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considered social studies irrelevant and boring. A review of solution
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and 26 references. (Author/BT)

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IMPROVING STUDENT INTEREST IN SOCIAL STUDIES
THROUGH THE USE OF MULTIPLE INTELLIGENCES

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An Action Research Project Submitted to the Graduate Faculty of the

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Title: Improving Student Interest in Social Studies through the Use of Multiple
           Intelligences
Authors: Michelle George, Jan Mitofsky, Mary Beth Peter
Date: January 2002

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This report describes an intervention for improving students' interest and academic improvement in Social Studies. The targeted population consisted of first and fourth grade students in different socioeconomic levels in Illinois. The problems were documented in student surveys, teacher observations, and assessments.

Analysis of probably cause data revealed that students had negative attitudes and low test scores in the area of Social Studies. Researchers reported that students considered Social Studies irrelevant and boring.

A review of solution strategies suggested by knowledgeable others and combined with analysis of problem data, resulted in the selection of multiple intelligences as an intervention. Various multiple intelligence activities were incorporated: songs of states, dioramas, brochures, models, murals, poetry, literature, and other hands-on activities.

Through surveys and assessments, post intervention strategies indicated an increase in student interest and academic achievement. Reports from home supported these findings. Parents were impressed with their children's enthusiasm for social studies. Songs and poems were being repeated in their homes, in cars, and in school buses. Children also brought in related artifacts from other places into the classroom to share. Class discussions were strengthened. The desire for more information stemmed into future class research projects. Independent reading of literature that pertained to the region being studied also increased. Books were purchased that dealt with social studies topics. Through the evidence provided, social studies seemed to have a remarkable impact on students.

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CHAPTER 1

PROBLEM STATEMENT AND CONTEXT

Problem Statement

The students in elementary grades located in three suburban Northwestern Illinois schools exhibited lack of interest in social studies that interfered with academic growth. Evidence of the problem included anecdotal records, teachers' observations and journal entries; student surveys that provided an indication of student attitudes, and assessments that indicated the level of student academic performance.

Immediate Problem Context

<u>School A</u>

School A was a neighborhood school because all children in this school were within walking distance, except for special education students. The school was a two-story facility that had three additions. The original building was built in 1953, so the center portion of the building was much older than the rest of it.

The preschool center for the southwest side of the district was located in School A. The attendance for School A was approximately 400 students. The staff included 20 teachers, teaching preschool to 6th grades. There were two classrooms of each grade level. The average years of teaching experience were 11 years.

The children in this school were predominantly Caucasian, 79%, and staff at the school was predominantly Caucasian. The school had four Hispanic teachers and one Asian/Pacific Islander teacher. In the student body, there were 2.9% African American students, 12.0% Hispanic students, and 5.3% Asian/Pacific Islander students. The school had only 12% low-income students, and 3.5% limited English proficiency students.

The parents were actively involved in school activities, and it was not unusual to see the majority of the primary parents outside the primary doors before and after school. The parents kept one another informed about school and community events.

The faculty had tried a new approach in multiple intelligences using the area of music. Many of the academics were taught through various musical approaches. Technology was very visible in this building. There was a computer lab available to all teachers. Each classroom was equipped with TV, aviators, and at least two computers to each room. The school was presently considering the purchase of a computer-assisted language/reading program by Waterford that had been successfully used in the district. The purchase of this program included computers, so the administration actively worked to seek the funds to make the purchase.

The uniqueness of this school was its location. The school was only a few blocks from the central section of the village. This area was located on one of the busiest streets that led to its downtown area. School A was in a residential area and was only a few blocks from the fire department, city hall, and police department. There was a close relationship with those departments. Located in the central area of were 20 businesses that included 4 car-related businesses. The smallness of the area helped to build a strong and close community.

A major concern in School A with parents, school, and community was parental pick-up. The parents of primary students wanted to be at their door before and after school, but the physical make-up of the area around that door did not allow enough room for all those people and cars. The parents, school, and police were all involved in working out a plan to improve the pick-up of these children.

The small size of the school added a few difficulties. Because of fewer low-income students, special state funding was not available to the school. The sizes of the school also required that every teacher had to be on at least one district committee, and most were members of two committees. A strain was placed on the teachers' time and workload.

School B

School B housed preschool through sixth grade. The school building was one floor with many wings. This school was unique in that all grade levels had bilingual classes. There were four sessions of kindergarten, three sessions of Project Accelerated Literacy (PAL) for kindergarten students, four sessions of first grade, four sessions of second grade, three sessions of third grade, four sessions of fourth grade, three sessions of fifth grade, and three sessions of sixth grade. The school also had primary and intermediate physically handicapped students. There was a Reading Recovery program to help students to help students read at grade level. The preschool department had its own session with both English and bilingual students. The bilingual, physically handicapped, and learning disabled students were mainstreamed into the classrooms.

