

**AN EVALUATION
OF THE MATHEMATICS AND SCIENCE
PARTNERSHIP GRANT
TO HAMPTON S.C. SCHOOL DISTRICT 1
(Teacher Evolution to Advance Math and
Science, or TEAM, Project)**

PREPARED FOR HAMPTON SCHOOL DISTRICT ONE

BY

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EXECUTIVE SUMMARY

Hampton County (SC) School District 1 received a Mathematics and Science Partnership Grant from the SC Department of Education for the period of August 2010-August 2011, with continuation of the grant possible in future years. These grants are intended to improve the mathematics and science outcomes for students by improving the abilities of mathematics and science teachers. The goal of this project is to raise student achievement in mathematics and science by reforming teachers' thoughts and habits in the classroom to value and embed research-based best practices in their instruction. The strategies being used are: professional development; teacher created action plans for reforming instruction; training Master Teachers; support and feedback provided by Master Teachers. The project is known as Teacher Evolution to Advance Math and Science (TEAMS).

A method used in the TEAM project to meet its objectives is to improve teaching of math and science through application of the Cognitive CoachingSM model. Cognitive CoachingSM applies a solution focused approach to adult learning using trained coaches who assist teachers and is designed ultimately to change the approach of entire organizations to teaching and learning.

The purpose of the current evaluation is to provide information that will assist the project staff in meeting the goals of Project TEAMS and in assuring the continuing improvement of the project. The process of implementation of the program will be reported on in the evaluation. The areas covered in this section will be the four process objectives, as measured by the performance measures explicit in the proposal. The outcomes of the program will also be reported on through the two outcome objectives, as measured by the performance measures explicit in the proposal.

There are 92 teachers of math and science in the District. Of the 92 classroom math and science teachers, 36 (39.1%) teach only math, 17 (18.5%) teach only science, and 39 (42.4%) teach both math and science. There are approximately 2,558 students enrolled into seven schools in Hampton School District 1. Hampton School District 1 has two primary schools (grades PK-3), three elementary schools (two schools grades K-6 and one school grades 4-6), one middle school (grades 7-8), and one high school (grades 9-12).

The process of the grant can be divided into three parts. The first part is the professional development of classroom teachers on both content and process of teaching math and science. The second is the identification and preparation of Master Teachers to conduct the Cognitive CoachingSM model. The third is the implementation of the Cognitive CoachingSM model in the schools among the classroom teachers.

The professional development offerings were well planned and widely available. Stipends were used as incentives to assure attendance at the offerings. The selection of the Master Teachers was an exhaustive process, resulting in a high quality group of individuals. These individuals received excellent training and continuing support on Cognitive CoachingSM from the Lowcountry S²TEM Center and strong support from the District and one another. The Master Teachers, in turn, provided Cognitive CoachingSM to the classroom teachers to a degree beyond expectations at this point in the grant.

As measured by the PASS scores, the District met its goals for improvements in math among students overall by the end of the first year, rather than during the second year. There is very little difference between years in the percentage of students scoring met or above in Science. There were large differences in outcomes on the PASS by grade level, particularly with the 7th grade scores. On the South Carolina High School Assessment Program (HSAP) math examination, the scores declined between 2010 and 2011. However, on the Algebra and Biology End of Course Exams, there were relatively large improvements.

This was the baseline year for measurement of the teacher attitude, knowledge and use of best practices and of technology. It appears that the classroom teachers at the beginning of the project scored well on the best practices portion of the measurement instrument, but not as well on the technology section. This beginning high score leaves less room for change with best practices and more room for change with technology.

Since there was no evaluator overseeing the data gathering and data storage until the end of the first year of the grant, the District was placed in the difficult position of having to find data and provide it to the evaluator at the last minute. This was a hardship for the District, and one which should not be repeated. The measurement of teacher attitude, knowledge and use of best practices does not appear to be sensitive to the non-linear nature of the Cognitive CoachingSM process.

The conclusions of the evaluation are:

- The process performance measures of the grant were met or exceeded.
- The outcome performance measures of the grant were met or exceeded with the exception of the science PASS and the math portion of the HSAP. The classroom teacher measurement was in its baseline year and, therefore, no conclusions can be drawn.
- The project has been well administered and the Master Teachers and classroom teachers are enthusiastic about the TEAMS.
- The TEAMS concept is being rapidly integrated into the District's teaching methods
- The data gathering for the project is disorganized and non-systematic and places an unnecessary burden on administrative personnel.
- The current teacher attitude, knowledge and use instrument does not measure teachers' changes in beliefs in their ability to teach over time that can be correlated with changes in student behavior.

There are four recommendations in the evaluation:

- the evaluation design be modified as a quasi-experimental design;
- an information system be implemented to systematize the data gathering for the project;
- a measure of teacher self-efficacy be used to determine teacher change in belief in teaching abilities over time;
- and the District continue to strongly support the TEAMS.

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INTRODUCTION

The Purposes and Goal of the Grant

Hampton County (SC) School District 1 received a Mathematics and Science Partnership Grant from the SC Department of Education for the period of September 1, 2010-September 30, 2011 with continuation of the grant possible in future years. These grants are intended to improve the mathematics and science outcomes for students by improving the abilities of mathematics and science teachers. Hampton School District 1 proposed accomplishing this by a systemic change in mathematics and science classrooms through Teacher Evolution to Advance Math and Science (TEAMS). The goal of this project is to raise student achievement in mathematics and science by reforming teachers' thoughts and habits in the classroom to value and embed research-based best practices in their instruction. The TEAMS concept is based on four process objectives and success is to be measured through two outcome objectives. The process objectives are:

1. Professional development provided by institutes of higher learning across all grade levels in mathematics and science
2. Teacher created action plans for reforming instruction
3. Training Master Teachers
4. The support and feedback provided by Master Teachers

The outcome objectives are:

1. Improved student achievement in mathematics and science
2. Improved attitudes about, greater knowledge of, and increased use of best practices and technology in science and math instruction

In all, Project TEAMS is intended to serve 96 Hampton District One teachers and 2,670 students in seven schools in rural Hampton County.

In addition, the grant seeks to meet the GPRA measures established by the federal government for these grants. These are:

1. GPRA Measure 1: The percentage of teachers who significantly increase their content knowledge in mathematics and science, as reflected in project-level pre-and post-assessments.
2. GPRA Measure 2: The percentage of students in classrooms of MSP teachers who score at the basic level or above in State assessments of mathematics or science.
3. GPRA Measure 3: The percentage of students in classrooms of MSP teachers who score at the proficient level or above in state assessments of mathematics or science.
4. GPRA Measure 4: The percentage of MSP projects that report using experimental or quasi-experimental design for their evaluations.
5. GPRA Measure 5: the percentage of MSP projects that use experimental or quasi experimental design for their evaluations that are conducted successfully and that yield scientifically valid results.

The TEAMS Method

A method used in the TEAMS project to meet its objectives is to improve teaching of math and science through application of the Cognitive CoachingSM model. Cognitive CoachingSM applies a solution focused approach to adult learning using trained coaches who assist teachers and is designed ultimately to change the approach of entire organizations to teaching and learning.

Coaches must be non-judgmental, in order to encourage reflective practice and to support others to self-directed learning. To encourage reflection, cognitive coaching focuses on a teacher's thinking, perceptions, beliefs, and assumptions and how these affect practices. A cognitive coach collects data and learns to pose questions to engage the teacher in reflective thinking. According to Costa and Garmston, the developers of Cognitive CoachingSM, a cognitive coach "...uses tools of reflective questioning, pausing, paraphrasing, and probing for specificity." A cognitive coach helps another person "to develop expertise in planning, reflecting, problem-solving, and decision-making. These are the invisible tools of being a professional, and they are the source of all teachers' choices and behaviors." A cognitive coach must be able to work effectively with different personality types, different learning styles, different philosophies, and different stages of a teacher's development.

The design for the TEAMS project is that the Lowcountry S²TEM Center would train nine Master Teachers as Cognitive Coaches and would support these teachers as they began to coach the science and math teachers in Hampton District 1. The Master Teachers would also be formed into a support group, led at first by an outside consultant, but which would become self directive over time. The Master Teachers would each provide coaching to their assigned teachers within their own schools. Work with the coaches and the teachers would begin with planning, which is the first of the three "maps" of Cognitive CoachingSM.

Teachers would also receive professional development to improve their content knowledge and technical skills. Technology would be provided that has not been provided before to allow teachers to communicate with one another, to gain access to more resources and to receive technical assistance and training via the internet.

Purpose and Contents of the Evaluation

The purpose of the evaluation is to provide information that will assist the project staff in meeting the goals of Project TEAMS and in assuring the continuing improvement of the project.

