

**A CASE STUDY
OF
MARION (SC) INTERMEDIATE SCHOOL
AND ITS ROLE AS A PARTNER IN THE NSF-SUPPORTED
COASTAL RURAL SYSTEMIC INITIATIVE**

**Prepared for the
NSF Rural Systemic Initiatives Evaluation Study**

**Submitted by
The Evaluation Center
Western Michigan University
Kalamazoo, MI 49008-5237**

February 2003

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by

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Other Visitation Team Members

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February 2003

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Foreword

On behalf of The Evaluation Center at Western Michigan University, I want to thank the administrators, faculty, and staff of Marion Intermediate School for their willingness to be involved with the Rural Systemic Initiatives evaluation study for the National Science Foundation. Especially, I want to thank Ms. Mechelle Blunt for her enthusiastic assistance as the host for the visitation team. The entire faculty and staff were extremely friendly, supportive, and helpful. They made our job easier and made the visits a pleasure. A special thanks to Tim Cotman who went far beyond his duties as a regional facilitator for CRSI and was an excellent historical resource and tour guide for the county.

It was a pleasure to serve as the leader of the visitation team, and I thank my colleagues who served as team members (Dr. Jerry Horn, Mr. Paul Nachtigal, and Dr. E. Robert Stephens) for their hard work and dedication. Their efforts will enable NSF and other decision makers to understand the strengths, barriers, and progress that are being made in the local school districts that take part in the Rural Systemic Initiative. Finally, I want to thank members of The Evaluation Center staff for their assistance in editing and preparing the final version of the case study report.

Brian Lotven

A Case Study of the Marion Intermediate School and Its Role as a Partner in the NSF-Supported Coastal Rural Systemic Initiative

The Evaluation Center (EC) at Western Michigan University (WMU) is engaged in a study of the Rural Systemic Initiatives (RSI) with support from the National Science Foundation (NSF). The RSI program is intended to improve science, mathematics, and technology education in rural and economically disadvantaged regions through collaborative efforts involving K-12 school districts, four-year colleges and universities, community colleges, community organizations, and other stakeholders.

The project began in 1999 and was designed around a plan to examine selected RSI collaboratives: the Appalachian, Delta, and UCAN. EC staff decided to conduct case studies in two communities in each of the three chosen collaboratives as the core of the project. Because these collaboratives had been operational for two or more years, a “post hole” type case study (one that was unique, not a preconceived model) was conducted. A site visit team of two to four professionals made on-site visits and conducted interviews and focus group meetings with teachers, administrators, students, and selected members of the community. The team also reviewed documents and observed classrooms and facilities over a period of three to five days. As available, RSI project personnel were included in the interview process in an effort to gain their perspectives of the work of the collaborative as well as the implementation process at the local level. The team “lived” in the community during the time of the visits in an attempt to more fully understand the context of the school and the environment/community in which the RSI was engaged. The case study reports were completed, reviewed at the local level for accuracy, and submitted to NSF. Summaries of the evaluative procedures and the findings and reports were also disseminated at meetings of professional groups of science, math, and rural educators as well as to other researchers as requested and deemed appropriate.

In 2000, the NSF asked the EC to expand the study to include three new RSI collaboratives and to extend the project through May 2003. The new collaboratives included the Texas, Michigan, and Coastal RSIs. The same overall objectives for the evaluative study were applicable to the new RSIs, with four additional questions introduced. The additional questions related to new or alternative forms of student assessment, the contextual factors of the communities that support educational reform, the processes and conditions that facilitate effective operation, and the use and value of technology.

The Texas RSI became operational in 1999 and later divided into southern and northern groups with additional funding from NSF in 2001. The Coastal and Michigan RSIs became operational in 2001. The post hole type case study approach, as a part of the initial WMU study with the more mature collaboratives, was judged as inappropriate and unfair for those in their early stages of development and operation. Instead, the decision was reached to employ a longitudinal case study approach consisting of three visits to three sites in each of the new collaboratives over a two-year period. Even then, the time frame is relatively short, which is a limitation of the overall study and particularly the study of individual collaboratives.

Site visit teams were formed and began gathering data during the 2001-2002 school year. The final visit of a study team to each case study community was conducted in Fall 2002.

Each case study team was composed of at least one project staff member and at least one member of the Research Advisory Team (RAT). The RAT member was selected for a visit on the basis of his/her special expertise or experience with an issue or condition determined to be a relevant factor in the case study. In the case of the Marion Intermediate School, Paul Nachtigal

and E. Robert Stephens, both longtime leaders in rural school research and members of the Research Advisory Team, served as members of the study site team. A case study visitor's guidebook was used to provide direction and format for the interviews in addition to specific and general questions to be addressed.

The case studies were designed to reflect an understanding of the variables within a school community that either support or serve as a barrier to educational reform. The role of the RSI in the reform effort was the primary focus. The RSI may be one of several independent initiatives for school improvement, but should be a major source of input with regard to math and science education. Clear evidence of impact, including consideration of different types of evidence reflecting student learning, is important. Evidence of positive effects of the RSI included traditional forms of student assessment; enrollment in advanced science, math, or technology courses; pursuit of careers requiring strong science, math, or technology backgrounds; and student work samples from independent investigation.

