Eye on Evaluation
DATA AND ACCOUNTABILITY DEPARTMENT

D&A Report No.12.12 **January, 2013**

2011-12 District Improvement Initiatives Evaluation

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Summary

WCPSS has been under the No Child Left Behind guidelines for District Improvement since 2006-07, after it did not meet Adequate Yearly Progress (AYP) goals in reading for two consecutive years at all school levels. Implementation of District Improvement was supported through Title I funds (10% of the Title I budget), which could only be designated for professional development (Bulgakov-Cooke, 2010). Within this limitation, several approaches were adopted that focused on providing teacher professional development either through training or coaching. The first strategy implemented was Sheltered Instruction Observation Protocol (SIOP®). Since then, more initiatives have been put in place to improve achievement of various student subgroups in reading and mathematics. In 2011-12, District Improvement involved seven initiatives.

In 2011-12, the seven training efforts underway through District Improvement funds to improve achievement outcomes were:

SIOP® (begun in 2007-08),
Adolescent Literacy (begun in 2009-10),
Secondary Mathematics (2009-10),
Elementary Mathematics (2011-12),
Differentiation (2011-12),
Special Education (2011-12), and
Highly Qualified Teacher Assistants (HQTAs) (2011-12).

In this summary, a short overview of each component is first presented, followed by conclusions with recommendations. More detail for each component on implementation is then offered with tables across components of coaching results and goal attainment and outcomes to follow.

Abstract

Seven District Improvement initiatives were implemented in 2011-12 in WCPSS. All were well designed and coordinated, with common goal setting processes and use of common monitoring tools. All initiatives either met or partially met 2011-12 goals. Some were more successful in showing student outcomes, with the most positive initiatives being elementary mathematics and adolescent literacy. These results should be used to influence future decisions about continuation or strengthening of these efforts. New components that were well received and implemented by those trained (but which did not have achievement results as yet) should also be considered for future funding.

Table of Contents

SIOP®

Description

SIOP® is a research-based approach aimed at strengthening students' academic language and student involvement with the primary focus on limited English proficient (LEP) students. Being in close alignment with Marzano's nationally recognized best classroom practices (Marzano, Pickering, & Pollock, 2001), SIOP® training was used to improve instruction for all student subgroups. This initiative included a training and a follow-up coaching component. In 2011-12, the fifth year of SIOP® training, several training formats were offered: face-to face, online, whole school, an overview, and one-day presentations. The coaching component of the initiative included providing support to groups of teachers and implementing the coaching cycle in one-on-one support (co-planning, co-teaching, modeling a lesson, pre-conference, observation, and a post-conference).

Implementation

Because some schools requested brief overviews rather than full trainings, a lower number of teachers were fully SIOP® trained in 2011-12 than in the previous years. With the goal of training 250 teachers, 419 were fully trained in SIOP® in 2011-12. The number did not include the teachers who received overview training at schools, but still exceeded the initial training goals for the year. The total number of teachers SIOP® trained since 2008-09 reached about 2,800. Observations of a random sample of 103 teachers in 2011-12 showed a moderate level of implementation of SIOP®.

Outcomes

Long-term implementation of SIOP® appears to be associated with the higher rate of increase in proficiency levels in reading and mathematics in elementary and middle schools compared to the district overall. However, in terms of student growth compared to the matched schools, middle schools showed more positive results than elementary schools.

Proficiency: A longitudinal analysis of the change in the proficiency levels in the SIOP®-supported schools conducted in 2011-12 showed significant increases in proficiency levels both in reading and mathematics, both in elementary and middle schools. The increases were higher in SIOP® schools than in matched schools. The SIOP® logic model specified an intermediate outcomes goal of a five percentage point gain towards proficiency targets. This goal was not met at the elementary level but was at the middle schools (which had a seven percentage point increase in proficiency levels in mathematics from 2008-09, while matched schools did not show any increase).