Process Evaluation

The process of implementation of the program will be reported on in the evaluation. The areas covered in this section will be the four process objectives, as measured by the performance measures explicit in the proposal.

Outcome Evaluation

The outcomes of the program will report on the two outcome objectives, as measured by the performance measures explicit in the proposal.

GPRA Measures

The GPRA measures will be reported as they are reported in the Federal reporting system, with additional information that may be of help in continuing quality improvement.

The TEAM Project is designed to ultimately bring permanent change to the teaching of mathematics and science in Hampton County School District 1. Among the changes that will be products of the project are:

- Reasonable progress will be made towards 100% of mathematics/science teachers meeting the SC definition for highly qualified in mathematics or science by offering additional college credit hours, increasing content knowledge through aligned activities designed to improve teachers' understanding of grade-level standards, and by supporting teachers' successful performance on the content area ADEPT teacher evaluation system.
- Activities provided through the partnerships will create reasonable progress toward aligning 100% of instructional materials and practice to the SC Mathematics and Science Standards.
- TEAMS will raise student achievement and reform math and science education by replacing traditional thought and outdated classrooms with innovative thought and relevant, engaging, content-rich classrooms.
- All professional development activities provided by the S²MART Center, the Citadel, USC-Aiken, Invent Now, and HD1 will have teachers experience the same research-based best practices that they will use to meet students' needs and to raise student achievement.

METHODOLOGY

Introduction

System Wide Solutions, Inc. was asked in early August 2011 to evaluate the TEAMS grant, and an agreement was signed on August 17, 2011. An evaluation design was in place from the original grant proposal. The design included formative research and pre- and post-professional development-tests only and other one-time data collection methods. The design is essentially a descriptive-exploratory design. SWS modified the design to include all measurements that had occurred, additional data available from another long-term evaluation project which includes data on all district students, and additional individual and group interviews. SWS will attempt to re-direct the evaluation to a quasi-experimental design for the remaining two years of the grant.

Philosophy of the Approach

SWS used an action research approach to conduct this evaluation. As described by Greenwood and Levin in *Introduction to Action Research: Social Research for Social Change* (1998), action research involves the professional researcher working with the members of an organization and community to improve a situation. Action research (or, in this case, evaluation) means that information developed by the evaluator is used by the organization and community to change their activities and objectives as they go along to make it more likely that the goals of the project will be achieved. In action research, the evaluator is part of the process, whereas in traditional evaluation, the evaluator stands outside of the process. In the current project, it is hoped that Hampton District 1 will be able to use the findings of the report to continue to improve upon the goals and objectives of the District embodied in the MSP project.

Phases of the Evaluation

Phase 1 – Preparation for Data Gathering

In this phase, the grant application was reviewed, with a particular emphasis on the goals, objectives, outcomes and activities of the project. The evaluation design of the project was reviewed and questions regarding availability of data, key informants and access to qualitative information prepared.

Phase 2 – Gathering and Reviewing Information

Information gathering occurred in five stages. The first stage was a meeting with the project director and the Director of Special Projects for the District. In this meeting, based on Phase One, the data needs and availability of the information were discussed and a plan created.

The second stage was to request the data and qualitative information which was available at the district level from the appropriate individuals. This information was made available over time.

In some instances, the information was not available and other information was substituted to replace that from the original plan.

The third stage was to conduct a series of interviews, each building on the previous set of interviews. First to be interviewed were the S²MART (now S²TEM) Center personnel who provided the training/coaching to the Master Teachers in Hampton. The interview schedules for these interviews were built on the objectives and activities in the grant proposal. Building on Results of these interviews, interview schedules were prepared for the Master Teachers. Following the interviews with the Master Teachers, interview schedules were prepared and interviews conducted with a representative sample of teachers. (See Appendix One for interview schedules.)

The fourth stage was to access the SC Department of Education database to download the standardized test score data for the District for the period under study. This was followed by a final stage of reviewing what information was now in the database for the evaluation of the project and requesting any missing information from the District.

Phase 3 –Preparation of the Information and Data

The qualitative information gathered was placed in a single qualitative database for analysis. The quantitative data was exported from Microsoft Access into the Statistical Packages for the Social Sciences (SPSS) for analysis. Tables and Graphs describing the outcomes were developed in Microsoft Excel and exported to Microsoft Word.

Phase 4 – Analysis of Information and Data and Development of the Report

In developing the report, the following steps were conducted:

1. The evaluation team achieved consensus on:
 - *What Happened?* (Findings of the Study) What activities and actions took place during the grant period?
 - *So What?* (Conclusions of the Study) What meanings do the activities and the actions have in terms of the goal and objectives of the project and the expressed desires of the participants? To what extent have the aims of the project been achieved? Which activities were most successful? Which could be improved upon?
 - *Now What?* (Recommendations of the Study) What changes and additions does the evaluation team believe might be useful in advancing the goals of the project?
2. The sections of the report were assigned to different team members for drafting and all team members edited the report.
3. The final report includes a description of the grant and its goals and objectives; implementation findings; findings of progress toward the project goals and objectives; a discussion of the findings of the evaluation, including trends and themes; the conclusions; and the recommendations. This resulted in a detailed, written documentation of the progress of the grant and possible implications for the future of similar projects.

Limitations of the Evaluation

The evaluation is limited by the evaluator being chosen at the end of first project year. This made the development of an evaluation design that is consistent with the proposal somewhat problematic. In addition, it required that the evaluation be conducted largely using data available rather than data specifically determined by an evaluator in concert with the District to be best for the needs of the District and the funder. In some cases, the data required was not available.

Organization of the Evaluation

The evaluation is organized into six parts.

- Introduction
- Methodology
- Process findings
- Outcome findings
- Discussion
- Conclusions and recommendations

FINDINGS PART I: PROCESS EVALUATION

Introduction

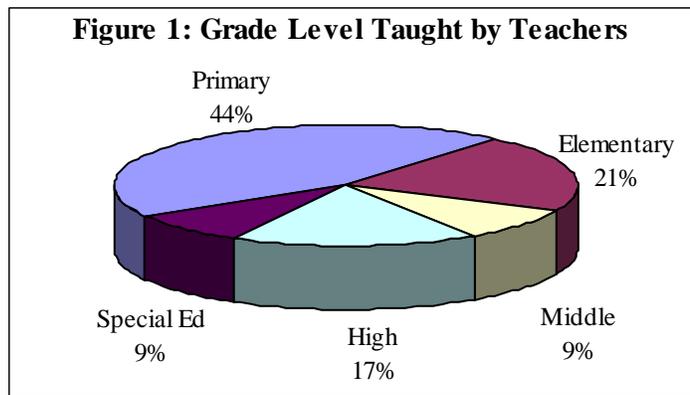
The process evaluation reports first on the numbers and makeup, to the extent possible, of the teachers and students served by the grant. It then reports on each process objective individually, including progress towards meeting the performance measure for the objective and the progress made towards carrying out the activities included in attempting to meet the objective. Finally, this section reports on several performance measures mentioned in the proposal but not included under a specific objective.

Teachers Served

In 2009-2010, the most recent year for which Report Card data is available and the year which will serve as the baseline year, 7.6% of the classes in high poverty schools are not taught by highly qualified teachers, 57.9% of teachers in Hampton School District 1 had an advanced degree and 4.3% of teachers had an emergency or provisional certificate. These percentages are in line with other similar districts within the state. On average, the 195 teachers (all subjects) participated in 19.5 professional development days each year.

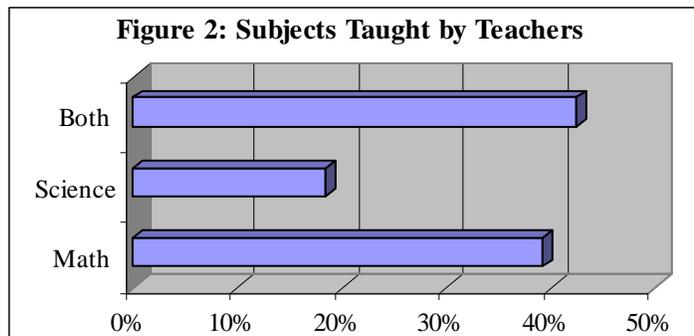
Almost half of the math and science teachers in the district (n=41, 44.6%) teach students in grades kindergarten through second (primary), 19 (20.7%) teach students in grades third through sixth (elementary), eight (8.7%) teach students in grades seventh and eighth (middle), 16 (17.4%) teach students in grades ninth through twelfth (high), and eight (8.7%) teach students in special education (all grade levels). (See Table 1 and Figure 1.)