A plethora of social, economic, geographic, cultural, and other factors make comparisons of rural schools with suburban and urban schools problematic. These case studies focused upon the communities involved without preconceptions related to consolidation; depth/breadth of science, math, and technology offerings; qualifications of teachers; or other site-situational factors. Rather, the focus was on the schools as integral parts of the community and the effects of the community values of education and schooling. Social research speaks to the significance of the community power structure with regard to schools and schooling. Decision making, power brokering, written and unwritten understandings are all part of "doing business" in rural communities. Clearly, the RSI project was an external intervention; one reason for making the study longitudinal was to allow more opportunities for interaction within the school and the community.

Although all of the case study sites are rural and poor (by definition and as criteria for participation), each is quite unique in terms of history, racial and ethnic makeup, property values, governmental jurisdiction, and site situation. All of these factors play a part in the lineage of public education in each community. Attention was paid to identifying significant events that have contributed to the shaping of public education in these areas. In essence, what evolves is a story about the community from the eyes and ears of outsiders, but with a strong sense of understanding about rural schools and communities.

The Coastal RSI case studies focused on school districts in Charles City, Virginia (Charles City Middle School); Elizabeth City, North Carolina (Pasquotank High School); and Marion, South Carolina (Marion Intermediate School). In Michigan the evaluation project looked at two traditional public school communities—Baldwin and Whittemore-Prescott—and one state-approved and -funded charter school that serves a Native American community—Nah Tah Wahsh Public School Academy. The case study school communities in the Texas RSI collaborative were Carrizo Springs, Clarendon, and Pittsburg.

Marion History

Marion County has been populated since the 1600s. The area was first settled by the Pedee, Cheraw, and Waccamaw Indians. Native Americans were attracted to the many resources provided by the nearby Little Pee Dee and Great Pee Dee Rivers. English settlers followed, migrating inland from the South Carolina coast, and by the late 1700s, the community that eventually became Marion began to prosper.

In 1798, the county was named Marion in honor of General Francis Marion, the notorious “Swamp Fox” of the Revolutionary War. Today, a statue honoring this hero of guerilla warfare stands in the city square of Marion, one of many reminders that an exciting history remains vital to life in Marion County.

The county courthouse, built in 1853 and still in use, is situated across the square from the statue of Francis Marion. The Old Opera House was built in 1892. Today, it houses a 300-seat auditorium used by various community and civic organizations.

The Marion Academy Building, built in 1886, is home to the Marion County Museum and site of the original Harvest of the Arts Festival celebrating the area’s quality of life. The Marion Foxtrot Festival pays tribute to the city’s heritage with concerts, an arts and craft fair, storytellers, and tours of historic buildings.

In Mullins, a Marion County community proximate to Marion, the old train depot serves as headquarters for the Chamber of Commerce and the Golden Leaf Festival.

Marion’s Current Status

Today the population of Marion County is approximately 36,000. Marion is the largest community in the county. The major ethnic groups in the county are African American (54.6 percent) and white (44.7 percent). Some residents are Native-American, Asian, and Hispanic. Females outnumber males 54.6 percent to 45.5 percent.

The physical appearance of Marion belies the social and economic ills of the county. With a population of nearly 9,000, it presents the picture of rural southern charm. Main Street and the neighborhoods seem amazingly vibrant. The homes, businesses, and municipal buildings, including the county courthouse, appear to be well kept.

In many ways, Marion County is socially and economically distressed. More than 19 percent of the residents over the age of 25 have less than a ninth grade education, while slightly more than 6 percent have a four-year college degree. Statewide, the percentage of persons over 25 with a four-year college degree is more than 11 percent. Among adjacent counties, Marion has the lowest median family income and has suffered a 6.3 percent decrease in median family income level over the previous 10 years.

The unemployment rate for Marion County is approximately 14 percent. In the last 2 years a number of significant employers have left the area. The following table indicates Marion County’s top 20 industries and employees for 1999–2001. The industries shown in bold type recently moved out of the area and are responsible for more than a 20 percent reduction in available employment in the county.

Marion County’s Top Twenty Industries and Employees

Company Name	Product	Number of Employees	Location
AMV, Inc.	Automotive components	867	Marion
Marion County Hospital Systems	Health care	828	Mullins
Blumenthal Mills, Inc.	Woven damask jacquard	625	Marion

Company Name	Product	Number of Employees	Location
Russell Stover Candies, Inc.	Candy	549	Marion
Pilliod of Carolina, Inc.	Furniture manufacturing	530	Nichols
Sara Lee Hosiery	Women's hosiery	400	Marion
Sli/Supreme	Light bulbs	341	Mullins
Heritage Sportswear	Knit sweaters/shirts	300	Marion
Anvil Knitwear	Knitted tops	300	Mullins
Raytex Finishing	Household fabrics	283	Marion
Beneteau, Inc.	Sailboats	165	Marion
SoPakCo Packaging, Inc.	Packaged military rations	160	Mullins
Precision Southeast	Plastics and molding	101	Marion
New South, Inc.	Wood molding	90	Marion
Marion Ceramics	Brick pavers	79	Marion
Pee Dee Tees, Inc.	Apparel	70	Mullins
Datwyler Rubber & Plastics, Inc.	Rubber and plastics	61	Marion
Wellman, Inc.	Recycling	60	Marion
SoPakCo Foods, Inc.	Domestic foods	52	Mullins
American Athletic Apparel	Athletic and swim wear	48	Marion

Given the problems of poverty and unemployment, it is not surprising that related social problems exist. In 1998, 8 percent of all babies born in Marion County were to mothers younger than age 18. Of these, 89.1 percent were born to single mothers. In 1990, 34.8 percent of the children in the county lived with only 1 parent and nearly 38 percent of all children and youth lived below the poverty line.