Growth: At the elementary level, 2011-12 did not show improved student growth at schools with three years of SIOP® coaching support when compared to the matched schools. Percentages of students who met growth targets in 2011-12 were lower at SIOP® elementary

schools than at matched schools. In 2010-11, analysis of growth revealed somewhat more positive results, with larger increases in the percentage of students attending SIOP® elementary schools who met growth in mathematics than the matched schools. However, differences were not significant.

At middle schools with SIOP® coaching support, growth results in 2011-12 were more positive. The percentages of students in NCLB subgroups who met growth targets in 2011-12 both in reading and in mathematics were higher at SIOP® schools than at the matched schools for most subgroups of interest. Similar positive patterns were evident in 2010-11.

Adolescent Literacy

Description

This component provided training and coaching aimed at increasing teachers' in-depth understanding and knowledge of literacy concepts and strategies, so that teachers could strengthen their support of students who were three or more years below grade level in reading, or otherwise at risk of not graduating from high school because of low reading proficiency.

Implementation

- Over a hundred teachers (104) were trained through two workshops ("Reading Interventions for Adolescent Learners" and "Foundations of Reading") in literacy concepts and strategies.
- The training was rated highly: 83% to 95% of teachers believed the skills they learned in both workshops made a positive difference in the effectiveness of their work; 88% to 95% of teachers reported that they used the new skills they gained (meeting this goal); and 88% to 97% stated their literacy training benefited their students. This shows that the goal of 75% or more of trained teachers implementing strategies from training was exceeded.
- At least 95 teachers at 12 schools received one-on-one coaching support in literacy strategies. Over three-fourths of teachers reported receiving resources, assistance with planning, and feedback on instruction. Somewhat less frequently coaches modeled or co-taught lessons. All elements of the coaching cycle were rated highly.
- Coaches also provided staff groups with professional development, resources, help with interpreting student data, and assistance with assessing students. Group literacy coaching support received positive ratings from most teachers. Three-fourths of teachers reported improved awareness of literacy practices, and over one half improved their use of literacy instructional practices. Close to two-thirds of teachers reported increased student engagement after receiving coaching support, and close to one half (47%) believed their students improved reading and comprehension skills.

Outcomes

Proficiency: English I proficiency rates at high schools with literacy coaches increased by 3.5 percentage points from 2009-10 to 2011-12, with the goal of a two percentage point increase. The increase was statistically significant. At the same time, no significant increase in proficiency rates in reading was identified at middle schools with literacy coaches (0.9% increase). Proficiency rates at high schools and middle schools with an adolescent literacy coach remained lower than proficiency rates at the WCPSS high schools and middle schools overall.

Growth: An increase in the percentages of students achieving growth targets close to the projected 2% was observed from 2009-10 to 2011-12 in reading and English I at the schools with literacy coaches. While all WCPSS middle schools had lower percentages of students who showed growth in reading from 2009-10 to 2011-12, middle schools with literacy coaches yielded a 1.7 percentage point increase. The high schools with literacy coaches also showed higher growth in English I than WCPSS high schools overall (2.1 percentage points vs. 1.5 percentage points).

Secondary Mathematics

Description

Started in 2009-10, training and coaching were used for enhancing mathematics instruction at the secondary level, leading to and including Algebra I. Self-selected teachers were trained in mathematics strategies aimed at increasing student engagement through "Algebra I Concepts" and "Differentiation" workshops. Coaching by seven coaches was provided to mathematics teachers in targeted middle and high schools with high numbers of targeted student subgroups performing below grade level.

Implementation

- Only 25 teachers were trained in 2011-12 - a lower number compared to the previous two years. Both trainings were rated highly.
- All trained teachers noted that they applied training in the classroom (exceeding the goal of 75%).
- Since 2009-10, 308 teachers were trained through this initiative.
- At least 47 teachers at five middle schools and five high schools received regular one-on-one coaching support from seven secondary mathematics coaches. Middle school coaches worked with nine to 19 teachers each, and high school coaches supported five to nine teachers. Additionally, coaches reported working with grade levels or all mathematics teachers in their school.