Table 1: Grade Level Taught by Teachers		
	#	%
Primary Grades	41	44.6%
Elementary Grades	19	20.7%
Middle School Grades	8	8.7%
High School Grades	16	17.4%
Special Education	8	8.7%
Total	92	100.0%



Of the 92 classroom math and science teachers in the district, 36 (39.1%) teach only math, 17 (18.5%) teach only science, and 39 (42.4%) teach both math and science. (See Table 2 and Figure 2.)

Table 2: Subjects Taught by Teachers		
	#	%
Mathematics Only	36	39.1%
Science Only	17	18.5%
Both Math and Science	39	42.4%
Total	92	100.0%



Students Served and Their Demographics

There are approximately 2,558 students enrolled into seven schools in Hampton School District 1. Hampton School District 1 has two primary schools (grades PK-3), three elementary schools (two schools grades K-6 and one school grades 4-6), one middle school (grades 7-8), and one high school (grades 9-12). About half of the students in the district (53%) are African American, 44% are Caucasian, and 4% are of other races. The majority of the youth receive free (64%) or reduced (9%) meals, and 12% have a special need or are on an Individualized Education Program (IEP). During the 2009-2010 school year (the most recent year for which data is available), the attendance rate for students was 95%, the retention rate was 4.6%, and 5.7% of students were older than usual for their grade. The annual dropout rate was 5.5% and the four year cohort graduation rate was 65.3%.

Objective 1: Professional Development Will Be Provided By Institutes Of Higher Learning Across All Grade Levels In Mathematics And Science

PERFORMANCE MEASURE

By June of years 1 and 2, at least **85% of HD1 math and science teachers will engage in at least 45 hours of professional development** provided by institutes of higher learning, the S²MART Center, and other certified instructors to understand the value of, the need for, and implementation of best practices.

Of the 92 math and science teachers in the district, 84 (91.3%) participated in at least one of the available trainings, and 82 (89.1%) received at least 45 hours of professional development from institutes of higher learning, the S²TEM Center, and other certified instructors during the grant year. This includes the nine master teachers who were trained in Cognitive CoachingSM by the S²TEM Center. The professional development opportunities included all of the specific activities in the grant proposal stated as part of this objective. These are listed below. Teachers in the district received a total of 6,594 hours of professional development credit. **The district**

has met the performance measure. Examples of agendas and other training materials may be found in Appendix Two.

There were 15 different professional development opportunities reported. These offerings met the descriptions of offerings found in the proposal. Teachers received credit toward their 45 hours for each professional development opportunity in which they participated. The hours of credit received for each of the offerings includes preparation time for the content, actual contact hours, and follow-up activities.

- **Science Kit:** Participants were trained on how different science kits are put together and practiced presenting lessons to one another. They also taught lessons to small groups of students. Twelve teachers received 36 hours each of credit for participating in the training.
- **Intel:** The guiding question for the course is: *How can technology be used most effectively to support and assess student learning?* In the course, the participants design and develop resources for a unit of study that they teach. The unit is developed throughout the course's eight modules. Twenty five teachers successfully completed the course and each earned 60 credits.
- **Camp Invention:** This professional development explores teaching methods that help to develop critical thinkers and creative problem-solvers. The experience allows educators to build STEM skills, while emphasizing teamwork, innovation, systems thinking and self-directed learning. Four teachers participated in the initial training portion only and earned 8 credits each. Thirteen teachers participated in the full experience and earned 45 credits each.
- **Algebridge:** AlgebridgeSC is an action research pilot that requires a three-year commitment from a team of Algebra I, Math for the Technologies 1 and 2, and middle school mathematics teachers who are from the same feeder school system. This professional learning experience has three intended outcomes:
 - 1) Identify and understand the conceptual progression of SC Academic Standards for Mathematics middle school through Algebra I /Math for the Technologies 1 and 2;
 - 2) Analyze student work in order to differentiate instruction based on the various levels of student understanding of the SC Academic Standards for Mathematics;
 - 3) Implement differentiated instructional practices to support students in their various levels of understanding of mathematics in order to accelerate student achievement.

Twelve teachers participated and received 32 hours of credit each.

- **Citadel Professional Development:** This was a four day event with a one/half day follow up, which took place at the Lowcountry ACE Basin Project-Based Learning Institute. The program emphasizes project based learning and the participants learned how to plan, organize and carry out project based learning projects in the sciences. Eleven teachers participated and received 33 hours of credit each.
- **Making Science and Math Fun for Elementary School Students:** The purpose of this standards based course is to enhance K-6 teacher content knowledge in science and mathematics and to provide instructional and assessment strategies that make science and

math fun and informative for their students. The course was provided by USC-Aiken School of Education. Eleven teachers received 60 hours of credit each.

- Robotics: Teachers participated in a four hour training on how to use the LEGO® Education WeDo™ Kit. The kit includes materials, software and instructions on how to build a LEGO robot with working parts. Three teachers received four hours of credit each.
- Middle School Math Camp: This was a four day event which taught teachers algebra, geometry, problem-solving, and using technology to understand math through class, lecture, and demonstration. Teachers then implemented what they learned in several practice classes with students. Seven teachers received 28 hours of credit each.
- Graduate Courses: There were several graduate courses undertaken by math and science teachers. Two teachers completed a course on teaching reading and writing in the content area in science, one teacher completed an online Geometry course, one teacher enrolled in a speech and language degree program, three teachers completed a Gifted and Talented Needs and Nature course, two teachers completed an AP Biology course, and two teachers completed courses on school administration. Each teacher received 60 hours of credit each for their completion of the course.
- Cognitive Coaching is described in the Introduction section of the evaluation. Twelve math and science teachers, nine of whom were master teachers, earned 48 hours of credit each for their participation in these trainings.

In addition to the training described above, each teacher participated in a five hour orientation meeting on January 3, 2011. During the meeting, teachers participated in an overview and breakout sessions to review the content of upcoming activities. Each teacher also received one hour credit for completing the pre-attitudinal survey and the pre-content knowledge test. Throughout the year, all math and science teachers met with their assigned master teacher and participated in the feedback and action plan process in order to implement the information they learned during the professional development opportunities and to improve their instruction. Each of the 84 teachers who participated in professional development opportunities received eight hours of credit for their participation.

As proposed in the grant, two teachers examined and updated grade-level standards, the standards support documents and the S3 guides during the summer of 2011. This work resulted in a new Scope and Sequence document for the science standards.

Objective 2: Teachers Will Create Action Plans For Reforming Instruction

PERFORMANCE MEASURE

By June of each year, at least **85% of math and science teachers will develop an action plan** that includes at least one instructional best practice for reforming their classroom that they have studied during the school year.

As described in the Introduction section of the evaluation, action planning is the first step in the Cognitive CoachingSM model. The Master Teachers began working with the math and science classroom teachers as soon as practicable during the summer of 2011 to develop action plans. Each teacher had developed a plan by the first few weeks of school. **The program therefore exceeded this performance measure.** The plans are flexible and are actionable, not something to be reviewed at a later date.

In many instances, the Master Teachers report that teachers at the same grade level or teaching the same subjects spontaneously came together to coordinate their planning. This is a positive development, indicating that teachers are using their own internal resources and the resources of other teachers. Such self-actualizing and self organizing is key to continuation of quality improvement.

Classroom teachers report a great deal of contact with their assigned Master Teachers. Daily contact is the norm. Master Teachers are assigned eight or nine classroom teachers. All classroom teachers responding to an email survey reported using their action plans.

There were two specific activities mentioned in the proposal to be accomplished during the first year under this objective. Both were carried out. These are:

- Eight of the teachers' 45 hours will be one professional leave day per teacher to develop a classroom action plan for 2011-2012.
- Camp Invention will be taught as a summer institute.

Objective 3: Master Teachers Will Be Trained

PERFORMANCE MEASURE

By June 2011, the S²MART Center will **train 9 HD1 master teachers** how to provide formative feedback.

The project met this performance measure. Nine master teachers were chosen using an exhaustive process. This process included recommendations from administrators, an application and interviews (see Appendix 1 for forms used in the process). The Master Teachers chosen then received six days of face-to-face training from the staff at the Lowcountry S²MART (now S²TEM) Center on the Cognitive CoachingSM model. The first half of this training consisted of learning the theory and techniques of Cognitive Coaching. The second half consisted of carrying out Cognitive Coaching with one another with critiques provided by the staff. The Master Teachers reported that this practice was extremely helpful. When they had their first coaching session with a teacher, it was not like the first time they had done it.

Subsequent to the initial training, the S²TEM Center personnel continue to provide technical assistance to the Master Teachers. The staff spends a half day with each of her assigned Master Teachers during the semester and provides email or remote support bi-weekly. The new District email/communication system (Gaggle) has greatly improved the capacity to do so through

webinars, conferencing, chat rooms, etc. Consultants have begun giving some assignments through this medium.