The problems associated with poverty contribute to a number of realities that affect the academic abilities and potential of Marion County children. Prenatal care, child injuries, lack of immunizations, and inadequate healthcare place many children at a disadvantage upon entering school. Many children reach school without the readiness skills needed for success. Language skills, visual and auditory discrimination, memory recall and knowledge of letters, numbers, and names of objects are all skills that are often lacking in children from impoverished backgrounds. Schools that serve these children often lack adequate funding and are not prepared to respond fully to the varying developmental levels of children in the early grades. As a result, too many students do not experience the success needed to create the motivation and engagement that sustain motivation and learning.

Selected demographic information on Marion County graphically illustrates the social, economic, and demographic realities that currently exist.

Population of County

Number of persons	35,191 (-0.8 percent over last 12 months)
Number of households	13,301

Geographic Factors

Land area	489 square miles
Persons per square mile	72.5
No metropolitan areas	

Age Breakdown

0-19 years	34.6 percent
65 and over	12.1
Median age	35.1

Racial Composition

Black or African American	19,984	56.8 percent
White	14,787	42.0 percent
All other	420	1.2 percent

Social and Educational Demographics

Foreign born	1.4 percent
Language other than English	3.9 percent
High school graduates (age 25+)	68.0 percent
Bachelor's degree or higher (age 25+)	10.2 percent
Persons with a disability (age 5+)	8,633 (out of total population of 35,191)

Economic Factors

Median value of owner-occupied home	\$63,500
Median household income	\$26,526
Per capita income	\$13,878
Persons below poverty	23.2 percent

Poverty Status

Families	1,808 (18.9 percent)
With related children under 18	1,364 (26.4 percent)
With related children under 5	662 (35.0 percent)
Families with female householder, no husband present	1,197 (40.0 percent)
With related children under 18	1,054 (48.4 percent)
With related children under 5	512 (64.1 percent)

Business Factors

Private, nonfarm establishments	672
Private, nonfarm employment	10,284
Nonemployer establishments	1,329
Retail sales	\$215,694
Federal funds and grants	\$270,240
Local government employment	2,132

**Statistics Related to Child Well-Being—Marion
(As reported in *Kids Count in South Carolina, 2002*)**

The following data are cited by the *Kids Count* census data as key indicators of child well-being:

Poverty

	<u>Number</u>	<u>Percent</u>
Population under 18 below poverty	4,002	32.7

In 2001, the poverty level was \$14,630 for a family of three and \$17,650 for a family of four. The poverty threshold is often criticized as an arbitrary number. People can still be poor, but may be just above the poverty level. For example, in 1989 there were 4,955 children ages 0-17 that were less than 125 percent of poverty; thus, an additional 953 children were just above the poverty level but could still be considered poor.

Population under age 18 below 50 percent of poverty	1,862	17.5
Population under age 18 below 200 percent of poverty	7,163	67.4

Readiness and Early School Performance

Too many children reach school without the readiness skills needed for success in learning, such as visual and auditory discrimination; memory recall; and knowledge of colors, letters, names of objects, etc. Often, these children are in schools that lack the funding to adequately respond to the varying developmental levels of children in early grades. As a result, too many students do not experience the success needed to create the motivation and engagement that sustain learning.

Grade 1 Readiness on 2000/2001 Cognitive Skills Assessment Battery (CSAB)	83 children not ready (16.3 percent)
Grade 1 Failures in 2000	45 children failing (8.9 percent)

Failures Grades 1-3 (cumulative percentage)

120 children failing (23.2 percent)

Over Age for Grade 3

64 (12.8 percent)

In elementary school, 236 six- and seven-year-olds and 259 eight- and nine-year-olds were enrolled in special education classes during 1999-2000, approximately 22.8 percent and 25.1 percent of their age groups, respectively.

The aforementioned data demonstrate that a serious problem exists in terms of student readiness and school success in the early grades. With 16 percent assessed as not ready for the first grade, 12.8 percent as over age in grade 3, and 25.1 percent of eight- and nine-year-olds placed in special education, unacceptably large numbers of students begin school without good prospects for success in future school achievement. This clearly impacts Marion Intermediate School, the challenges it faces, and what it is able to accomplish in terms of standardized test scores.

Marion School District

The Marion School District is the largest in the county with approximately 3,000 students. The black and white schools began merging in the late 1960s. Like many other schools in the South, the district has moved to single building sites for the various grade levels. The Marion district has one primary school for grades K-2, an intermediate school for grades 3-5, a middle school for grades 6-8, and a high school for grades 9-12. This approach to facilities requires the integration of all students attending public schools. There is a private academy that is virtually 100 percent white. Specific enrollment figures for the academy were not available. It was reported that the academy was experiencing growth and was seen as a potential problem for the district. Leadership of the district has been stable. The current superintendent has held the position for 7 years and follows 2 superintendents who enjoyed much longer tenures.