The faculty was comprised mainly of Caucasian and Hispanic teachers, although both African American and Asian/Pacific Islanders were also represented. The office

personnel were of Hispanic origin. The faculty and staff included a principal, an administrative intern, teachers, teacher assistants, art, music, physical education, librarian, two speech pathologists, physical therapists, occupational therapists, two social workers, Reading Recovery, reading specialist, and two learning disability resource teachers.

The School B had an attendance percentage of 96% with a chronic truancy of less than 1% and a mobility rate of 21%. The average class size in School B was 22. School B had a total enrollment of 710 students that included 38% Caucasian, 6% African American, 49% Hispanic, and 7% Asian/Pacific Islander. The school's population consisted of 45% low-income students and 30% limited English proficient students.

The district had established curriculum guidelines for each subject. At School B, students were taught the core subjects of math, reading, science, language, writing, social studies, music, art, and physical education. The programs that were at this school were PAL, Reading Recovery, Title 1, and bilingual education, and physically handicapped and preschool programs. The school started the Partnership in Excellence in Learning (PEL).

Diverse ethnic backgrounds of the students and the mainstreaming of the bilingual, special education, and physically handicapped children provided unique challenges to School B. The school's motto was very fitting: "Where America goes to school everyday." School B had a very high attendance rate of 96%, but had a mobility rate of 21% that made it difficult to follow children from kindergarten through sixth grade. The most difficult obstacle of School B was to overcome the effects of the numerous strikes that occurred within the past ten years.

School C

School C was a two-story brick facility, which included 22 classrooms, a gym, cafeteria, library, computer lab, music, and art rooms. Built in 1955, the school had been modified to accommodate varied age groups throughout the years. The building was situated in a small residential neighborhood and bordered a major state highway.

The faculty of School C consisted of one principal, one wing leader, fourteen classroom teachers, two special education teachers, eight specialists for the areas of art, music, physical education, library, speech, social services, and psychological services. The support staff consisted of four lunchroom assistants, a computer aide, a school nurse, and two secretaries. There were nine faculty members that had a master's degree, and the average length of teaching experience was ten years.

School C consisted of fourth and fifth grades. School C had an enrollment of 294 students with an enrollment of 89.3 % Caucasian, 1.5 % African American, 5.4% Hispanic, and 2.8% Asian/Pacific Islander. Of this number, 3.6 % received public aid. The attendance rate was 96.4 % with a student mobility rate of 13.9 %. Truancy rate consisted of 1.8%, with no chronic truants. The average class size in School C was 23 students.

Programs offered in School C included Drug Awareness Resistance Education (D.A.R.E.), Bank at School, ET (Exceptional Talented Program), Young Authors, Starlab, prairie restoration project, and choral and instrumental music. Before and after school programming available included Extended Time Care (ETC), Boy Scouts, Girl Scouts, and Spanish Club.

The district was located in the fastest growing county in the state. Each year, rapid escalation in new housing development added additional new students at an approximate rate of 25% per year. This growth created multiple challenges in providing buildings, maintaining classroom size, hiring qualified staff, and establishing a well-balanced curriculum to meet diverse needs.

Surrounding Community

Community A

Community A was approximately 45 minutes from the major metropolitan area. Trains and buses were conveniently located to this area. The community developed along the banks of a major river that flowed through the entire area.

The community's population was 13,901 on the latest census of the area. There were 12,618 Caucasian, 377 African Americans, 48 Native Americans, 682 Asian/Pacific Islanders, 1,233 Hispanics, and 176 other ethnic groups listed. The median age for this community was 31. The average household had two people living in each household, and the average family size was three persons.

For recreation, this community participated in many park district activities. They sponsored many events for the surrounding area, as well. They hosted the Riverfest Event, and Tuna Kahuna, a canoe and fishing competition in June. Along with these events, a Trolley Museum opened and ran trains for its community members and visitors. The park district had active sports programs and classes that ran successfully. The central business district of this community fit the norm for a small community. Most were very small, locally owned businesses that had been located there for many years.

With the massive population explosion that hit this area in the last few years, all of the service areas needed to expand. Referendums had to have been passed to get the needed police and fire protection. The small town grocer did not have a chance to compete against the new, modern chain stores. The small town ordinances were questioned and put under scrutiny at village meetings. The once empty cornfields were suddenly filled with houses and townhouses. The very small village doubled in size and almost all of that growth was to the village's west side. The community went from having all little and privately owned stores to franchises. This small community was forced to blend both the modern and the older atmospheres.

Community B

Community B was located one hour west of a major metropolitan area. The population of the community was approximately 100,000. The median household income was $49,000. The median age was 32. The total employees 16 years and older was 53,000.

Transportation was not a problem in this area. There were two major airports within 40 minutes to an hour away. The Metropolitan Transit Authority provided transportation to this community. The local transportation was provided by an urban bus system with service to the surrounding communities where malls were located.

The area had many industries such as a dairy, watch factory, and limestone quarries. Many businesses moved out to this area: Motorola, Visa, Safety Kleen, and Lipton Tea. There were many ethnic stores and restaurants that served the diverse population.