The first technical assistance is centered around the initial coaching the Master Teachers are conducting with their assigned teachers. This was, and is, composed of one-on-one coaching to support Master Teacher personal and professional growth. The S²TEM Center consultants visit the schools and observe classroom teacher and Master Teacher interactions. The consultant and Master Teacher then discuss the interactions. Master Teachers are encouraged to build a sense of community in order to overcome natural resistance to change.

The Master Teachers take part in a monthly support group. Observation of one meeting of this group indicated that it was directed toward the provision of information and tools, rather than being self-directed support. The Master Teachers report strong support from the independent consultant provided by the District. They also report providing support to one another. The Master Teachers are very energetic, very excited about the program and very sure that it has already made a difference. Other comments made by Master Teachers were:

- Master Teachers are impressed by the way that they were trained in Cognitive CoachingSM.
- Master Teachers believe that the training validated what they were doing and gave them the time and tools to do the work that needed to be done.
- Master Teachers value the support given to them by the S²TEM Center consultants in order for them to implement the techniques they had been taught.
- Master Teachers believe that classroom teachers were receptive to the information and sought out guidance from the Master Teachers.
- Master Teachers believe that creating their own action plans together allowed them to give and receive ideas from the other Master Teachers.
- Master Teachers believe that using Cognitive CoachingSM with all teachers across all subjects would allow all teachers to be influenced by the program. This is happening in the elementary schools simply because the teachers teach all subjects. It is spreading already in the middle school and especially the high school, but in a haphazard fashion.
- Master Teachers believe that Cognitive CoachingSM gives permission to teachers to utilize their own resources and to collaborate with one another.
- Master Teachers value the support from the administration that they are getting in carrying out their part of the project.

There was one activity associated with this objective, which was clearly carried out. That activity is:

- The Lowcountry S²MART Center will teach Master Teachers best practices to maximize instructional time, implement curriculum aligned to Title 1 School Improvement Plans, improve instruction, establish professional learning communities, and accelerate student achievement through its 8 day training, *Cognitive Coaching*SM.

Objective 4: Support And Feedback Will Be Provided To Classroom Teachers By Master Teachers

PERFORMANCE MEASURE

By June of years 2 and 3, **Master Teachers will observe and provide ongoing feedback and support for at least 85% of HD1 math and science teachers** as they implement pedagogical best practices.

While planning is an important part of changing a teacher's actions, Cognitive CoachingSM is not a linear model, with one step following another. Rather, the coach helps the teacher navigate through their "territory of thinking" using the maps of planning, reflecting and problem-solving. The tools the coach uses to do so are rapport, meditative questioning, response behaviors and pacing and leading. The "maps" are not really separable as distinct entities but continuously interact. The coach's job is to use the tools to help the teacher do the navigating.

Therefore, the action plans were not developed until there was observation and continuous feedback and support to the math and science teachers by the Master Teachers using the Cognitive CoachingSM model. This occurred in August and September of the first year of the grant and continues to occur as the grant enters its second year. This coaching was reported by the Master Teachers and by administrative staff and confirmed through the teachers' plans and a survey of a sample of teachers in each school in the District in which 100% percent reported having daily to weekly support from their assigned Master Teacher. **The program has, therefore, exceeded this performance measure.**

FINDINGS PART II: OUTCOME EVALUATION

Both outcome objectives and their performance measures are to be measured in the second and third year of the grant. Baseline and interim progress data is presented here for information.

Objective 5: Improved Student Achievement In Mathematics And Science

PERFORMANCE MEASURE

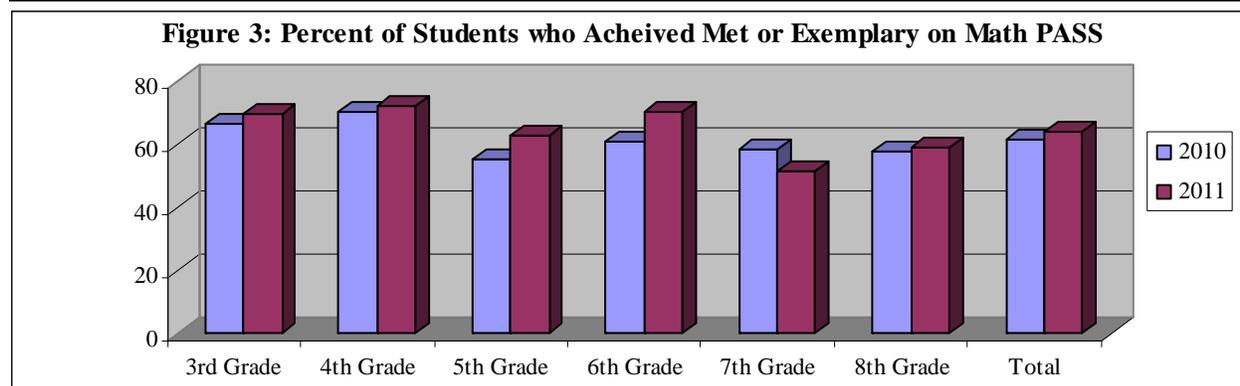
By June of years 2 and 3, grade level achievement in math and science on PASS will improve by **at least 3% annually** compared to the 2009 – 2010 baseline data to narrow the gap between HD1 and the state average. By June of years 2 and 3, the percentage of students passing EOC exams in Algebra and Physical Science and HSAP math will increase by **at least 3%** compared to the 2009 – 2010 baseline data.

Students in Hampton School District One had an average scale score on the Math PASS test of 616.2 points in 2010 (n=1180) and an average scale score of 619.3 points in 2011 (n=1176). This is an increase of less than one percent. The average scale score for students in the third grade in 2011 (mean=623) is 1.5% higher than the average scale score for students in the third grade in 2010 (mean=613.6), which gave the third graders the greatest change between 2010 and 2011. The average scale score for students in the fifth and seventh grades had the second highest changes between 2010 and 2011. The fifth grade scores increased by 1.2% between 2010 (mean=610.1) and 2011 (mean=617.2); however, the scores of the seventh graders decreased 1.2% between 2010 (mean=615.3) and 2011 (mean=608), showing the only decrease in average grade level PASS scores. The average scale score for all other grade levels in 2011 is about 0.5% more than the average scale score of the students in the same grade during the previous year. (See Table 3 Figure 3.)

Of the 1,180 students in Hampton School District One who completed the Math PASS test in 2010, 725 (61.4%) achieved a performance level of met or exemplary. Of the 1,176 students who completed the Math PASS test in 2011, 754 (64.1%) achieved a performance level of met or exemplary. This is an increase of 4.4%. The percentage of sixth graders who scored met or exemplary on the Math PASS increased by 15% from 2010 (61.3%) to 2011 (70.5%). Seventh grade was the only grade level in which the percentage of students scoring met or exemplary decreased (-11.7%). The eighth grade had the lowest increase of percentage of students who achieved met or exemplary between 2010 and 2011 (2.4%), followed closely by the change in percentage of students in the fourth grade who achieved met or exemplary (2.7%). (See Table 3 and Figure 3.)

Using the percentage of all students who achieved a performance level of met or above on the math PASS test in 2010 to 2011, **the district met their goal of an increase of 3% improvement** in grade level achievement on the math PASS test.

Table 3: Change in Math PASS Test						
	Mean Scale Score			Performance Level Met or Above		
	2010	2011	% Change	2010	2011	% Change
3rd Grade	613.6	623.0	1.5%	66.5%	70.1%	5.4%
4th Grade	624.6	627.3	0.4%	70.2%	72.1%	2.7%
5th Grade	610.1	617.2	1.2%	55.4%	63.1%	13.9%
6th Grade	619.8	624.1	0.7%	61.3%	70.5%	15.0%
7th Grade	615.3	608.0	-1.2%	58.2%	51.4%	-11.7%
8th Grade	613.8	617.7	0.6%	57.9%	59.3%	2.4%
Total	616.2	619.3	0.5%	61.4%	64.1%	4.4%