Marion Intermediate School

Marion Intermediate School, which is the focus of the case study, is located on a large campus at the edge of Marion. It is a very attractive structure built within the last decade. The classroom wings radiate from a central hub that houses the office, counseling center, and library. The enrollment is approximately 70 percent black and 30 percent white. The principal has held that position since the opening of the building and, with the help of members of the school staff, initiated a character education program designed to create a culture in the school that values and supports all students. The program was one of ten recognized by the federal government as a National School of Character in 1999. Known as the Care Curriculum, it includes cooperative learning in science and math, the study of great historical figures, discussion of characters in literature, and reflection and writing about values.

The school climate is relaxed. It appears to be staffed with dedicated individuals at all levels. The leadership team has been together for a long time and appears to work well together.

Special Programs and Activities to Increase Student Involvement

The following programs and activities, while not specifically CRSI-sponsored programs, are significant in that they are aimed at helping to increase students' affiliation with school. The CRSI goals are much more likely to be met in an environment where students display a positive attitude toward the school environment and where the community is supportive of the school.

School/community liaison. The school recently employed a school/community liaison whose responsibilities include building bridges with the black community, stimulating greater parental involvement, and supporting students who are having problems at home or at school. It was reported that a high percentage (as high as 45 percent) of black students were being raised by grandparents or were in single-parent families. As a result of this fact and input from parents, the new position was created.

Character education. The Marion Intermediate School was recognized by the State Board of Education for being one of ten schools in the United States honored for their character education programs. Sponsored by the Character Education Partnership, the National Schools of Character program honors schools with exemplary initiatives that yield positive results in student behavior, school climate, and academic performance.

Students set goals related to core traits and send them aloft tied to balloons. Instead of the usual disciplinarian, a responsibility counselor works one-on-one with students. During the first year of the program, discipline referrals were reduced by 50 percent.

Field trips. In an effort to improve student familiarity, understanding, and motivation regarding science, all students at Marion Intermediate School are involved in numerous field trips each year. The primary focus of the field trips is science-related careers.

Guest speaker program. The school conducts a monthly guest speakers program. The speakers are frequently individuals involved in science-related occupations. This program supports the aforementioned field trips.

Career awareness. Each year, Marion Intermediate School sponsors a month-long program directed by the guidance counselor. The career awareness program focuses on careers and career awareness. Careers requiring knowledge in mathematics and science are prominently featured.

The Coastal Rural Systemic Initiative

The Coastal Rural Systemic Initiative (CRSI) is a collaborative effort among 35 impoverished counties along the Interstate 95 corridor of North Carolina, South Carolina, and Virginia. Its goal is to stimulate sustainable systemic improvements in science and mathematics education for K-12 students in a region noted for its persistent poverty and isolation from opportunities. The CRSI plans to achieve this goal in the counties' 47 school districts by creating effective teaching and learning environments, strategically linking schools with other partners in an enhanced community infrastructure, and creating the local capacity and commitment to engage in an ongoing process of renewal. The long-term goals are improved student performance in

mathematics and science, better preparation of a competitive workforce, community commitment to sustain reform efforts, and enhanced capacity for economic development.

The CRSI implementation plan reflects broad stakeholder participation and strong commitments from both the state and local levels. The outcomes of the development period include a shared vision of science and mathematics education, initial collection of baseline data, strengthened statewide and regional partnerships, identification of standards-based practices for dissemination, and identification of critical opportunities and strategies to include in the implementation plan.

The CRSI plan contains four primary strands: (1) near-term strategies to create the local readiness and commitment to implement standards-based mathematics and science; (2) long-term strategies to build local leadership vision and capacity to engage in “renewal,” an ongoing process of program review and improvement; (3) community-based strategies to consolidate support for high-quality mathematics and science, principally through establishment of local community education foundations; and (4) state/regional-level strategies to maximize CRSI’s influence by embedding it within the broad context of mathematics and science reform. These four strands function together to create the conditions necessary for participating local systems to achieve and sustain their long-term goal: improved student performance in mathematics and science.

Through an articulated system of regional institutes, on-site support, and ongoing access to technical assistance, the CRSI supports development of a local vision for mathematics and science reform; builds capacities for local leadership, planning, and implementation; and facilitates access to resources critical to achieving the vision. Working as an advocate on behalf of its participating districts, the CRSI will create collaborations that align vital processes and resources; develop partnerships between schools and other agencies and groups in the community, state, and region; and provide linkages to existing science, mathematics, and technology initiatives, leveraging their efforts in support of systemic improvements throughout the region. As a result, students will experience high-quality science and mathematics in classes with teachers who use research-based strategies, and whose efforts are supported by an aligned local system engaged in a continual process of renewal.

Goals of the Coastal Rural Systemic Initiative

The principal long-term outcome of the Coastal Rural Systemic Initiative is accelerated performance in science and mathematics for all students in its participating counties. Achieving this outcome entails reaching two long-term goals.

- A. All science and mathematics teachers create effective learning environments in which all students learn mathematics and science and use technology.

- B. Local schools and school districts have an appropriate infrastructure to support and sustain implementation of standards-based mathematics and science in all classrooms.

Because these goals are long term, extending beyond the five years of NSF support, CRSI has identified intermediate, strategic goals that lay critical groundwork for achieving the long-term

results. CRSI uses the following strategic goals as its basis for evaluating its progress and performance during the funding period.

Strategic Goal 1: Develop a critical mass of mathematics and science teachers with the knowledge and skills to implement high-quality, standards-based instruction in their classrooms.

Strategic Goal 2: Institutionalize an ongoing cycle of mathematics and science program review and improvement in participating schools as the basis for sustaining reform.