Community B sponsored an annual marathon, which drew over 2000 participants, and an annual bike race. Symphony performances and theatre productions provided entertainment for everyone.

There was an incentive for people to revitalize the historic district. Matching grants up to $10,000 were made available for the improvement of historic homes. A riverboat casino provided revenue that refurbished and upgraded the town. The downtown area was in the process of being rebuilt due to the many businesses, which left and moved to the shopping malls.

Community C

Community C was approximately one hour from a major metropolitan area. The population of Community C was approximately 3,200, which included a large retirement community. The average annual median household income was $51,471 with the median home value being $125,225.

Transportation available included a small airport within 10 miles and a major international airport within 60 miles from the community. Commuter train service was available to the major metropolitan area within ten miles, and easy access to a major interstate highway was available.

Facilities within the community included an outlet mall, a new library, a bowling alley, a golf driving range, a community park, a historic downtown, and various local businesses and restaurants. The community had also recently passed a referendum to build a water park and pool. Cultural activities within the community were highly related to the school district. Dramatic and musical plays, band and choir concerts, and fine arts fairs were available for attendance throughout the school year. Further cultural

experiences such as an aquarium, museums, plays, and concerts and other events were easily accessible through various modes of transportation. Community C had a strong park district that provided activities in music, art, sports, etc. for all ages two and older.

A unique quality of Community C included a retirement community not normally found in the northern part of the United States. The retirement community provided an excellent source of historical information for the students through possible interviews and classroom visits. Community C had a difficult task of gaining support for referendums for the school and park districts. These referendums were important to Community C since it was gaining young families rapidly. New housing development was found in multiple areas of the community.

National Context of the Problem

Teachers enter the field with the desire to improve the lives of their students. This is a difficult task when teachers do not have prior knowledge of the human intellect, which would allow them to better understand how a child's mind functions. Today more emphasis is put on academic performance. If teachers were better educated on how the students' minds function, teachers could structure their lessons to maximize learning. Teachers are concerned about student interest and academic performance (Campbell & Campbell, 1999).

Lack of student interest in social studies has generated concern at the state and national level (Hootstein, 1994). Hootstein ran a national longitudinal study to find out why students were not interested in social studies. Results indicated that students needed real-life experiences and social interaction with other students.

Elementary students are eager to learn: however, social studies is a struggle for many students. Social studies may not have much personal meaning for some students. Students become unfocused during a social studies presentation because the information may be dull or lifeless. A social studies text is considered the most dense and least enjoyable informational nonfiction in academic studies. Social studies is a conglomerate of information from secondary sources (Young & Vardell, 1993). Why should students need to know disconnected facts? Now that students have access to the Internet, online encyclopedias, and palm pilots, most factual information is readily available at their fingertips (Scherer, 1999).

CHAPTER 2

PROBLEM DOCUMENTATION

Problem Evidence

What can teachers do to make social studies come alive for students? Students'
disinterest in social studies has been known to increase as children progress through the
elementary years. What can be done to stop or change that cycle so that interest builds
instead of decreases in this subject area? In order to document the extent of poor
academic performance and lack of student interest in social studies, test assessments,
surveys, teacher observations, and student portfolios were used.

Survey and observation lists were developed by the researchers to aid in the data
collecting process. A summary of the results is presented in Tables 1 and 2. Chapter test
scores were also considered for the fourth grade classes. These results are presented in
Table 3.

In Table 1, fourth grade students in two different classrooms were surveyed. A
total of 48 students participated. Students were asked to judge each category with a
rating. The ratings were indicated on the survey to mean the following: 4 was "Totally
awesome" (strongly agree); 3 was "Cool!" (agree); 2 was "Not quite" (disagree); and 1
was "Not!!!" (strongly disagree). The results of the survey noted that only 9 out of 48 of
the fourth grade students considered social studies their favorite subject, and only 18

Table 1

Frequency Distribution of the Results of the Fourth Grade Interest Survey

Category	4	3	2	1
Favorite Subject	9	13	21	5
Interesting and Fun	17	16	12	3
Enjoy Geography	17	14	12	5
Identify Parts of a Map	21	9	13	5
Understand People	18	20	3	7
Help with Success	26	14	6	2
Stay Awake	29	10	5	4

considered the subject to be fun and interesting. These results confirmed the beliefs of

that social studies is not an academic area that students enjoy and find interesting.

In Table 2, first grade students were surveyed with similar categories. The survey

had to be easier to read and simpler to answer since first graders are just starting to read.

The students were also not familiar with the term social studies since their day is not

broken down into subjects. The concept of social studies had to be explained before the

survey could be given. The students colored a smiley face if they agreed with the

statement and colored a frown face if they disagreed with the statement. However, it was

not clear whether or not the students understood the survey when it was given. The

survey was given orally. Although there were many of smiles, the goal was to have that

number increase after the intervention.