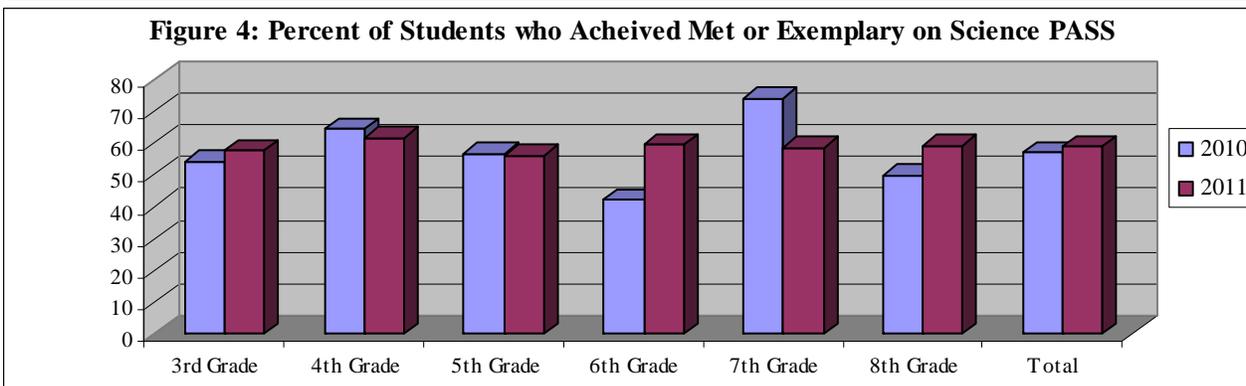


Students in Hampton School District One had an average scale score on the Science PASS test of 615 points in 2010 (n=795) and an average scale score of 611.6 points in 2011 (n=787). This is a decrease of 0.5%. The average scale score for students in the third and fifth grades did not change between 2010 and 2011. The seventh graders' average scale score had the greatest change across all grades between years (-2.8%); their scores dropped from 627.4 in 2010 to 610.1 in 2011. The sixth grade scale scores showed the greatest positive change across the grades, with average scores increasing 1.7% from 2010 to 2011. None of the remaining grades' scores either increased or decreased more than 1%. (See Table 4 and Figure 4.)

Of the 795 students in Hampton School District One who completed the Science PASS test in 2010, 478 (60.3%) achieved a performance level of met or exemplary. Of the 787 students who completed the Science PASS test in 2011, 465 (59.1%) achieved a performance level of met or exemplary. This is a slight decrease of 1.9%. The percentage of sixth graders who scored met or exemplary on the Science PASS test increased by 41.4% between 2010 and 2011, and the percentage of eighth graders who scored met or exemplary increased by 18.4%. In 2011, 58.6% of seventh graders achieved met or exemplary performance levels, compared to the 74.1% who did so in 2010. Seventh grade had the greatest decrease in percentage of students scoring met or exemplary (-20.9%). The fifth graders showed the least amount of change between the two years. The percentage of fifth grade students who achieved met or exemplary in 2011 decreased by 1.1% compared to the students in the same grade level during the previous year. (See Table 4 and Figure 4.)

Using the percentage of all students who achieved a performance level of met or above on the science PASS test in 2010 to 2011, **the district did not meet its goal of 3% improvement** in grade level achievement on the science PASS test.

Table 4: Change in Science PASS Test						
	Mean Scale Score			Performance Level Met or Above		
	2010	2011	% Change	2010	2011	% Change
3rd Grade	608.2	608.1	0.0%	54.3%	57.7%	6.3%
4th Grade	619.8	617.1	-0.4%	64.4%	61.7%	-4.2%
5th Grade	610.1	610.0	0.0%	56.7%	56.1%	-1.1%
6th Grade	601.1	611.4	1.7%	42.0%	59.4%	41.4%
7th Grade	627.4	610.1	-2.8%	74.1%	58.6%	-20.9%
8th Grade	604.7	610.2	0.9%	50.0%	59.2%	18.4%
Total	615.0	611.6	-0.5%	60.3%	59.1%	-1.9%

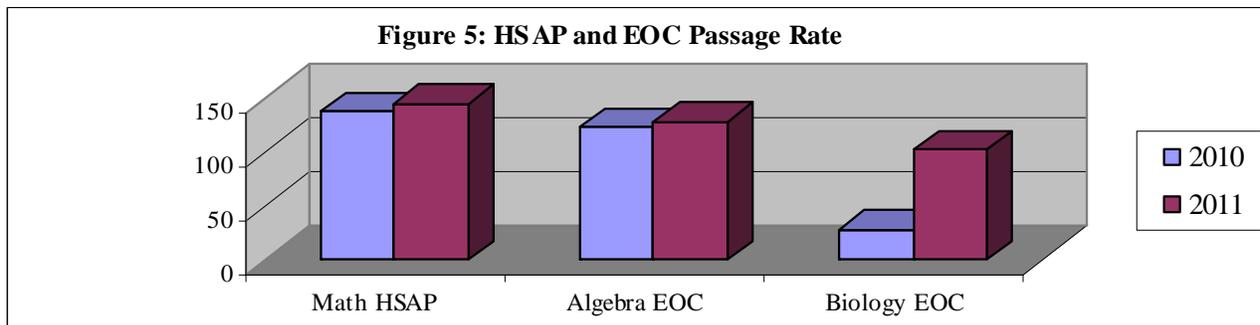


Hampton County School District’s high school students completed the state’s standardized end of year exam in math, the South Carolina High School Assessment Program (HSAP) and Algebra and Biology End of Course Exams (EOC). Passing grades for the EOC were scores of 70 or higher. Score categories on the HSAP ranged from 1 to 4. Students who met or exceeded examination requirements scored between a 2 to 4 and a student who scored a 1 was considered to not have met requirements. There was no data available for the 2010 Biology EOC exam.

There was a 5.1% decrease in percentage of students passing the Math HSAP. In 2010, 138 (70.1%) of 197 students passed their Math HSAP exam, while in 2011 only 145 (66.5%) of the 218 students who completed the exam passed. In contrast, the percentage of students who passed the Algebra EOC exam and the percentage of students who passed the Biology EOC exam increased by 13.7% and 14.3%, respectively. In 2010, 123 (65.1%) of 189 students passed their Algebra EOC exam, compared to 128 (74%) of the 173 students who completed the exam in 2011. Of the 191 students who completed the Biology EOC exam in 2011, 102 (53.4%) passed, compared to 28 (46.7%) of the 60 students who passed the exam in 2010. (See Table 5 and Figure 5).

The **district exceeded its goal of increasing the percentage of students who pass the End of Course test in algebra and biology by 3%**; however, the district did not meet its goal of increasing the percentage of students who pass the math portion of the HSAP.

Table 5: HSAP and EOC Passage Rate					
	2010		2011		% Change
	#	%	#	%	
Math HSAP	138	70.1%	145	66.5%	-5.1%
Algebra EOC	123	65.1%	128	74.0%	13.7%
Biology EOC	28	46.7%	102	53.4%	14.3%



Objective 6: Improved Attitudes About, Greater Knowledge Of, and Increased Use Of Best Practices And Technology In Science And Math Instruction

PERFORMANCE MEASURE

By May 2013, comparing survey results in year 3 to baseline survey results in year 1, **at least 85%** of HD1 math and science teachers will demonstrate improved attitudes about, greater knowledge of, and increased use of best practices and technology in their science and/or math instruction.

The baseline survey was administered to math and science teachers by district staff in January of 2011 using an online survey method. Questions on the survey were divided into one of six areas, attitudes about best practices, knowledge of best practices, use of best practices, attitudes about technology, knowledge of technology, and use of technology. All items related to best practices and all items related to technology were then combined, respectively, to form a total composite for that topic. For each of the eight composites that were created, the teachers' scores were divided by the total number of points possible for that item to achieve a standard scale score with a range of points from 0 to 100%. Teachers were considered to be strongly unfavorable toward the concept if their score was from 0 to 25%, unfavorable if their score was from 26% to 50%, favorable if their score was from 51% to 75%, and strongly favorable toward the concept if their score was from 76% to 100%.

