects - naturalistic). As an

example of the success of the talk and listen chairs (problem solving technique), a parent e-mailed a teacher at Site A through the use of schoolnotes.com, a web site designed to increase the communication between parents and teachers, and said, "I wanted to let you know that my child told us last night that he and a friend worked out their problem about the homework assignment. He said that you had them use your problem solving technique. Very clever! Thanks." Relating to motivation, another parent used this method of communication to write, "Hi. Just a quick note to let you know how much my child enjoyed the presentation. All he talked about last night was fossils and bones and rocks. Thanks so much." The Principal at Site A demonstrated her enthusiasm for the teacher's engaged learning activity by writing the following note. "Dear (Site A teacher), Your student _____ just showed me his journal for Italy. I have never seen such a wonderful way to help make his trip a valuable learning experience! With your permission -- I'll use it as my Engaged Learning activity at the principals' meeting. Sincerely, (Principal)."

Students reflected their feelings on cooperative learning and shared the following in a class book.

- "Three heads are better than one."
- "The projects are fun to do."
- "We get to learn about other people and what they like."
- "You can get things done quicker and I do not like to do work by myself."

Finally, it is important for the reader to understand that the above analysis artificially separates these reasons into different categories according to the action research presented in this paper. In reality, the students benefited from the blending of

techniques. Learning is a holistic adventure and the result of many teaching methods interacting in varying degrees at varying times according to the individual needs of the student.

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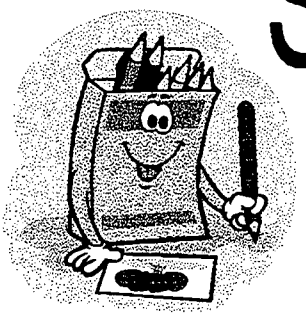


Student Survey

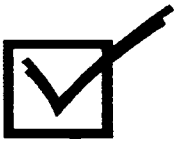
Second and Third Grade
Multiple Intelligence Information

1. Number your three **favorite** subjects 1, 2, 3 (1 most favorite).

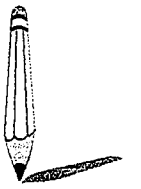
Art	_____	Language	_____
Math	_____	Music	_____
P.E.	_____	Reading	_____
Science	_____	Social Studies	_____
Spelling	_____	Writing	_____

2. Number your three **least favorite** subjects 1, 2, 3 (3 hate it).

Art	_____	Language	_____
Math	_____	Music	_____
P.E.	_____	Reading	_____
Science	_____	Social Studies	_____
Spelling	_____	Writing	_____



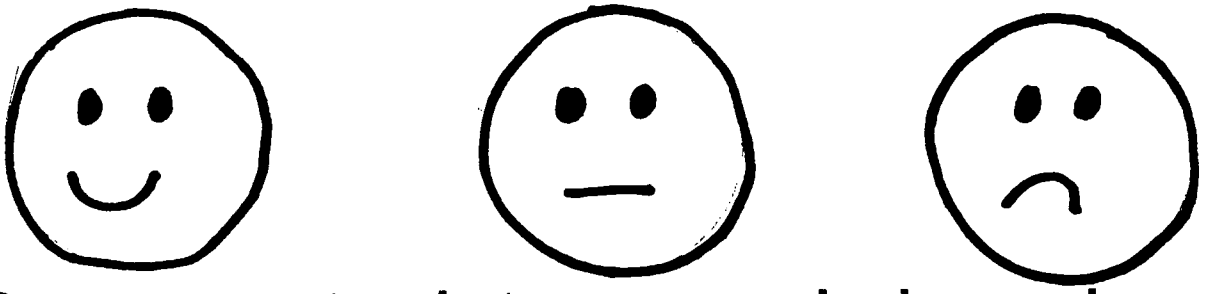
Student Survey



	Always	Sometimes	Never
1. I listen to the teacher.			
2. My parents make sure I do my homework.			
3. It is important for me to do well with my school work.			
4. My teachers care about me.			
5. I feel safe at school.			
6. I like to work with others in my class.			
7. I share.			
8. I follow directions.			
9. I listen to other students' ideas.			
10. The students in my school like each other.			
11. I hand in my work on time.			