Table 2

Frequency of Distribution of the Results of the First Grade Interest Survey

Category	Smile	Frown
Favorite Subject	18	9
Interesting and Fun	21	6
Enjoy Geography	24	3
Understand People	21	6

On close examination of Table 3, results indicated that even though students do not like social studies, many did well on the tests. However, a number of students did poorly. The percentage of students not achieving academically was alarming.

Trying to assess students in social studies for the first grade was rather difficult since the students were just introduced to the subject shortly before the research began. There were no test scores for the first grade since they did not have written tests.

Probable Causes

"When will I ever need to use this in real life?" "Why do I need to know all of this information?" These questions are two of many comments social studies teachers hear over and over again. For decades, some students have had an aversion to the content taught in social studies (Hootstein, 1994). This poses a great problem for teachers trying to make social studies more interesting and enjoyable for students. Frequently, students have stated that social studies is the least-liked subject in the curriculum.

Reasons that teachers have found social studies to be hard to teach are: 1) insufficient planning time to make the lessons more interesting and enjoyable; 2) limited

Table 3

Frequency of Distribution of the Results of the Fourth Grade Chapter Tests

Grade	Test 1	Test 2	Test 3
A	26	10	15
B	2	19	13
C	7	5	13
D	9	5	4
F	4	9	2

classroom time to extend the activities; 3) lack of time for teachers to attend workshops to help improve in this area; 4) the need for additional time to preview new materials, educational music, and computer software that could enhance the program; and 5) lack of funds to purchase hands-on materials, updated maps, and current media (Hendrix, 1999). Students also have problems in social studies because of difficult content. All of these reasons may factor into the lack of interest in social studies and the poor academic performance of students.

Teachers easily feel overloaded, frustrated, and even inadequate when results are not attained. When these feelings occur, a teacher's presentation of the material may lack the enthusiasm that is necessary to spark students' interests. Teachers may even avoid teaching the subject frequently and resort to direct instruction. Students obviously sense their teacher's feelings, so the students may also come to dislike or become passive towards social studies. Teacher behavior and feelings may effect the students' participation in a subject (Skinner & Belmont, 1994).

Educators understand that students learn best through active involvement in small

cooperative groups; and yet, because of the lack of planning time, social studies has

traditionally been taught in large groups, or by using independent seatwork, and assessed

by the administration of objective tests (Hendrix, 1999).

CHAPTER 3

THE SOLUTION STRATEGY

Literature Review

Social studies frequently is the least-liked subject in school. Students would do
anything to avoid social studies if they could. Students do not care for the content of the
subject because it is difficult and often not presented in an interesting way. Direct
instruction is the preferred method for most teachers because it takes less time to prepare.

Does research support the old methods of direct instruction, or does research
support the idea of teaching through the multiple intelligence methods where students are
more actively involved? Research can be found to support both of these methods;
however, they recommend gearing teaching to reach all different styles of learners.
Howard Gardner believed that people learned in different ways. He expanded the
traditional view that only recognized two intelligences: verbal and computational.
Originally Gardner defined the multiple intelligences to include seven different ways to
be smart: logical/mathematical, verbal/linguistic, visual/spatial, bodily/kinesthetic,
musical/rhythmic, interpersonal and intrapersonal. He later added the eighth intelligence,
naturalist (Brualdi, 1996).

All children are expected to learn a specific battery of skills in a specific amount
of time. Many schools fail to prepare at-risk students because they are not well prepared

or equipped to meet this challenge. Some students need more time or other ways to grasp those skills (Engelmann, 1999).

Direct instruction cannot stand alone. For an English-language learner, direct instruction has not been considered an effective method (Gersten & Baker, 2000). Others methods such as cooperative learning or peer-tutoring have effectively and rapidly increased English-language development. These children truly benefit from variations in instruction.

When direct instruction is the method of teaching, students assume the role of passive learners. By being passive learners, students may not take ownership of their learning. Students who play this role have a tendency to have lower test scores (Hill, 1996).

Typical forms of instruction, such as direct instruction, are not meeting the needs of the many students. Students must become motivated and interested in their learning. One factor that will affect students' learning is the environment. Many students will only do well if the learning environment is caring and nurturing. When students' needs are met, they will become intrinsically motivated (Galloway & Gallenberger, 2000).

Students must be permitted to think, question, reflect, and interact with ideas, objects, and others. Through these experiences, students will be able to construct meaning in their learning. In school, being wrong has always carried negative consequences for students. Sadly, in this climate of increasing accountability, being wrong has severe consequences. Often it is necessary to be wrong in order to take the first step on the path to greater understanding. Educators need to make the classroom environment comfortable, so students can be allowed to fail and still feel good about

themselves. Students must understand that real learning comes from mistakes, as well (Brooks & Brooks, 1999).