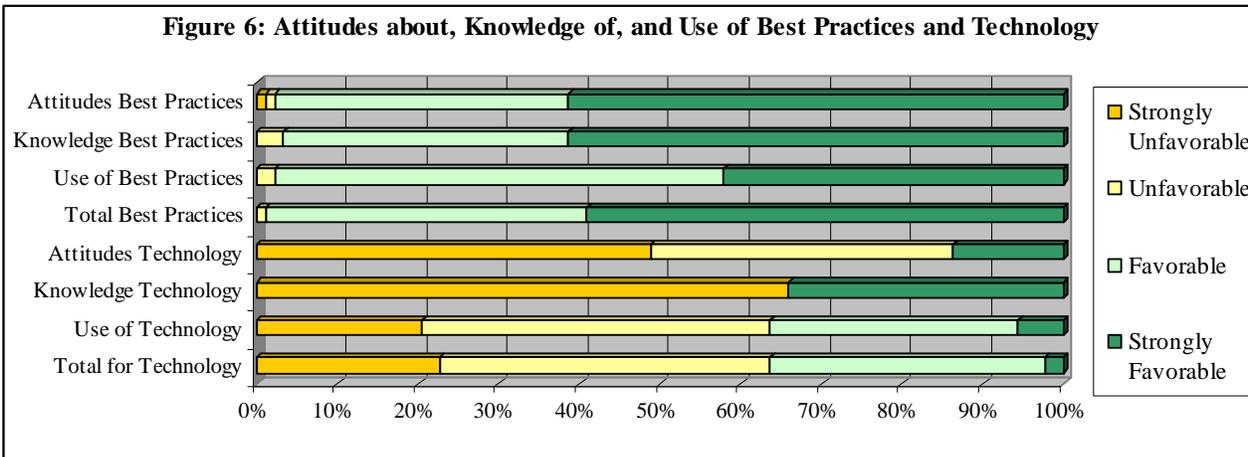
The findings indicate that the majority of Math and Science classroom teachers have either favorable or strongly favorable attitudes, self-rated knowledge, and self-rated use of best practices in their science and/or math instruction. Of the 88 teachers surveyed, 32 (36.4%) had

favorable attitudes and 54 (61.4%) had strongly favorable attitudes toward best practices; 31 (35.2%) had favorable self-rated knowledge and 54 (61.4%) had strongly favorable self-rated knowledge of best practices; and 49 (55.7%) had favorable self-rated use patterns and 37 (42%) had strongly favorable self-rated use patterns of best practices. The average score on the total composite score for teachers' attitudes, knowledge, and use of best practices in the 2010-2011 grant year was 77.1 (n=88, SD=0.1). (See Table 6 and Figure 6.)

The Math and Science classroom teachers do not have as favorable attitudes, self-rated knowledge, and self-rated use of technology in their science and/or math instruction. Of the 88 teachers surveyed, 12 (13.6%) had strongly favorable attitudes toward technology, 30 (34.1%) had strongly favorable self-rated knowledge of technology, 38 (30.7%) had favorable self-rated use and 27 (5.7%) had strongly favorable self-rated use of technology. The average score on the total composite score for teachers' attitudes, knowledge, and use of technology in the 2010-2011 grant year was 41.9 (n=88, SD=0.18). (See Table 6 and Figure 6.)

This information will provide the baseline by which teachers' changes in attitudes about, knowledge of, and use of best practices and technology in their science and/or math instruction will be measured.

Table 6: Attitudes about, Knowledge of, and Use of Best Practices and Technology					
	Strongly Unfavorable	Unfavorable	Favorable	Strongly Favorable	Mean Score
Attitudes about Best Practices	1.1%	1.1%	36.4%	61.4%	82.7
Knowledge of Best Practices	0.0%	3.4%	35.2%	61.4%	78.7
Use of Best Practices	0.0%	2.3%	55.7%	42.0%	74.4
Total Composite for Best Practices	0.0%	1.1%	39.8%	59.1%	77.1
Attitudes about Technology	48.9%	37.5%	0.0%	13.6%	32.4
Knowledge of Technology	65.9%	0.0%	0.0%	34.1%	34.1
Use of Technology	20.5%	43.2%	30.7%	5.7%	43.4
Total Composite for Technology	22.7%	40.9%	34.1%	2.3%	41.9



FINDINGS PART III: GOVERNMENT PERFORMANCE AND RESULTS ACT (GPRA)

This section reports on the federal Government Performance and Results Act (GPRA) measures established for this grant. The results of measurements are reported and variances discussed.

GPRA Measure 1: Teacher Content Knowledge

The specific GPRA measure is “the percentage of teachers who significantly increase their content knowledge in mathematics and science, as reflected in project-level pre- and post-assessments.”

Teacher content knowledge was measured using the Study Island and A+ computer software. Study Island and A+ software has been purchased by the school district for use by students as an additional instructional tool. The A+ software is used primarily in the high school. Teachers were instructed to complete the module that is two grade levels above and the same subject which they teach. Teachers completed the same test for both the pre-assessment and the post-assessment. Of the 91 math and science teachers who completed the pre- and post- content knowledge assessment, 69 (75.8%) completed a math module of Study Island and 12 (13.2%) completed a science module of Study Island, and 10 (11%) completed a science module of A+.

The electronic spreadsheet supplied by the MSP federal program office was used to determine the number of teachers who showed significant gains in math and science content knowledge. This spreadsheet uses a “dependent t-test (for 30 or more respondents) or the Wilcoxon signed ranks test (for less than 30 respondents) to calculate, with 85 percent certainty, the number of teachers who showed significant gains”.

Of the 84 teachers in the district who participated in professional development opportunities, 67 participated in at least one of the courses which focused on math. Four of the courses offered focused primarily on Math topics and six courses offered focused on STEM (both math and science). The total participation in these ten courses is 93. Sixty four teachers completed both the pre-test and the post-test on math content knowledge. Of these 64, 22 (34.4%) achieved significant gains in math content knowledge from the pre-test to the post-test.

Seventy teachers participated in at least one of the courses which focused on science. In addition to the six courses which focused on STEM, four courses focused primarily on Science topics. The total participation for these ten courses is 90. Nineteen teachers completed both the pre-test and the post-test on science content knowledge. Of these 19, eight (42.1%) achieved significant gains in science content knowledge from the pre-test to the post-test.

GPRA Measure 2: Students at the Basic Level or Below in State Assessments of Mathematics or Science

The specific GPRA measure is “The percentage of students in classrooms of MSP teachers who score at the basic level or above in State assessments of mathematics or science.”

The project is designed to serve all math and science teachers in the schools within Hampton School District 1. Therefore, all students in the district should be impacted. During the 2010-2011 school year, there were approximately 2,558 students enrolled in school in the district.

Of the 1,176 who completed the Math PASS test, 422 (35.9%) scored not met. Of the 218 who completed the math portion of the HSAP, 73 (33.5%) had not met the examination requirements for a high school diploma. Of the 173 who completed the Algebra End-of-Course (EOC) test, 45 (26.0%) did not pass the test (scored less than 70 points).

Of the 787 who completed the Science PASS test, 322 (40.9%) scored not met. Of the 191 who completed the Biology End-of-Course (EOC) test, 89 (46.6%) did not pass the test (scored less than 70 points).

GPR Measure 3: Students at the Proficient Level or Above in State Assessments of Mathematics or Science

The specific GPR measure is “The percentage of students in classrooms of MSP teachers who score at the proficient level or above in State assessments of mathematics or science.”

The project is designed to serve all math and science teachers in the schools within Hampton School District 1. Therefore, all students in the district should be impacted. During the 2010-2011 school year, there were approximately 2,558 students enrolled in school in the district.

Of the 1,176 who completed the Math PASS test, 754 (64.1%) scored met or exemplary. Of the 218 who completed the math portion of the HSAP, 145 (66.5%) met the examination requirements for a high school diploma. Of the 173 who completed the Algebra End-of-Course (EOC) test, 128 (74%) passed the test (scored 70 points or more).

Of the 787 who completed the Science PASS test, 465 (59.1%) scored met or exemplary. Of the 191 who completed the Biology End-of-Course (EOC) test, 102 (53.4%) passed the test (scored 70 points or more).

GPR Measure 4: Experimental or Quasi-Experimental Evaluation Design

The specific GPR measure is “The percentage of MSP projects that report using experimental or quasi-experimental design for their evaluations.”

As stated in the methodology section of this report, System Wide Solutions, Inc. was asked in early August 2011 to evaluate the TEAMS grant, and an agreement was signed on August 17, 2011. An evaluation design was in place from the original grant proposal. The design included formative research and pre- and post-professional development tests only and other one-time data collection methods. The design is essentially a descriptive-exploratory design. SWS modified the design to include all measurements which had occurred, test score data on students

in the district, and additional individual and group interviews. SWS will attempt to re-direct the evaluation to a quasi-experimental design for the remaining two years of the grant.

GPRA Measure 5: Scientifically Valid Evaluation Results

The specific GPRA measure is “The percentage of MSP projects that use experimental or quasi experimental design for their evaluations that are conducted successfully and that yield scientifically valid results.”

The evaluation conducted for the 2010-2011 grant year is a descriptive-exploratory evaluation and therefore does not meet the federal definition of having a successful experimental or quasi experimental design that yields scientifically valid results. Efforts were made to collect data in such a way that it may be used in the future for conducting an evaluation with a quasi-experimental design that yields scientifically valid results.

DISCUSSION

Process Evaluation

The process of the grant can be divided into three parts. The first part is the professional development of classroom teachers on both content and process of teaching math and science. The second is the identification and preparation of Master Teachers to conduct the Cognitive CoachingSM model. The third is the implementation of the Cognitive CoachingSM model in the schools among the classroom teachers.