Strategic Goal 3: Enhance existing school district and community infrastructures to provide increased articulation and support for school-based reforms in mathematics and science.

The CRSI regional coordinator for the Marion Intermediate School is Mrs. Brenda Dixon, and the project director is Dr. Chuck Blanton. Members of the evaluation team who participated in site visits to the district included Mr. Paul Nachtigal, Dr. E. Robert Stephens, and Dr. Brian Lotven.

Activity to initiate the longitudinal case studies in the Coastal Rural Systemic Initiative (CRSI) began in November 2000. Representatives from The Evaluation Center at Western Michigan University (contractor with the National Science Foundation) and CRSI met in Fayetteville, North Carolina. The following people attended:

CRSI Representatives

Dr. Chuck Blanton, Principal Investigator

Mr. Manley Midgett, Associate Director for District Programs

Ms. Kimberly Smith, Associate Director for Regional Programs

Evaluation Center Representatives

Dr. Jerry Horn, Principal Research Associate

Dr. Brian Lotven, Project Consultant and CRSI Project Manager

In January 2001, Dr. Blanton suggested three sites for CRSI case studies:

Marion Intermediate School, Marion, South Carolina

Charles City Middle School, Charles City, Virginia

Pasquotank County High School, Elizabeth City, North Carolina

In April 2001, Brian Lotven visited each of the aforementioned schools to explain the nature and purpose of the longitudinal study. School district involvement in terms of personnel time, information, and resources was discussed prior to receiving district commitment. After receiving the district commitment, it was agreed that a site visit would occur on an agreed-upon date during the fall of 2001. Visits to Marion Intermediate School occurred in September 2001, April 2002, and October 2002. Additional contacts were conducted via e-mail.

The high stakes testing associated with the Palmetto Achievement Challenge Tests (PACT) is having a strong impact on schools across South Carolina, and the Marion Intermediate School is certainly no exception. PACT is a testing program that measures each student's grade-level knowledge in language arts and mathematics. Science tests were implemented in 2002, and social studies standards are under review and will be tested in the near future. Beginning in 2002, promotion to the fifth grade depended on a student's fourth grade test scores. Plans to make more grade promotion gateways are currently in progress. Consequences of low performance on the tests are indicative of what a high stakes testing program would suggest:

1. Graduation from high school is contingent on a graduation examination.
2. Beginning in 2002, promotion to the fifth grade depended on a student's fourth grade test scores. Plans to make more grade promotion gateways are currently in progress.
3. The state issues a report card that disseminates school test results to the public.
4. The state identifies low performing schools according to whether they meet state standards or improve each year.
5. The state has the authority to close, reconstitute, revoke a school's accreditation, or take over low performing schools.
6. Monetary awards may be given to high performing or improving schools.
7. Monetary awards can be used for staff bonuses.
8. The state has the authority to replace school personnel due to low test scores.

Statewide Palmetto Achievement Challenge Test (PACT) scores, as reported by the South Carolina Department of Education, are as follows:

Palmetto Achievement Challenge Tests (PACT) Results 2002

Mathematics

	Advanced**	Proficient**	Basic**	Below Basic**
Marion Intermediate	7 percent	11 percent	38 percent	44 percent
Schools with students similar to Marion Intermediate*	6 percent	14 percent	42 percent	38 percent

English/Language Arts

	Advanced**	Proficient**	Basic**	Below Basic**
Marion Intermediate	1 percent	16 percent	42 percent	41 percent
Schools with students similar to Marion Intermediate*	1 percent	21 percent	47 percent	31 percent

Percentage of Students Scoring at Basic or Above on the PACT 2002

Student Group	English/Language Arts	Mathematics
All students (n = 753)	59.2	57.0
Students with disabilities other than speech (n = 130)	27.7	35.4
Students without disabilities (n = 623)	65.8	61.5
Male	50.6	53.9
Female	68.7	60.3
African American (n = 558)	54.1	47.8
Hispanic (n = 4)	N/A	N/A
White (n = 188)	75.0	83.5
Other (n = 3)	N/A	N/A
Free/reduced lunch (n = 583)	53.7	50.9
Pay for lunch (n = 164)	81.1	80.5

2002 PACT Rating of Marion Intermediate School—Average
 PACT Ratings of Similar Schools—Unsatisfactory = 2, Below Average = 18, Average = 53,
 Good = 14, Excellent = 2

Palmetto Achievement Challenge Tests (PACT) Results 2001

Mathematics

	Advanced**	Proficient**	Basic**	Below Basic**
Marion Intermediate	8 percent	9 percent	33 percent	50 percent
Schools with students similar	6 percent	12 percent	39 percent	43 percent

English/Language Arts

	Advanced**	Proficient**	Basic**	Below Basic**
Marion Intermediate	1 percent	19 percent	35 percent	45 percent
Schools with students similar to Marion Intermediate*	2 percent	23 percent	44 percent	31 percent

Percentage of Students Scoring at Basic or Above on the PACT 2001

Student Group	English/Language Arts	Mathematics
All students (n = 708)	55.5	49.2
Students with disabilities other than speech (n = 109)	26.6	25.5
Students without disabilities (n = 595)	61.2	53.6
Males (n = 374)	48.7	46.8
Females (n = 330)	63.9	52.0
African American (n = 510)	49.2	41.6
Hispanic (n = 4)	N/A	N/A
White (n = 186)	74.7	69.5
Other (n = 4)	N/A	N/A
Free/reduced lunch (n = 535)	49.9	41.6
Pay for lunch (n = 169)	74.6	73.5

2001 PACT rating of Marion Intermediate School—Below Average
Ratings of similar schools were not provided in 2001.

*Schools with students similar to those at Marion Intermediate were determined by the South Carolina Department of Education for the purpose of establishing peer institutions for comparison purposes. Peer institutions are presented on the South Carolina Annual School Report Cards that are issued as a part of the statewide testing program.