Curriculum has often been reduced to what is going to be included on standardized tests. It is difficult to test the complexity of learning. Students are learning how to take tests rather than being taught how to learn. Teachers are highly encouraged to spend lots of time "teaching to the test." With all the preparation for these tests, many teachers using back to direct instruction, and the students are becoming passive learners. Teachers must work on fostering creative problem solving. Test scores should rise if students are learning the important ideas (Brooks & Brooks, 1999).

Studies link new and innovative methods to an increase in test scores. Teachers who use a variety of instructional strategies will have students scoring higher on tests. Students will master more skills if differentiation of instruction occurs (Blair, 2000).

Many people believe the solution to any problem in education is to simply increase funding. Textbooks, videos, globes, maps, and various forms of multimedia and equipment need to be kept current. School districts are held accountable to distribute funds equally among the academic areas. Even when additional money is given to the teacher, this does not mean education will improve. Teaching materials are important; however, more critical to the classroom are the strategies that teachers use to teach the children (Blair, 2000).

Many schools struggle with poor parent participation and low student test scores. Project SUMIT (1999) was incorporated into the schools to help these areas. Although the project was not geared specifically to students with various learning needs, Project SUMIT discovered that the multiple intelligences were able to nurture all youngsters,

including students with learning needs. Nearly four-fifths of the schools interviewed associated with multiple intelligences were able to document improvements in the students with learning differences.

Five elements are needed in a classroom if students are to excel academically: trust and belonging, meaningful content, enriched environment, intelligent choices, and adequate time. Most of these elements are addressed when using the multiple intelligences. Incorporating the multiple intelligences into the classroom encourages students to grow while striving for higher academic achievement. Teachers should not try to use the eight intelligences in every lesson. Varied lessons within a unit allow students to focus on their strengths and to improve their weaknesses (Chapman, 1993).

Students need to find ways to connect their lives to their education. Many students demonstrated an increased rate of retention when teachers use methods such as: peer teaching (students teaching students), questioning, summarizing, role playing, debating, time-lines, practice tests prepared by the teachers, paraphrasing, mnemonic devices, and graphic organizers. These methods encourage students to connect the concepts with their meanings which allow their learning to become long-term. When students' brains are not able to process information in different ways, many students try desperately to use temporary storage processes to get by. In most cases, they are unsuccessful (Sprenger, 1999).

Use of the multiple intelligences encourages students to explore, investigate, and inquire. Creative and critical thinking skills are also developed through the multiple intelligences. Strategies that teachers and students have found to be the most effective in developing creative and critical thinking skills include: hands-on activities, projects,

individualized instruction, role playing, games, problem-solving activities, activities that link students' current lives to various other situations, reading, writing, multimedia activities, cooperative groups, and the development of student portfolios (Fogarty, 1997)

According to the NAEP study, students who have learned through hands-on activities excel at a higher rate than their peers. Many students prefer to participate in hands-on activities (Blair, 2000). Students' attention is more easily captured when teachers have tapped into their interests. Building upon their interests provides the connection to real-life and their education. When teachers use emotional hooks, they will gain the students' attention quickly. Learning and memory are increased when students' attention has been caught. Keying into one's emotions is an easy and inexpensive way to enhance learning. Emotions help a student to pay attention and put energy into learning.

Frequently the fine arts trigger a positive emotional response. Students need the arts because they are part of the foundation of learning, part of developing the brain. Music is an integral part of triggering positive emotional responses, because it is thought to be critical to learners to develop pattern making (D'Arcangelo, 1998).

Music is considered to be relaxing, comforting, stimulating, fun, and is an aid to increasing productivity. Music is known to strengthen memory and learning (Campbell, 1997). Light music in the background helps some students to concentrate and helps with the memorization of spelling words, poetry, foreign words, or math facts. Campbell (1997) noted that phonics, music, notation, and math are all linked to the auditory centers to the left and right brains. Students need to have the ability to connect symbols in the outer world and memory in the inner world of the brain. Music often provides these opportunities.

The interest and excitement in developing more hands-on experiences in the arts, including music, art, physical activities, or computer technology, opened the door for Gardner (1999) and his new ideas. Gardner believed that there are eight intelligences: interpersonal, intrapersonal, kinesthetic, logical, musical, naturalistic, verbal/linguistic, and visual/spatial. All people are able to perform well in specific areas, depending on where their strengths lie. He came upon his ideas through working with stroke patients in the morning, and then working with average and gifted children in the afternoon. He would notice similarities in the way the two groups worked. This theory has been embraced by liberals and humanists as a guide for engaging students who might do poorly on standardized tests, but who shine in music, the visual arts, or even interpersonal relations. This theory explained why some students who scored poorly on tests could go on to become brilliant political leaders, be exceptional in interpersonal relations, or have such talents in science, music, or art. Gardner stated, "I am relentlessly focused on genuine learning and insistent on high standards" (Gardner, 1999, p. 36).