Outcomes

Student outcomes for middle school teachers who were trained through the initiative did not show an increase in proficiency or improved growth results from 2010-11 to 2011-12. Trained high school teachers did not have enough data (too few students) to conduct the analysis. Training was thus not shown to be effective in terms of student outcomes.

Proficiency: Middle schools with coaches did not demonstrate significant increases in proficiency levels in Algebra I, even with East Millbrook having an increase in proficiency in Algebra I by 6 percentage points. However, Algebra I proficiency at middle schools with coaches improved while WCPSS did not improve. High schools with coaches showed a significant 8.5 percentage point increase in Algebra I proficiency. This exceeded the goal of a five percentage point increase.

Growth: The middle schools with mathematics coaches showed a small 0.2 percentage point increase, while fewer middle school students in WCPSS overall met growth targets in Algebra I in 2011-12 than in 2010-11. High schools with mathematics coaches showed a significant 9.7 percentage point increase in growth in Algebra I in one year, which was higher than the increase in WCPSS high schools overall (2.8 percentage points). Thus, student outcomes were higher in high schools than in middle schools. Specific benefits of coaching were not evident for any ethnic or at risk groups of students.

Elementary Mathematics

Description

Through the elementary mathematics initiative, 32 elementary schools received a full-time elementary mathematics coaching position. The schools were selected based on their proficiency levels in the previous year (below 70% or below 75%). Coaching was provided in Common Core, use of Math Talk, Student Leaders, and instructional rigor.

Teacher survey results (592 responses) showed strong implementation:

- 91% of grade levels had a coaching plan,
- 91% of all teachers reported a coach assisted with planning,
- 82% received feedback on their instruction,
- 82% reported improvement in their instructional practices, and
- 77% reported an increase in student engagement.

Classroom observations of all teachers at the 32 schools showed improved implementation of Math Expressions, increased use of Math Talk, increased rigor, improved use of instructional time, and enhanced student engagement after receiving coaching support.

Overall, nine of 11 goals were met for elementary math coaching.

- 3.8 percentage point increase in use of Math Expressions (70% of teachers use Math Expressions or alignment lessons (this goal not met);
- 16.9 percentage point increase in the use of math talk (50% use Math Talk) (goal met);
- 9.5 percentage point improvement in the protection of math instructional time (95% teach mathematics on the day of the observation) (goal met);
- 15.6 percentage point increase in the levels of rigor in math instruction (25% demonstrate rigorous mathematics instruction) (goal met);
- 43 percentage point increase in student engagement in math (75% of teachers report increased student engagement and performance in mathematics) (goal met);
- Improved instructional practices in mathematics (75% of teachers report improved math instructional practices as a result of collaboration with the math coach) (goal met).

Outcomes

Growth and proficiency trends were positive. The vast majority of coached schools (26 of 32) showed an increase in proficiency.

- From 2009-10 to 2011-12, the percentage of students scoring proficient on the math EOG increased from 76.4% to 82.0%. The goal of an increase of three percentage points in proficiency was therefore exceeded, with a 5.6 percentage point increase observed across schools. At the same time, the goal of reaching math EOG proficiency of 87% was not met.
- The schools with an elementary mathematics coach showed an average 10.5 percentage point increase (which was significant) in the proportion of students who met their growth targets. The percentage of students reaching their growth targets increased from 59.3% to 69.8% over the two years. The goal to increase the percentage of students making growth to 70% was met.

Differentiation Training

Description

This initiative provided training on differentiation of instruction to match student needs. The Champions (classroom teachers who were enthusiastic and supportive of this training) in 35 schools received face-to face training on differentiation and were to use the online training modules to support other staff at their school through the train-the-trainer model. By spring of

2011-12, lesson plan samples and reflections were collected from the trained Champions to show the integration of newly learned skills into teaching.