The professional development offerings were well planned and widely available. Stipends were used as incentives to assure attendance at the offerings. The selection of the Master Teachers was an exhaustive process, resulting in a high quality group of individuals. These individuals received excellent training and continuing support from the Lowcountry S²TEM Center on Cognitive CoachingSM and strong support from the District and one another. The Master Teachers in turn provide Cognitive CoachingSM to the classroom teachers to a degree beyond expectations at this point in the grant.

Outcome Evaluation

As measured by the PASS scores, the District met its goals for improvements in math among students overall by the end of the first year, rather than during the second year. There is very little difference in the percentage of students scoring met or above in Science. However, there were large differences in outcomes on the PASS by grade level, particularly with the decline in 7th grade scores. On the South Carolina High School Assessment Program (HSAP) math examination, the scores declined between 2010 and 2011. However, on the Algebra and Biology End of Course Exams there were relatively large improvements.

This was the baseline year for measurement of the teacher attitude, knowledge and use of best practices and of technology. It appears that the classroom teachers at the beginning of the project scored well on the best practices portion of the measurement instrument, but not as well on the technology section. This leaves less room for change with best practices and more room for change with technology.

Data and Measurement Issues

Since there was no evaluator overseeing the data gathering and data storage until the end of the first year of the grant, the District was placed in the difficult position of having to find data and provide it to the evaluator at the last minute. This was a hardship for the District, and one which should not be repeated.

The measurement of teacher attitude, knowledge and use of best practices does not appear to be sensitive to the non-linear nature of the Cognitive CoachingSM process.

CONCLUSIONS

1. The process performance measures of the grant were met or exceeded.
2. The outcome performance measures of the grant were met or exceeded with the exception of the science PASS and the math portion of the HSAP. The classroom teacher measurement was in its baseline year and, therefore, no conclusions can be drawn.
3. The project has been well administered and the Master Teachers and classroom teachers are enthusiastic about the TEAMS.
4. The TEAMS concept is being rapidly integrated into the District's teaching methods.
5. The data gathering for the project is disorganized and non-systematic.
6. The current teacher attitude, knowledge and use instrument does not measure teachers' changes in beliefs in their ability to teach over time that can be correlated with changes in student behavior.

RECOMMENDATIONS

1. The evaluation design be modified as a quasi-experimental design.
2. An information system be implemented to systematize the data gathering for the project.
3. A measure of teacher self-efficacy be used to determine teacher change in belief in teaching abilities over time.
4. The District continue to strongly support the TEAMS.

**APPENDIX ONE:
INTERVIEW INSTRUMENTS**

HAMPTON SCHOOL DISTRICT 1 CLASSROOM TEACHERS EMAIL QUESTIONNAIRE

1. What support, coaching or assistance have you received from a Master Teacher? Can you say a little bit about how that was given?
2. Has a Master Teacher helped you to develop an action plan?
3. Have you begun to implement your action plan?
4. What further support or assistance would be helpful to you in teaching math or science in your classroom?

Hampton MSP Interview classroom teachers

Date _____

SWS staff _____

Name _____

1. Which MSP training or PD events did teachers attend?
2. How useful were the MSP training events overall?
3. To what extent did the training or PD help you gain content knowledge?
4. To what extent did the training or PD help you increase classroom teaching skills?
5. What support, coaching or TA have you received from Master Teachers? (how given?)
6. How well is that process working?
7. Has a Master Teacher helped you to develop an action plan?

8. How much of the action plan have you implemented so far?

9. What further support/assistance do you need to put MSP content and skills into action?

10. General comments

6. Have you been assigned the classroom teachers you will work with?

7. How well prepared do you feel for your new coaching responsibilities with classroom teachers? (Prompts: Are you clear about expectations – theirs and the District? Did training give you the knowledge/ skills needed?)

8. Where do you feel most prepared?

9. Least prepared?

10. To what extent did you get assistance in developing your own action plan?

11. Have you developed action plans yet with assigned teachers?

12. What is your plan for working with your assigned teachers? (meetings, email, observation, chat)

13. Have you done any direct work yet with classroom teachers ? How did it go?

14. What further support/assistance do you need?

Hampton MSP Interview Trainer/Coaches for Master Teachers

Date _____ SWS staff S Meadows

- Kristi Wood - District consultant
- Kenna Alewine - S2MART
- Amy Threatt - S2MART* (now called S²TEM Centers SC)

8 days of training were planned; 6 days completed; last two days scheduled for September 15-16

1. How was the training of Master Teachers accomplished? (live face to face, web based, group or 1-1 teaching/coaching), etc?
2. What was your role?
3. Did all 9 Hampton master teachers participate in all planned sessions?
4. What was the focus of the training? (Was this a TOT on “cognitive coaching” or some other topics/skills?)
5. How was technical support provided to the Master Teachers?
6. What changes or adjustments in the original plans (if any) did you make?
7. To what extent did the Master Teachers overall meet your expectations for their learning?
8. To what extent did the Master Teachers overall apply the content?
9. What is needed next?
10. Comments

**APPENDIX TWO:
PROFESSIONAL DEVELOPMENT MATERIALS**



Making Science and Math Fun for Elementary School Students AEDU 633X

Mission Statement: The USC Aiken School of Education, in partnership with the university community, regional schools, area professionals and businesses, prepares dynamic educators who are knowledgeable in their fields, skilled in the art and science of teaching, and dedicated to providing the quality education that every student deserves.

Instructors:	Dr. Jeff Priest	Meeting Time:	9:00 AM – 3:00 PM
Office:	210C B&E	Dates:	June 6, 7, 8, 13, 14, 15, 20, 21, 22
Telephone:	803-641-3269 (W) 803-645-2515 (C)	Meeting Place:	
Office Hours:	by appt.	E-mail:	<u>jeffp@usca.edu</u>
Credit:	3 hours graduate		

I. Descriptive Information

The purpose of this standards based course is to enhance K-6 teacher content knowledge in science and mathematics and to provide instructional and assessment strategies that to make science and math fun and informative for their students.

USCA School of Education Conceptual Framework. The objectives of this course are designed to facilitate the participants' development as a Dynamic Educator. This course will focus specifically on the development of the Dynamic Educator with respect to *planning, instructing, communicating, growing professionally, and managing elementary science classes that include students with and without exceptionalities.*

II. Course Goals and Objectives

A. Course Goals

The course participant will develop the skills to effectively teach standards-based science and math and to all students in grades K – 6. Knowledge of both the National Standards and the South Carolina Academic Standards will be emphasized. Additionally, candidates will learn how to implement modifications and accommodations to help all learners succeed. Finally, candidates will learn strategies for successfully collaborating with other professionals in the field.

B. Instructional Objectives

Each Candidate will:

1. Understand the meaning of and be able to implement the South Carolina Academic Standards in Science and Mathematics.
2. Use appropriate grade level instructional and assessment strategies that accommodate for learners.

III. Course Readings

A. Required Texts and Readings: No formal texts will be used for this course, however participants are expected to use the following resources:

South Carolina Science Standards - <http://scde.mrooms.org/index.php?page=14481>

South Carolina Math Standards - <http://scde.mrooms.org/index.php?page=14481>

SC³ Grades K-2 Science - <http://scde.mrooms.org/index.php?page=14495>

SC³ Grades 3-5 Science - <http://scde.mrooms.org/index.php?page=14496>

SC³ Grades K-2 Math - <http://scde.mrooms.org/index.php?page=14486>

SC³ Grades 3-5 Math - <http://scde.mrooms.org/index.php?page=14487>

South Carolina Math Support Documents - <http://ed.sc.gov/agency/Standards-and-Learning/Academic-Standards/old/cso/standards/math/index.html>

South Carolina Science Support Documents - <http://ed.sc.gov/agency/Standards-and-Learning/Academic-Standards/old/cso/standards/science/sd.html>