Education board members have concluded that the arts should be viewed as an integral part of the curriculum. Students should be assured access to the exploration and study of the arts throughout their formal education. The arts evoke an emotional response for students. Statements have frequently been made that when a student's emotions are involved, his attention is easier to keep. Not only can the arts capture the emotions of the artist or students, but also many times audiences or students watching or observing their product become engaged. For example, when a student produces or sings a beautiful, emotionally laden song, it captures the interest of those listening, too. In art class, one student produces a beautiful, thought-producing picture. This picture easily captured the

attention of other art students or observers. Physical activities often have the same result. Students who are practicing a simple cheer will soon have others repeating the same cheer (Thurman, et. al, 1995).

Social studies is a subject that needs more than direct instruction. Universities should no longer prepare teachers to use only lecture and textbooks, which many students consider boring. New teachers need to be motivated to use a variety of teaching methods. Technology is more motivating and powerful then the use of a textbook or lecture method (Lumley, 1991). One method that enhances the curriculum and incorporates the eight intelligences is the use of technology.

Infusing technology into elementary social studies does take some planning. Universities need to model appropriate and engaging uses of computer technology in teacher education courses. Technology has been advocated in methods and foundation courses. Teachers should be ready to incorporate technology into the teaching of social studies. Each time technology is integrated into social studies, there are new challenges and successes. In order to be successful, teachers must become acclimated to incorporating technology into the curriculum.

When schools attempt to weave social studies and technology together, there is a realization that telecommunications can speed the process of students discovering information about cultures, living conditions, history, and the environment all over the world. Social studies textbooks or people can be as up to date as the information that is found on the Internet. Technology cannot be left out of the curriculum for social studies (Beisser, 1999). Technology can easily be matched with each of the intelligences.

Verbal/linguistic learners benefit from the words written and heard in any software application. Students can create poetry and essays. Students can listen or read monumental speeches or other historical events.

Learners who are strong in the musical intelligence benefit from hearing the musical backgrounds, creating and listening to compact discs, or even composing music. Students will learn various historical facts from listening to songs that can be sung, tapped out, or whistled. They can also associate a song to what they are learning.

Logical/mathematical students benefit from computers and technology in numerous ways. Technology naturally lends itself to problem-solving and higher-order thinking skills. Software applications that include spreadsheets, databases, strategy games, calculations, and any other multimedia are beneficial to the logical/mathematical student.

Software that requires the use of a joystick, mouse, keyboard, or touch window provides opportunities for bodily-kinesthetic learners. There are even software programs that provide hardware that allow children to pretend they are cooking, fixing, or driving. Any software that provides an active learning environment for the learner is considered beneficial to a bodily-kinesthetic learner.

People who are strong in the interpersonal intelligence will enjoy communicating with others around the world through e-mail, chat rooms, and other online activities. Software programs that address social issues should also be used. These students also benefit from working with other students in pairs or groups while using the various forms of technology/media. On the other hand, a student who tends to be more intrapersonal has

a tendency to prefer computer-assisted programs, self-improvement applications, or any program that allows independence.

Students who are considered strong visually and spatially excel in programs that incorporate drawing, painting, and visualization. Any program that incorporates visual clues, maps, diagrams, and charts should be highly considered. Visual/spatial students also benefit from watching movies or filmstrips.

Finally, the naturalist intelligence can also be enhanced using the various forms of technology/media. Besides research, students can watch animals on live web cams in zoos and in their natural habitat. Students can also be exposed to the other natural phenomena within the world.

As stated by Gardner, all people are different, which means all people learn differently. Incorporating technology into the curriculum can easily address all of the multiple intelligences. It is important to respect, value, and nurture the diversity within the students. Students can only benefit when all of the multiple intelligences have been addressed (Edwards, 1995).

Project Objectives and Processes

As the result of the implementation of the multiple intelligences strategies during the period of January 2000 to May 2000, the first and fourth grade students at the targeted schools will increase their interest and academic performance in the area of social studies, as measured by student surveys, teacher checklists, teacher constructed tests, and student portfolios.

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

1. Construct units and lesson plans in social studies.
2. Implement materials that foster the multiple intelligences.
3. Help each child understand and encourage their strengths in the various multiple intelligences.

Project Action Plan

The fourth grade students will participate in the following activities.

Northeast

Week 1:
- Read River Ran Wild (Verbal/Linguistic, Naturalist)
- Read Cricket in Times Square (Verbal/Linguistic, Naturalist, Intrapersonal)
- Scavenger Hunt-Latitude and Longitude (Logical/Mathematical, Visual/Spatial, Intrapersonal)
- Identifying Characteristics of a Region (Interpersonal, Verbal/Linguistics, Visual/Spatial)
- Map of Region (Logical /Mathematical, Visual/ Spatial, Intrapersonal)
- Survey

Week 2:
- Song (Musical/Rhythmic, Verbal/Linguistic)
- Growth Mural (Visual/Spatial, Bodily/Kinesthetic, Interpersonal, Logical/ Mathematical, Interpersonal, Logical/Mathematical, Intrapersonal, Verbal/ Linguistic, Naturalist)