Implementation

- Five online training modules were developed (meeting one of the initiative goals).
- Sixty-eight Champions in 35 self-selected elementary, middle, and high schools were trained in four to five differentiation modules, with 51 trainees completing all five modules. This exceeded the goal of training 50 Champions.
- To provide evidence of improved use of differentiation strategies, all Champions were to implement a differentiation lesson or submit a reflection. In spring 2012, Champions from 22 of 35 schools (63% of those trained) submitted their lesson plans and reflections which showed a range of implementation of differentiation strategies.
- Pre- and a post- training surveys of the Champions revealed improved use of differentiation strategies. For example, there was a 15 percentage point increase (from 82% to 97%) in the proportion of teachers who matched supplemental resources to students' level of knowledge about a curricular topic, and a six percentage point increase in the proportion of teachers who adjusted learning tasks to meet individual students' needs and ensure a challenging learning experience.

Special Education

Description

The initiative provided training on effective co-teaching through collaborative teaming of a general education and a special education teacher. The SWD students placed in general education classes frequently receive instruction from a team consisting of a general education teacher and a special education teacher. To support the collaborative teaching model and improve the effectiveness of collaborative instruction provided to SWD students, pairs of special education and general education teachers received face-to-face training using the District Improvement funds. Schools were ultimately selected for training based on the requests of the principals who had concerns about achievement of their students with disabilities.

Implementation

- The goal of training 75 teachers at six schools was exceeded; a total of 119 elementary and middle school teachers from 31 elementary and middle schools received training in collaborative teaching.

- The majority of trained teachers who responded to a spring survey reported that the collaborative teaching model benefited students with special needs (92%) and believed students learned better in a classroom with collaborative instruction (88%).
- The majority of the trained teams reported sharing ideas, information, and materials, used a variety of co-teaching approaches, and shared the responsibility for differentiating instruction. This was higher than the 50% implementation goal.
- At the same time, only about half of the teams made joint decisions on who taught different parts of the lessons. Teaching teams frequently reported not having a regularly scheduled time for planning their lessons or for reflecting on instruction.

Highly Qualified Teacher Assistants (HQTA)

Description

This District Improvement initiative was aimed at supporting teacher assistants in Title I schools in becoming highly qualified to more efficiently support classroom instruction. By the end of 2011-12, all teacher assistants in WCPSS Title I schools were expected to have credentials to demonstrate their ability to provide support to students in reading, writing, and mathematics. Those teacher assistants who were not highly qualified were offered financial support in funding for registration at Wake Technical Community College for the Career Readiness Certificate (CRC) program. This prepared them to successfully pass the required WorkKeys assessments in reading for information, business writing, and applied mathematics.

Implementation

The overall goal of all teacher assistants in WCPSS Title I schools having credentials to demonstrate their ability to provide support to students in reading, writing, and mathematics was met. The specific goal for 2011-12 that teacher assistants enrolled in the career readiness program successfully complete the program, was met. The initiative's financial support allowed 253 teacher assistants out of a total 265 (or 96%) become highly qualified. The remaining 12 teacher assistants (4%) were reassigned to non-Title I schools, retired, or resigned by the end of 2011-12. Thus, the overall goal for all teacher assistants in Title I schools having credentials was also nearly met.

Coaching Results Across Components

Table 1 shows results for each component that employed coaching of teachers. All had been in place more than one year except Elementary Math. Results revealed consistent positive results for:

- SIOP® for reading and mathematics at the middle school level (for growth and proficiency);
- Adolescent Literacy at the high school level;
- Secondary Math at the high school level;
- Elementary Math.

Results were mixed for SIOP® at the elementary level in reading and mathematics (with improved proficiency but not growth). Positive trends were less evident for Adolescent Literacy and Secondary Mathematics at the middle school level.