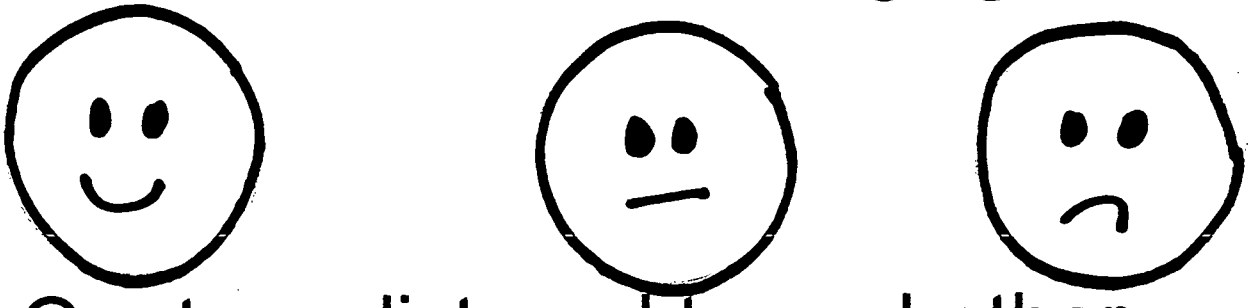
Team Survey

1. Our team used a 12 inch whisper.

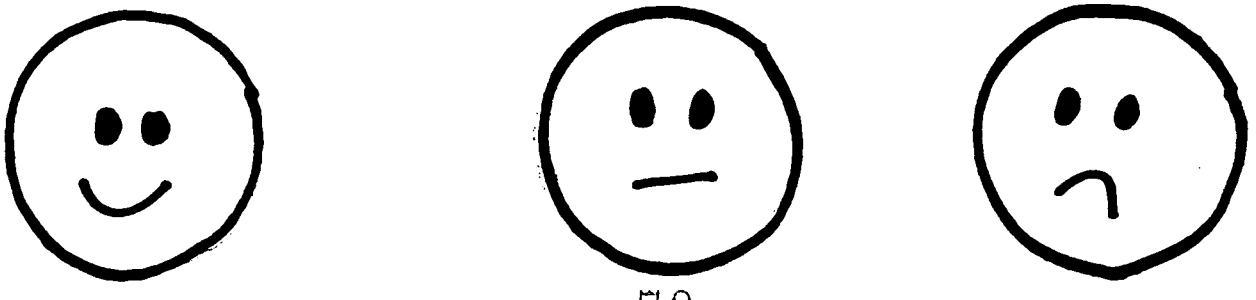


2. Our team took turns and shared.

3. Our team used encouraging words.



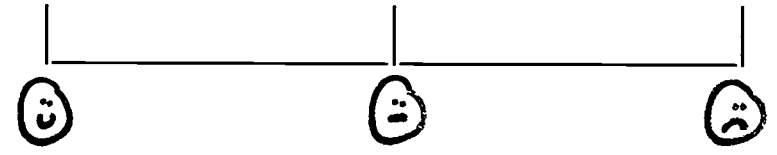
4. Our team listened to eachother.



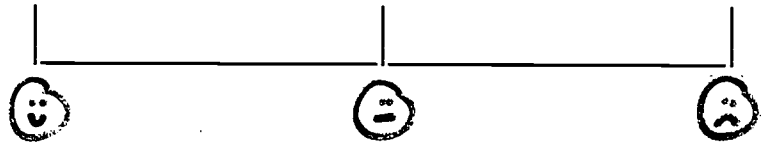
Team Survey

Names:_____

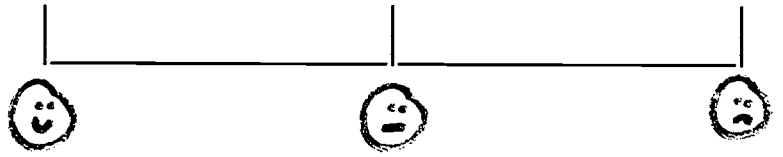
1. Each member of the group was on task.



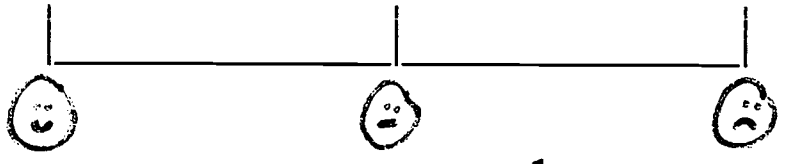
2. Everyone contributed to the group.



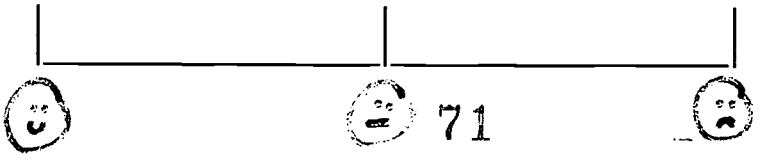
3. The group met the goal for today.