June 6 – 9:00-3:00 PM

Introductions, Pre-test, Learning Styles, SC³, Plants, Measurement

June 7– 9:00-3:00 PM

Plants, Animals, Classification, Geometry

June 8– 9:00-3:00 PM

Animals, Habitats, Adaptations, Data Analysis and Problem Solving

June 13– 9:00-3:00 PM

Weather, Earth Features, Measurement, Numbers and Operations

June 14– 9:00-3:00 PM

Maps, Algebra, Earth Features

June 15– 9:00-3:00 PM

Electricity, Sound, Balance, Laws of Motion, Numbers and Operations

June 20– 9:00-3:00 PM

Field Trip??? Class Presentations

June 21– 9:00-3:00 PM

Class Presentations, Review

June 22– 9:00-3:00 PM

Class Presentations, Final Exam

1. Grading Scale

90-100%=A

87-89%=B+

80-86%=B

77-79%=C+

70-76%=C

67-69%=D+

60-66%=D

<60%=F

3. Final Exam 25%
4. Written Lesson Plan 25%
5. Presentation of Lesson 25%
6. Attendance and Participation 25%



**Lowcountry ACE Basin
Project-Based Learning Institute
June 20-23, 2011**

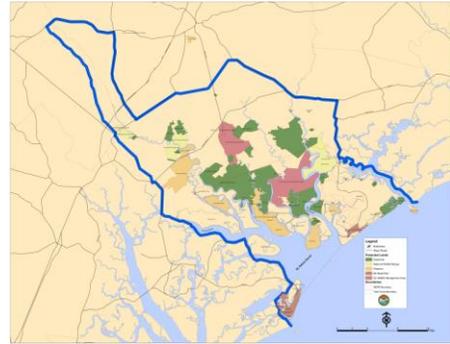
Monday, June 20

9:00 – 9:15	Arrival - Continental Breakfast	Capers Hall
9:15-9:45	Welcome, Introductions/Getting Acquainted Activity, Outcomes & Schedule - <i>Barbara Habegger, School of Education – Project Coordinator</i>	
9:45-10:15	Professional Development Expectations <i>Dr. Kathy Richardson-Jones, School of Education – Graduate Course Instructor</i>	
10:30-11:00	Introduction & Overview of Project-Based Learning (PBL) Video clips and sample projects - <i>Barbara Habegger</i>	
11:00-12:00	PBL 1. Beginning with the End in Mind – <i>Dr. Kathy Jones</i>	
12:00-12:45	Lunch	
12:45-2:15	Estuaries 101 – <i>Dr. Joel Gramling, School of Science & Mathematics, Biology Professor</i>	
2:30-3:30	PBL 2. Crafting the Driving Question - <i>Dr. Kathy Jones</i>	
3:30-4:00	Technology – <i>Dr. Kathy Jones & Barbara Habegger</i>	

Funding provided through the Hampton One Science and Math Partnership Grant



Lowcountry ACE Basin
Project-Based Learning Institute
June 20-23, 2011



Tuesday, June 21

9:00 Arrival – Continental Breakfast

McKenzie Field
Station –
Bennett's Point

9:15-9:30 Review Day 1 – Q & A

9:30 – 10:30 PBL 3. Linking Standards to PBL – *Dr. Kathy Jones*

10:30-12:15 Estuaries 101 - Field Experiments - *Dr. Kathy Jones*

12:15-12:45 Lunch

12:45-3:30 ACE Basin – Who Are We? What Do We Do?
Field Activity on DNR boat – *Al Segars, D.V.M., ACE Basin National
Estuarine Research Reserve*

Funding provided through the Hampton One Science and Math Partnership Grant



**Lowcountry ACE Basin
Project-Based Learning Institute
June 20-23, 2011**

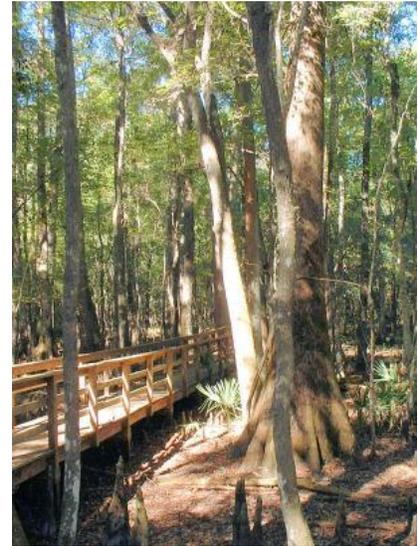
Wednesday, June 22:

- | | | |
|-------------|---|---|
| 9:00-9:15 | Arrival - Continental Breakfast | Ernest Hollings Wildlife Refuge
The Grove Plantation |
| 9:15-9:45 | Review /Q & A of Day 1 and 2 | |
| 9:45-11:00 | Exploring Ernest Hollings Wildlife Refuge | |
| 11:00-12:15 | PBL 4. Planning the Assessment – <i>Dr. Kathy Jones</i> | |
| 12:15-12:45 | Lunch | |
| 12:45-3:30 | PBL 5. Mapping the Project – <i>Dr. Kathy Jones</i> | |

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Thursday, June 23:

9:00-9:15	Continental Breakfast	Caw Caw Interpretive Center
9:15-9:45	Review / Q & A Day 1, 2 and 3	
9:45-10:45	PBL 6. Managing the Process – <i>Dr. Kathy Jones</i>	
10:45-12:00	Learning thru Loggerheads – Turtle monitoring & Project-Based Learning – <i>Meg Hoyle, Executive Director</i>	
12:00-12:45	Lunch	
12:45-2:15	Estuary 101 – Exploring Caw Caw Interpretive Center – <i>Dr. Joel Gramling</i>	
2:15-3:30	Bringing it all together: Course assignments, Fall Schedule, Feedback – <i>Dr. Kathy Jones & Barbara Habegger</i>	

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**Hampton School District One
Master Teacher Institute**

**May 31, 2011 – Day 1
8:00 – 12:00**

Math / Science Partnership Overview – Rhonda Willis and Carole McGrath

Expectations of Master Teachers - Rhonda Willis and Carole McGrath

Action Plan Overview - Rhonda
Content
Instructional

Action Plan Work session – Guided by Kristy, Shannon, Jack, Rhonda, Amy and Kenna

Homework – Finish Individual Action Plan

**June 1, 2011 – Day 2
8:00 – 2:00**

Day Overview – Rhonda

Coaching Demonstration - Action Plan Modeling – Kristy / Shannon

Coaching Exercise – Discuss Individual Action Plans – Master Teachers
Instructional goal for Coaching

What Works – Kristy and Shannon
Building Relationships

Creative Scheduling – Kristy and Shannon

Eportfolio Review – Anita Padgett

Exit Slip – Edmodo (sp?) – Anita Padgett

- If Amy and Kenna can come on one or both of these days, I hope they may serve as our change advocates.
- This format is not set-in-stone. We want there to be many opportunities for questions and meaningful conversations about this entire process.

Master Teacher Summer PD (this is only the beginning of this list)

Administrative / Leadership – MSP Support (This needs to involve district/school administrators having conversations about how MSP will work and be successful.)

Flip Cameras

Eluminate

IPad

Short Course - Math / Science Journaling (A questions was posed from a principal about “how do we get students to reflect”.)

- If anyone has suggestions for summer of future training / support, please send those suggestions to me so we can add them to the list.

Master Teacher Support Schedule – Fall Semester, 2011
Amy K. Threatt

	Preferred platform to use for virtual conversations	September VIRTUAL <i>NOTE: Dates are different</i>	1 st Quarter ONSITE <i>NOTE: Dates are different</i>	October 5 th VIRTUAL	October 24 th VIRTUAL	November 7 th VIRTUAL	2 nd Quarter ONSITE <i>NOTE: Dates are different</i>	December 5 th VIRTUAL
Violet Salisbury (FES)	School phone	9/22 @ 11:00 AM	9/27 @ 8:30-11:30AM	11:00 AM	11:00 AM	11:00 AM	11/14 @ 8:30-11:30AM	11:00 AM
Robin Hiers (VES)	School phone	9/21 @ 1:00 PM	9/27 @12:00-3:00PM	1:00 PM	1:00 PM	1:00 PM	11/14 @12:00-3:00PM	1:00 PM
Dawn Stuckey (NDMS)	School phone	9/21 @ 8:30 AM	9/28 @8:30-11:00AM	8:30 AM	8:30 AM	8:30 AM	11/15 @8:30-11:00AM	8:30 AM
Mysti Long (WHHS)	Cell phone	9/21@ 12:00 PM	9/28 @11:30-3:30PM	12:00 PM	12:00 PM	12:00 PM	11/15 @11:30-3:30PM	12:00 PM
Jacqueline Hatfield (WHHS)	Cell phone	9/21 @ 1:45 PM		1:45 PM	1:45 PM	1:45 PM		1:45 PM

** Amy's contact information: amythreatt@gmail.com

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On-site visits, could include **but** are not limited to:

- Observing teachers
- Observing Master Teacher interaction with teachers
- Reflecting / Planning with Master Teacher
- Dialogue with Administrative / Leadership Team

Virtual conversations, could **but** are not limited to:

- Last about an hour in length
- Take place in any virtual platform (phone, on-line chat such as gaggle, Elluminate etc)

*** The dates/times listed above represent the minimum level of interaction – if more time/opportunities are needed, please let me know*

NOTE: On the following early-out days, I will be facilitating in-services at Hampton Elem from 12-3:00. If you would like me to stop by before-hand, please let me know ☺

- Wednesday October 12th*
- Wednesday November 9th*
- Wednesday December 7th*