Table 1
2011-12 District Improvement Components
Coaching Proficiency and Growth Results

EOG	Level	Subject	SIOP®	Adol Lit	Sec Math	Elem Math
Proficient	elem	read	**sig**			
		math	**sig**			**sig**
	mid	read	**sig**	no imp		
		Alg I	**sig**		not sig	
	high	Engl I		**sig**		
		Alg I			**sig**	
Growth	elem	read	not sig			
		math	not sig			**sig**
	mid	read	**sig**	not sig		
		Alg I	**sig**		not sig	
	high	Engl I		**sig**		
		Alg I			**sig**	

Notes: no imp-stands for no improvement;
not sig- not signif increase;
sig –significant increase.

Table 2

Summary of the 2011-12 Goals and Attainment

Initiative	Goals Met /Not Met	2011-12 Goals
SIOP®	SIOP® implementation evaluation was not a priority in 2011-12 and was measured only at targeted schools. Implementation goals that were measured were met. Outcomes goals were partially met.	**Targeted Schools:** ▪ New teachers receive SIOP® training. One school completes school-wide training. ▪ 80% to 90% of classroom teachers receive coaching support. ▪ 100% of schools develop and implement a SIOP® professional development plan and include SIOP® in SIP Plan. ▪ 30% 3-8 teachers and 15% of content teachers in targeted schools utilize 4 to 6 components of the SIOP® model in lesson planning and delivery. ▪ Deeper training in SIOP® implementation in at least 3 schools. ▪ 5 percentage point gain towards proficiency targets **Non-Targeted Schools:** (not measured for this evaluation)
Adolescent Literacy	Implementation: Training goals were met. Outcomes: Goals were met in high schools, partially met in middle schools.	▪ 75% or more of trained teachers are implementing strategies from training. ▪ Increased percentages of students of the coached teachers meet growth targets in English I (high school) and reading EOG (middle school). ▪ A two percentage point increase in reading or English proficiency of students of middle and high school teachers who participated in training; ▪ For teachers who received coaching support -increased percentage of students who met ABCs growth targets in English or reading.
Secondary Mathematics	Implementation: Training goals were not met, with no increased growth or proficiency after the 2011-12 training. The 75% implementation goal for use was exceeded. Outcomes goals for coaching were met at high schools and partially met in middle schools.	▪ 75% of teachers trained or receiving coaching support use training strategies; ▪ 3% more students in schools where teachers were trained reach ABCs growth targets and are proficient on the EOG/ EOC tests; ▪ 5% more of students in schools with coaches reach ABCs growth targets and are proficient on the EOG/EOC tests.

Initiative	Goals Met /Not Met	2011-12 Goals
Elementary Mathematics	All implementation and outcome goals met.	▪ Increase use of Math Expressions; ▪ Increase the use of math talk; ▪ Improve the protection of math instructional time; ▪ Increase the levels of rigor in math instruction; ▪ Increase student engagement in math; ▪ Improve instructional practices in math; ▪ Increase students' math EOG proficiency and percentage making growth
Differentiation	All implementation goals met.	▪ Develop 5 online training modules; ▪ train 50 champions in differentiation; ▪ increase use of pre-assessment as reflected in survey; ▪ Champions plan, implement, and reflect on differentiated lessons.
Special Education	All implementation goals met.	▪ 50% of trained collaborative teams use 3 of the 6 approaches to co-teaching. ▪ 45% of trained teachers exhibit parity based on checklist.
HQTA	All implementation goals met.	. All non-highly qualified teacher assistants will have credentials to demonstrate their ability to provide support to students in reading, writing, and mathematics.

Conclusions and Discussion

The seven District Improvement initiatives were well implemented in 2011-12. All efforts were well designed and coordinated, and common processes in goal setting and monitoring tools (coaching logs, budget monitoring, and surveys) were notable. The most consistent positive results for coaching were shown for:

- SIOP® for reading and mathematics at the middle school level,
- Adolescent Literacy at the high school level,
- Secondary Math at the high school level,
- Elementary Math.