4. The group members were prepared.



5. The group encouraged one another.



Appendix E

2nd Grade Lesson Plan

Lesson Name: Dinosaur Project

Target Intelligences: Verbal/Linguistic

Supporting Intelligences: Visual/Spatial, Naturalistic, Logical/Mathematical, Bodily/Kinesthetic, Interpersonal, Intrapersonal

Thinking Skills: research, creativeness

Social Skills: working with a group

Content Focus: dinosaurs

Materials: pencil, paper, internet, books, magazines, any materials needed to create a model of a dinosaur

Task Focus: The students will do research on a dinosaur, which they selected and design a model of it.

Product: Written research report and a model of a dinosaur

Problem: researching certain information about an animal, thinking of a way to model it

Activity: The second graders will research a dinosaur, which they selected, and have a choice of how they want to model it.

Reflections:

1. Did you like doing research on your dinosaur with your group?

2. What did you like most about this activity?

3. What didn't you like?

4. Did you like coming up with your own idea to design a model?

2nd Grade Lesson Plan

Lesson Name: Stranded

Target Intelligences: Verbal/Linguistic

Supporting Intelligences: Visual/Spatial, Naturalistic, Logical/Mathematical, Intrapersonal

Thinking Skills: decision making

Social Skills: working with a group

Content Focus: needs and wants

Materials: pencil, paper, paper cutouts of needs and wants

Task Focus: The students will decide with their group what the most important needs and wants would be if they were stranded on an island.

Product: A written report of their final decision

Problem: deciding on needs and wants

Activity: The second graders will work in groups of four and imagine that they are stranded on an island. They will make a group decision on their top 4 needs and top 4 wants and include reasons for their choices.

Reflections:

1. Did you like working with your group?

2. What did you like most about this activity?

3. What didn't you like?

Appendix G
Third Grade Lesson Plan

Lesson Name: Rhyming Patterns

Target Intelligence: Musical/Rhythmic, Verbal/Linguistic

Supporting Intelligence: Bodily Kinesthetic

Thinking Skills: Verbal Communication

Social Skills: sharing ideas, taking turns

Content Focus: Writing

Materials: overhead projector, overhead of text, scripts, paper, pencil

Task Focus: The students will be able to identify rhyming patterns and continue the pattern in their original writing. The students will also be expected to incorporate the themes of a class generated script within their writing.

Product: The students will use their rhyming lines to construct a song. The song will be set to music and become part of the classroom production, The Under Creatures.

Problem: Given the previously listed ideas, write a 4 line segment using rhyming patterns discussed in class.

Activity: The teacher will present a list of ideas to incorporate into music. (These ideas were listed in a previous activity.) Students will work in small character groups to come up with rhyming lyrics. Each character group will focus on using the same information to tell a story from the point of view of their characters.

Reflections:
1. Did you enjoy this activity?
2. Did you group accomplish their goal?
3. Did your group listen and take turns?
4. Did everyone agree on the finished product?

My reflection: This activity ran very smoothly. I was initially very skeptical that the students would be able to write song lyrics that made sense and pertained to our play. I found that even though the students had a lot of things to think about all at the same time, they were very focused on the activity. I also felt that writing the lyric for the chorus helped the kids understand how their verses would fit together and became a great motivator.

Appendix H

Third Grade Lesson Plan

LESSON NAME: Designing Patterns

TARGET INTELLIGENCES: Logical/Mathematical

SUPPORTING INTELLIGENCES: Visual/Spatial

THINKING SKILLS: Decision making, creativity patterns

SOCIAL SKILLS: Sharing materials

CONTENT FOCUS: Math readiness

MATERIALS: Paper, colored pencils or crayons

TASK FOCUS: The students will create patterns and geometric designs.

PRODUCT: To design a pattern

PROBLEM: To come up with a design

ACTIVITY: Each student is given a sheet of construction paper and crayons or colored pencils. Students will create patterns and geometric designs, experimenting with different patterns such as stars, stripes, checkerboards, triangles, alternating colors, etc.

REFLECTIONS:
1. Did you enjoy this activity?
2. What did you like?
3. What didn't you like?
4. What was the easiest?
5. What was the hardest?

MY REFLECTIONS: The students liked the activity. It was interesting to see the various designs the students created. Each student enjoyed sharing their design with the rest of the class.