** Definitions of Critical terms:

Advanced = Student performance exceeded expectations

Proficient = Student performance met expectations

Basic = Student performance met minimum performance expectations

Below Basic = Student performance did not meet minimum performance expectations

Because the aforementioned tests are for years when the CRSI involvement with Marion Intermediate School was in its infancy, it is inappropriate to assign responsibility for impact on the test results to this project. It is, however, important to note the previous results and trends that are based on student achievement of PACT results in mathematics and English/ language arts. In 2001, the school received a rating of Below Average, which indicates that the school is in jeopardy of not meeting the standards for progress toward the 2010 South Carolina performance goal. The South Carolina Performance Goal states:

By 2010 South Carolina's student achievement will be ranked in the top half of the states nationally. To achieve this goal, we must become one of the five fastest improving systems in the country.

The 2002 rating of Average indicates that the school's performance met the standards for progress toward the 2010 South Carolina performance goal. Clearly, the improvement in ratings is a positive indication for Marion Intermediate School. Efforts undertaken by the faculty and staff to improve on the below average rating were successful. The following activities were undertaken by the school staff:

1. Training and implementation of the literacy model
2. Training and use of science and math hands-on activities
3. Work on specific testing strategies
4. Early morning "test prep" sessions for students
5. Extended day classes for students
6. Parent involvement in academic assistance conferences
7. Parent involvement in student-parent compacts and report card conferences

Many factors might explain improvement in a standardized test score. Scores that start at a lower level are more likely to show a faster rate of improvement. The social, economic, and demographic factors that were responsible for Marion Intermediate School being a candidate for inclusion in the CRSI project, however, also make it a setting in which improvement will be very difficult.

Although CRSI is not directly responsible for changes in test scores, it has made contributions that have helped Marion Intermediate School as it has made progress on the required PACT tests. CRSI-sponsored activities most prominently cited as beneficial include these:

1. The Program Improvement Review that was conducted in February 2001. The review included (a) an assessment of the school's math and science programs based on a one-day snapshot of activities at the school and (b) a detailed description of program status to guide school improvement activities.
2. The implementation of the FOSS and STC instructional kits. CRSI provided funding for substitutes that enabled faculty to attend in-service activities during the school day rather than evenings or Saturdays.
3. Release time for a secondary science teacher to serve two days each week as the District Science Coordinator.

4. Funds provided for science and math teachers to attend work sessions in the summer during the first year of the program. CRSI paid for eight teachers to attend a two-week alignment workshop. The second summer workshop consisted of five half-days.

Progress and/or Presence of the Drivers of Educational System Reform

Evidence of the presence or progress toward fulfilling the intent of the Six Drivers for Educational System Reform, as disseminated by the National Science Foundation, was a major focal point of the visitation team's work. In the following section, these findings are summarized:

Driver #1: Implementation of a comprehensive, standards-based curricula and/or instructional materials that are aligned with instruction and assessment available to every student served by the system and its partners.

Ongoing, systematic efforts to align the curriculum, instruction, assessment, and professional development are a clear priority in the school and have been for several years. The comprehensive action by the state of South Carolina in its adoption and implementation of its version of a school accountability and improvement plan (PACT) has certainly added impetus to the priority.

Efforts to align the critical parts of a comprehensive systemic reform strategy are districtwide. They involve not only Marion Intermediate School, but also the elementary, middle, and senior high schools.

The Curriculum Planning Committee at Marion Intermediate is composed of three teachers from each grade, two visiting teacher specialists employed by the state, and the school's curriculum specialist. The two teacher specialists, one each in math and reading, are available to the school by virtue of its 2001 below average rating by the state and are thus eligible for state support. The committee addresses several alignment issues:

1. align math textbooks
2. create a calendar for what is referred to as a program for "math wizards"
3. add measurement and geometry to the math wizard program
4. align all math and science supplemental enrichment materials

The *2001 Marion Intermediate School Renewal Report*, created by constituents comprising teachers, support staff, parent advisory groups and community members, listed the following strategies for improving curriculum and instruction:

1. Use the alignment team to complete the components of the standards-based curriculum.
2. Continue to provide in-service opportunities on instructional strategies to address standards.
3. Mandate the utilization of addressed instructional strategies.
4. Provide training in selecting and utilizing methods of assessment.
5. Use assessment results to direct instruction.

6. Provide time for communication in and between grades to address curriculum links, transition, and themes.
7. Develop weekly end-of-unit and benchmark tests to determine student progress (tests aligned to standards with questions similar to PACT questions).
8. Provide weekly grade-level meetings to write grade-level plans.
9. Review lesson plans weekly.
10. Counsel students and parents about academic assistance plans.
11. Continue a test-taking strategies program.
12. Align resources to curriculum.
13. Provide mentors, coaches, and consultants to support induction teachers.