Week 3:
- Chapter Test (Intrapersonal)

Week 4:
- Visitor's Brochure (Verbal /Linguistic, Logical/ Mathematical, Intrapersonal, Visual/ Spatial, Bodily/ Kinesthetic, Naturalist, Interpersonal)

Week 5:
- Choral Reading- The Midnight Ride of Paul Revere (Interpersonal, Verbal/ Linguistic, Musical/ Rhythmic, Bodily/ Kinesthetic)

Week 6:
- Jeopardy Game (Visual/ Spatial, Bodily/Kinesthetic, Intrapersonal)
- Chapter Test (Intrapersonal)

Middle West/Illinois

Week 7:
- Identifying Characteristics of a Region (Interpersonal, Verbal/Linguistics, Visual/Spatial)
- Read Sarah Plain and Tall (Verbal/Linguistic, Intrapersonal)
- Map of Region (Logical /Mathematical, Visual/ Spatial, Intrapersonal)

Week 8:
- Resource Round-Up (Bodily/Kinesthetic, Verbal/Linguistic, Logical/ Mathematical, Interpersonal, Visual/Spatial, Naturalist)

Week 9:
- Chapter Test (Intrapersonal)

Week 10:
- Learn the Illinois Song (Musical/Rythmic)
- Create a 3-D Mobile about Illinois (Logical/Mathematical, Visual/Spatial, Bodily/Kinesthetic, Intrapersonal, Naturalist)

Week 11:
- Reflection on the Road to the Reservations (Intrapersonal, Verbal/Linguistic, Visual/Spatial)

Week 12:
- Make Conestoga Wagons (Visual/Spatial, Bodily/Kinesthetic, Logical/Mathematical, Interpersonal, Naturalist).

Week 13:
- Field trip to Blackberry Farms/One-Room Schoolhouse (Naturalist, Bodily/Kinesthetic, Visual/Spatial, Interpersonal, Verbal/Linguistic)
- Chapter Test (Intrapersonal)
- Final Survey

The first grade students will participate in the following activities.

Where We Live

Week 1-3
- Survey
- Listening to a tape on neighborhoods (musical/rhythmic)
- Looking at pictures, globes, and maps (visual/spatial)
- Puzzles of natural environments (naturalistic, bodily/kinesthetic)
- Word Charts, poems, and chants performed together (verbal/linguistic, interpersonal, and musical/rhythmic)
- Computer software (visual/spatial, logical/mathematical)
- Classroom mural on their school neighborhood (visual/spatial, logical/mathematical, bodily/kinesthetic)
- Pen pals to students in different areas (verbal/linguistic, interpersonal, naturalist)
- Songs about the units topic (musical/rhythmic)
- Checklist

We Belong

Week 4-6
- Family portrait of their families (bodily/kinesthetic, visual/spatial)
- Listen to and sing songs on topic (musical/rhythmic)
- Counting candles on birthday cakes (mathematical)
- Videos on sharing, Japan, and voting (visual/spatial)
- Play a game called Following the Rules (bodily/kinesthetic)
- Checklist

People at Work

Weeks 7-9
- Career Puppets, speakers about careers, riddles about careers, drawings about careers (bodily/kinesthetic, visual/spatial, verbal/linguistic, interpersonal, intrapersonal)
- Play store (bodily/kinesthetic, visual/spatial, interpersonal, verbal/linguistic, logical/mathematical)
- Transportation – toys of vehicles (intrapersonal, interpersonal, verbal/linguistic, bodily/kinesthetic, naturalist)
- Songs about transportation (musical/rhythmic)
- Checklist

Our World

Week 10-12
- Big books about the world (verbal/linguistic, interpersonal, visual/spatial)
- Memory pouches (naturalist, intrapersonal, bodily/kinesthetic)
- Bulletin boards with landforms (visual/spatial, naturalist)
- Earth mobiles (bodily/kinesthetic, naturalist, visual/spatial, logical/mathematical)
- Pen pals (verbal/linguistic, interpersonal, naturalist)
- Weather activities (naturalist, interpersonal, visual/spatial)
- Chants and songs about weather (musical/rhythmic, interpersonal, verbal/linguistic)
- Checklist
- Final survey

Methods of Assessment

In order to assess the effects of the intervention, tests covering the content and skills identified for social studies will be used for the fourth grade students. Scoring rubrics for the fourth and first grade students will also be developed. Teacher observations, surveys, and portfolios will also be used.

CHAPTER 4

PROJECT RESULTS

Historical Description of the Intervention

The objective of this project was to increase student interest and academic performance of first and fourth graders in the subject of social studies at the targeted schools during January 2001 to May 2001. Test scores and student interest were low. This indicated that instruction in social studies needed to change.

Prior to intervention, social studies was taught in a conventional direct instruction method. Students listened to the teacher lecture or read the text to obtain information. Students were expected to retain what was taught them in a verbal/linguistic method.