CHARACTERISTICS OF ENGAGED LEARNING

Characteristic	Indicator	Explanation
Vision of Learning	[ ]Responsible for Learning	Learner involved in setting goals, choosing tasks developing assessments & standards
	[ ]Strategic	Learner actively develops repertoire of thinking/learning skills
	[ ]Energized by Learning	Learner is not dependent on rewards from others
	[ ]Collaborative	Learner develops new ideas and understanding in conversations and work with others
Tasks	[ ]Authentic	Pertains to real world; may be addressed to personal interest
	[ ]Challenging	Difficult enough to be interesting but not frustrating
	[ ]Multidisciplinary	Involves integrating disciplines
Assessment	[ ]Performance Based	Involving a performance or demonstration, usually for a real audience and useful purpose
	[ ]Generative	Assessments having meaning for learner
	[ ]Seamless/Ongoing	Assessment is part of instruction; students learn during assessment
	[ ]Equitable	Assessment is culturally fair
Instructional Model	[ ]Interactive	Program responsive to student needs/requests
	[ ]Generative	Instruction oriented toward constructing meaning, providing meaningful activities/experiences
Learning Context	[ ]Collaborative	Instruction includes students as part of learning community
	[ ]Knowledge-building	Learning experiences designed to use multiple perspectives
	[ ]Empathetic	Learning designed to value diversity/multiple
Grouping	[ ]Heterogeneous	Small groups of persons with various abilities/backgrounds
	[ ]Equitable	Groups organized to offer all students challenging tasks;experiences
	[ ]Flexible	
Teacher Roles	[ ]Facilitator	Stimulates and monitors activities but does not control
	[ ]Guide	Helps students construct their own meaning by modeling, mediating, explaining, redirecting, providing options
	[ ]Co-learner/Investigator	Takes risks to explore areas outside his/her expertise: collaborates with other teachers/professionals
Student Roles	[ ]Explorer	Students have opportunities to explore new ideas/tools
	[ ]Cognitive Apprentice	Mentored by those with more expertise
	[ ]Teacher	Students encouraged to mentor others (formal & informal)
	[ ]Producer	Students develop products of real use

Teacher Name ____ Activity Title ____ Grade ____ Date ____

Engaged Learning Activities in District 161

District 161 has embraced the concepts of engaged learning as a set of valuable and essential skills for teachers to acquire and utilize. District 161 has made a significant philosophical and financial commitment to technology as a tool for students and teachers, and that engaged learning is an appropriate vehicle to utilize technology to enhance the learning of students.

◇ At the opening institute in August, 1996 a presentation and overview of engaged learning was presented to District 161 teaching and administrative staff.

◇ During the summers of 1997 and 1998 teachers and principals attended training for the role of technology in engaged learning through the Goals 2000 Grants in the *IDEAL Summer* programs.

◇ During the 1997-98 school year at their weekly meetings principals shared exciting examples of teachers implementing engaged learning activities through the curriculum.

◇ A component of the District 161 Technology Plan (under revision during the Fall of 1998) is the impact of technology in enabling and enhancing engaged learning activities.

Please help us document and study the use and impact of engaged learning in District 161. When implementing engaged learning concepts or activities, please:

- Reflect on the attributes of the engaged learning model as they pertain to the activity you have planned.
- Check (√) the indicators (on the reverse side) which will be used. "Explanation" references are provided as prompts and are not an exhaustive list of attributes.

Detailed information pertaining to the indicators is found on pages 5-11 in *Learning through Technology: Study Group Framework and Profile Tool* published by the Illinois State Board of Education Center for Learning Technologies (1997), and through NCREL.

TECHNOLOGY PERFORMANCE (Low <------------>High)	Passive Learning	Engaged Learning
High	**Examples** Closed integrated learning systems focusing on low level objectives and standardized, objective assessments Traditional distance education used to transmit information from a central source and focused on low level objectives and assessments (talking head) Connections to homes that are linked only to closed networks for the school and vendor and perhaps to other schools using the same vendor	**Examples** Networked projects with: Challenging tasks, access to Internet, integrated multimedia capabilities including CD-ROM, two-way video conferencing, access to professionals Distance education networked with computers; challenging tasks; linked to work with real-world professionals and data; two-way video Advanced tools and high-technology museum exhibits that are interactive and support high-level thinking
Low	**Examples** Computer-based instruction/drill and practice focusing on low level objectives Instructional television focused on low level objectives Video and audio used to transmit information as a lecture or talking head Teaching a computer language or word processing as an end in itself as technology literacy	**Examples** Projects using multimedia experiences and data provided by CD-ROM for authentic and challenging tasks Local file sharing allowing students access to all files for communal editing and development E-mail for inquiry collaborations State network support for schools using the Internet for projects

Passive Learning <--->Engaged Learning

LEARNING

Please attach to weekly lesson plans when engaged learning activities are planned.