The three on-site visits confirmed that all stakeholder groups are actively involved in the above-listed strategies.

Driver #2: Development of a coherent, consistent set of policies that supports provision of high-quality mathematics and science education for each student; excellent preparation, continuing education, and support for each mathematics and science teacher (including all elementary teachers); and administrative support for all persons who work to dramatically improve achievement among all students served by the system.

The Curriculum Planning Committee at Marion Intermediate School (teachers from each grade, two visiting teacher specialists and the school’s curriculum specialist) and the individuals involved in the Marion Intermediate School Renewal Report (teachers, support staff, parent advisory groups, and community members) are the most critical entities with regard to this driver.

It is important to note that all stakeholders are involved in the process. Formalized written policies and procedures were not provided. Such documents may exist at the district level. However, since the focus of the case study was one school within the district, they were not provided. It was apparent that there was no lack of understanding of or support for what was being done in the interest of the students at Marion Intermediate School.

The alignment activities regarding textbooks in math, the math and science supplemental enrichment materials stated as goals of the Curriculum Planning Committee, and the strategies stated in the *Marion School Renewal Report* all point to coherent and consistent policies that involve all stakeholders in a process aimed at improving achievement for all students.

Driver #3: Convergence of the usage of all resources that are designed for or that reasonably could be used to support science and mathematics education—fiscal, intellectual, materials, curricular, and extracurricular—into a focused and unitary program to constantly upgrade, renew, and improve the educational program in mathematics and science for all students.

According to the annual school report card provided by the state of South Carolina, all school district teachers were provided 5 professional development days in the 2001-02 school year. The staff at Marion Intermediate School received 5.5 days. The district’s total is similar to other school districts in the state with “students similar to” those at Marion School District as well as

the average for all schools. However, the 5.5 days of professional development for teachers in the Marion Intermediate School were well below those provided to staff in schools with students similar to Marion Intermediate (10.8 days).

As a result of being designated as a below average school in the 2001-2002 Annual School Report Card, Marion Intermediate School received approximately \$35,000 through the state's Retraining Grants program. According to the principal, the bulk of these funds were being devoted to professional development activities.

According to the curriculum specialist, the use of instructional technology in the school has been limited. Some math and science software are available along with some new microscopes that were purchased through a grant to the school district.

Outreach to parents is an integral part of Marion Intermediate's attempt to provide support at all levels for students and their families. Three events for parents were directly relevant to math and science. One event focused on how parents can help students develop math skills and competencies. Another presented a program from the National Aeronautics and Space Administration (NASA), and another instructed parents on how they can help their children prepare for the PACT tests.

Students are exposed to math and science career paths through a variety of efforts. All students take field trips each year that are oriented toward science-related fields. A monthly guest speakers series frequently features high-interest, science-oriented professions. One month of every school year features a program directed by the guidance counselor that focuses on careers, including those requiring a strong foundation in math and science.

Driver #4: Broad-based support from parents, policymakers, institutions of higher education, business and industry, foundations, and other segments of the community for the goals and collective value of the program, based on rich presentations of the ideas behind the program, the evidence gathered about its success and its failures, and critical discussions of its efforts.

A strong feature of the Marion Intermediate School is the consistent effort that is made to reach out to parents. Although there is a parent advisory committee, many other ongoing initiatives are more impressive and probably more effective in making the school a place where parents are welcomed. The *Marion School Renewal Report*, with input from parents and community members, outlines the following strategies for obtaining and maintaining support:

1. Create an atmosphere where community members feel welcome in the school
2. Develop and implement parenting workshops throughout the school year
3. Provide opportunities for meaningful involvement (grandparent luncheon, monthly class visits, parent conference days, PTO activities, honor ceremonies, field trips, mentors, fund-raisers)
4. Student-Teacher-Parent Compacts
5. Regular communication (weekly newsletter, positive postcards, student agenda books, Friday folder of student work, teacher newsletters)

6. Parent Liaison working with parents and community to enhance relationships and communication
7. Share positive student activities with community (United Way, Habitat for Humanity, Relay for Life, Children's Miracle Network, and recent national disasters in New York and Washington)

Further evidence of broad involvement is provided by the principal's/school improvement council's report that is reported in the annual school report card. In addition to matters directly related to the PACT, the following were reported:

1. Marion Intermediate School students raised more than \$40,000 for school and community activities.
2. Marion Intermediate School students participated in meaningful service learning projects, including the United Way, Pennies for Patients, St. Jude's Children's Hospital Fund, school fund-raisers, and school grounds enhancement activities.
3. Marion Intermediate School students and staff provided meaningful opportunities for community members to participate in their child's total education (Black History program, Veterans Day program, monthly parent luncheons, and evening parenting sessions).

It is difficult to imagine a school more dedicated than Marion Intermediate to the ideal that the school is an integral part of a community and a society. The annual school report card provides further evidence. The report card indicates that 86 percent of parents completed surveys regarding the school climate, 90.6 percent of parents were satisfied with the learning environment, 88.1 percent expressed satisfaction with the social and physical environment, and 89.4 percent were satisfied with home-school relations.