Multiple intelligences strategies were chosen to increase student interest and improve test scores. Academic change was measured through the comparison of tests prior and during to the incorporation of the multiple intelligences strategies. Surveys, checklists, and teacher observations were used to compare student interest prior to and after intervention was implemented.

Before implementation, social studies units were developed to incorporate each of the eight multiple intelligences: visual/spatial, verbal/linguistic, musical/rhythmic, intrapersonal, interpersonal, logical/mathematical, bodily/kinesthetic, and naturalist. This

was done for both grade levels: first and fourth. Lessons were expected to occur four

times a week for approximately 30 minutes each. The surveys for both grade levels were

developed. The teachers used personal journals for general class observations.

The intervention started with a general survey of students in all three classes. The

planned activities were implemented at that time. At the end of each chapter, oral and

written tests were given in order to gather data. Beginning in Week 5, it was necessary to

postpone activities to the following week due to assemblies, length of activities, and

holidays at the fourth grade level. Activities turned out to be one week off for the rest of

the intervention. During Week 6, the Jeopardy game was not completed due to time

constraints in both fourth grade classrooms. The eight multiple intelligences were

addressed prior to the elimination of Jeopardy. There were no changes to the plan at the

first grade level. Projects and activities were gathered and assessed in student portfolios

in order to help determine if the necessary outcomes had been met. At the conclusion of

the intervention, the final survey was given to all students and results were tallied.

Presentation and Analysis of Results

In order to assess how the students' interest may have changed from the

application of the multiple intelligences, before and after surveys were given. Data are

presented with the total number of students in each ranking from all categories in Table 4

before and after intervention. The smile and frown came from the first grade surveys,

and the numbered rankings were from the fourth grade surveys. The smile in the first

grade surveys indicated that they agreed with the statement, and the frown indicated that

they disagreed with the statement. In the fourth grade survey, the ratings were indicated

Table 4

Frequency of Rankings Before and After Intervention

	First Grade		Fourth Grade			
Timing	Smile	Frown	4	3	2	1
Before Intervention	84	24	140	97	73	31
After Intervention	104	5	148	115	56	17

Table 5

Frequency of Grades out of Four-Fourth Grade Test Scores

Timing	A's	B's	C's	D's	F's
Before Intervention	78	48	29	20	17
During Intervention	78	55	25	20	14

on the survey to mean the following: 4 was "Totally awesome" (strongly agree); 3 was "Cool!" (agree); 2 was "Not quite" (disagree); and 1 was "Not!!!" (strongly disagree). The other area of concern was the academic performance of the fourth grade students. These data are presented in Table 5. The percentage of students receiving each letter grade is presented.

After examining Table 4, the researchers noted that the first graders went from 84 to 104 smiley faces for positive feelings towards the subject area. Specifically, the two areas of "understanding the people around me better" and "understanding the past will encourage success in the future," indicated an increase of ranking. The first grade students also had a better understanding of the concept of what social studies was and a better understanding of the survey. The results for the fourth grade students had an increase in the higher rankings on the survey. Although the highest ranking of

"Awesome" only went from 140 to 148, there was a more dramatic change with the ranking of "Cool". The negative ratings of "Not quite" and "Not!" decreased.

In Table 5, there was a decrease in the number of F's during the intervention. The number of students receiving D's did not change, and the number of C's decreased slightly. There was a notable increase of the number of B's, 48-55. The number of A's according to the table remained the same. However, when comparing individual student results before and during intervention, students who had not done well before increased their scores during the intervention. This may indicate that some of the students who had different learning styles may have benefited from the multiple intelligences method of teaching and some students may have benefited from the direct instruction. The original intent of the intervention was to help students who were struggling with the content of social studies.

<div align="center">Conclusions and Recommendations</div>

Based on the presentation and analysis of the data of the surveys and test scores, the students showed a noticeable difference in their interest levels in social studies. Academic performance seemed to slightly improve, too. As noted in the teacher's observations journals, students' attitudes toward social studies improved. Students who did not usually participate found various activities in which they felt comfortable. Some students were so excited about the change in social studies that they were asking when we were going to start social studies that day, even if it meant that we skipped another subject. Social studies no longer was the dreaded subject.

Interest was not easily measured. The surveys indicated some improvement, but more important was the attitudes of students in the classroom. The participating teachers

were confident that the students' interest in social studies had increased after the implementation of the multiple intelligences strategies. In the first grade classroom, the students became excited to hear they were going to be starting social studies since they did not even know what social studies was initially. There were more students actively participating during social studies. Students were frequently heard stating that they were having fun. Besides sparking the interests of the students, the interests of the teachers also increased. The participating teachers found that including each of the multiple intelligences seemed to spark more interest in the subject.

If this research project were to be repeated, the number of activities should be more balanced throughout the units. There were too many activities in the beginning of the project and not enough activities toward the end of the project. The action plan quickly fell behind due to the number activities planned initially. Even if the numbers had given reason for success, the implementation of the multiple intelligences benefited most students at each level.

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