Thanks!

Engaged Learning and/or Cooperative Learning

Subject:_____ Date:_____

Task:_____

+ −	+ −
+ −	+ −
+ −	+ −
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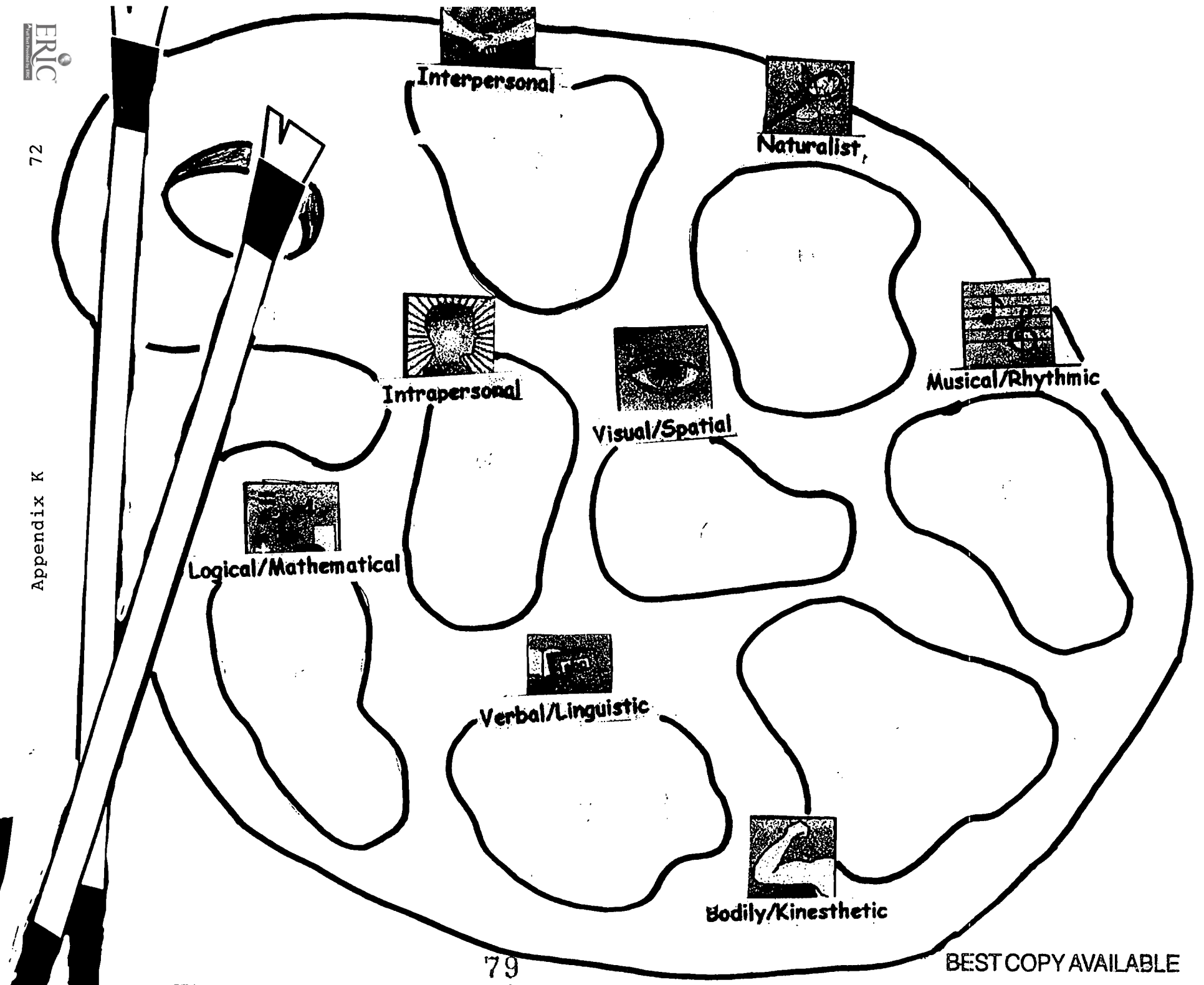
+ −	+ −



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