Driver #5: Accumulation of a broad and deep array of evidence that the program is enhancing student achievement through a set of indices that might include achievement test scores, higher level courses passed, college admission rates, college majors, Advanced Placement Tests taken, portfolio assessment, and ratings from summer employers, and that demonstrate that students are generally achieving at a higher level in science and mathematics

The Palmetto Achievement Challenge Tests (PACT) is the high stakes testing program in South Carolina. It is definitely the most powerful, visible, and widely disseminated vehicle for examining student achievement. According to the PACT results that were reported earlier in this case study, Marion Intermediate School has improved. The overall rating, which was "below average" in 2001, improved to "average" in 2002. The percentage of students scoring at basic or above on the PACT in English/language arts was 55.5 percent in 2001 and 59.2 percent in 2002. In mathematics the percentage was 49.2 percent in 2001 and 57.0 percent in 2002. An 8 percent increase in mathematics in one year is certainly an indication of progress.

Several reasons account for the improvements in PACT performance: (1) teachers received training in hands-on activities, (2) teachers received help in specific testing strategies that enable greater agreement between what is taught and what is tested, (3) parents were active in academically oriented school activities (student-parent compacts, academic assistance conferences, and report card conferences), and perhaps most important, (4) the ongoing work related to aligning curriculum, instruction, assessment, and professional development.

Driver #6: Improvement in the achievement of all students, including those historically underserved.

The student population of Marion Intermediate School is largely underserved. The majority of the student population is African American (approximately 75 percent). More than 70 percent of the student body is eligible for free or reduced price lunch, and more than 24 percent have been diagnosed as having disabilities.

The performance of African-American students and students eligible for free/reduced price lunch is less than that for white students and students who pay for lunch. African-American students have a pass rate of 54.1 percent for English/language arts and 47.8 percent for math. The rate for white students is 75 percent and 83.5 percent. Free/reduced price lunch children had pass rates of 53.7 percent for English/language arts and 50.9 percent for math. Students who paid for their lunch had pass rates of 81.1 percent and 80.5 percent.

Based upon three site visits; an examination of written materials; interviews with teachers, administrators, students and parents, it is readily apparent that the Marion Intermediate School staff are aware of the disparity in performance and are committed to meeting the needs of all the students they serve.

In the *2002 Annual School Report Card*, the principal made the following statement: “Teachers will balance their efforts between those 45% of our students scoring below basic and those students who have scored at satisfactory levels on PACT.”

Rating of Educational System Reform Drivers

DRIVER	RATING*
1. Implementation of standards-based curriculum	3
2. Policies supportive of quality math and science programs	3
3. Convergence and usage of resources to support math and science programs	2
4. Broad-based support and involvement of parents and others	3
5. Accumulation of broad and deep array of evidence that the program is enhancing student achievement	2
6. Improvement in the achievement of all students, including the historically underserved	2

- 0 = Not present/no evidence
- 1 = Weak evidence/beginning but sporadic
- 2 = Moderate evidence/developing but visible success
- 3 = Strong evidence/operationally consistent and widespread

Concluding Statement

Marion Intermediate School is situated in a small, rural community with a high unemployment rate. It serves a population that is mostly African American and mostly poor. Thus, it matches the profile targeted by the Rural Systemic Initiatives. The physical facility is attractive and functional. The school has a leadership team that has served together for many years and appears to work together well. From designing a “care curriculum,” to myriad programs to solicit community and parental involvement, to an early morning program for the most “challenged” students, to finding funding for student needs, the administration deserves kudos for its efforts in support of its school and its students.

The faculty is well prepared and motivated to meet the needs of students. The two most often voiced concerns of faculty are turnover (having to start at ground zero with new colleagues) and PACT. Everything that takes place at Marion Intermediate School is under the cloud of high stakes testing. Teachers are required to continually review what and how they are teaching in light of the PACT assessment. Faculty members voiced frustration regarding what some called the “oppressive” cloud of high stakes testing. PACT is, however, a reality, and there has been success at improving student performance. The second year of the annual school report card issued by the state of South Carolina indicates improvements in test scores, passing rates, and overall rating.

The part played by the CRSI in the success of Marion Intermediate School is difficult to determine. The project provided a valuable first step in helping the school address the six NSF drivers through the program improvement review. It provided monies for alignment workshops that were held during the summer. It also provided the school with the FOSS Instructional Kits and sponsored professional development designed to assist staff in their use.

There does not, however, appear to be a common set of perceptions with regard to CRSI’s relationship with Marion Intermediate School. A representative of the central office of the Marion schools suggested that the relationship was between the district and CRSI with Marion Intermediate being the pilot site. Interventions initiated at the intermediate school are expected to influence other district schools. The understanding at Marion Intermediate was that the relationship was between CRSI and that school.

The differing perceptions regarding CRSI’s role have led to frustration. Administrators at Marion Intermediate School reported the required paperwork and the lengthy turnaround time necessary to receive responses on requests from both district and CRSI officials informed a decision to cease such requests. When asked if any current plans or activities in the area of alignment issues would be different if there was no CRSI involvement, the response was an emphatic no. Administrators indicated that they had seldom seen the CRSI coordinator and expressed frustration with the inability to receive technical assistance with classroom observations to establish whether or not staff development activities were being implemented.

A meeting that was held in October 2002 between officials of CRSI, Marion School District, and the intermediate school resulted in a better understanding between the participants. Clearly, there has been widespread misunderstanding among Marion Intermediate School staff regarding their expectations for participation in the National Science Foundation’s Rural Systemic Initiatives as being implemented by CRSI. The intent of the joint meeting was to clarify what roles CRSI, the district, and the school were to play.