New initiatives, such as differentiation and special education, were well received and implemented. Continued use of differentiation modules (perhaps within common core or other training) and of special education training is warranted, as well as continued work with the trained differentiation Champions. HQTA was a one-year initiative with the short-term goals that were achieved. Therefore, continuation is not necessary.

Adolescent Literacy and Secondary Mathematics at the middle school level did not show sufficient improvement in student outcomes. While need exists in these areas, these models, as structured and delivered, did not seem to yield sufficient benefits to continue.

With no obligation to follow the strict funding requirements of NCLB, the district is no longer implementing District Improvement per se, but is continuing some components in 2012-13 at a reduced level due to funding constraints. Decisions on whether to continue funding for these efforts in 2011-12 had to be made before all results were available; so more informed decisions are possible for 2013-14 based on the results in this report within available funding. Table 3 shows the status of the District Improvement initiatives in 2012-13.

Table 3

2012-13 Status of 2011-12 District Improvement Components

Most Promising Components	2012-13 Status
SIOP® coaching at middle schools	Reduced coaching at middle schools (other funding)
Adolescent Literacy coaching at high schools	Discontinued
Secondary Math coaching at high schools	Discontinued
Elementary Math Coaches	Reduced coaching (other funding)
Other Components	**2012-13 Status**
SIOP® at elementary schools	Reduced coaching at elementary schools (other funding)
Differentiation training	Discontinued (modules exist, Champions trained)
Special Education collaborative team training	Continuing with Special Education funds
Highly Qualified Teacher Assistants	Complete; no longer needed
Adolescent Literacy at middle schools	Discontinued
Secondary Math at middle schools	Discontinued

The overall findings from this report can be generalized to other initiatives:

- stable leadership is associated with better coordination of efforts, use of common approaches to monitoring own efforts, and more flexible budget management;
- coaching support appears be correlated with cumulative positive student outcomes.

Recommendations

District Improvement was a massive multi-million dollar effort. WCPSS learned some valuable lessons along the way which have implications for the future. We have two general recommendations as WCPSS moves forward.

1. Build on what worked in District Improvement. Based on achievement results, finding ways to fund the following components should have high priority.

- Math Coaches at the elementary level;
- SIOP® coaching and training for reading and mathematics at the middle school level;
- Adolescent Literacy and Secondary Math coaching at the high school level.

If funding is not possible for these components, exploring ways to build content into other training (for example, the Effective Teacher Training or Common Core training) should be considered.

In addition, collaborative team training by Special Education Department and continuing use of the differentiation modules and work with the trained differentiation Champions to impact more teachers appear to have potential.

2. Build in coaching to future training efforts. While more costly than simply providing training, coaching appeared to strengthen the fidelity of implementation and impact for several of the components studied. Costs could be reduced if the coaching efforts are planned with the end in mind. Critical issues include the following:

- Plan ahead on how long coaches will need to be at schools to reach all staff and how long it would take before teachers and staff develop confidence in their own skills to carry on without coaching support.
- Utilize elements of the coaching cycle.
- Set clear benchmarks for implementation along the way, as well as for the long-term goal to be accomplished.

WCPSS may want to consider building a cadre of coaches to be used across training efforts. Such a cadre could be trained in skills critical to any coaching effort (such as best practices in case of SIOP® coaches or instructional rigor, Common Core standards, Math Talk, and Student Leaders in the case of elementary math coaches). These coaching skills could then be applied across more than one training effort. Existing or new staff could be part of the coaching cadre. Funding should be secure for several years; as recruitment for a coaching position may become more difficult when the future of funding is uncertain.

Introduction

In 2006-07, when WCPSS did not meet Adequate Yearly Progress (AYP) goals for certain student subgroups at all school levels for two years in a row, it was placed in District Improvement under the Elementary and Secondary Education Act of 1965 amended by the No Child Left Behind Act of 2001 (NCLB). The NCLB student groups that did not meet the proficiency targets were limited English proficient students (LEP) and students with disabilities (SWD). To provide additional support to both groups, the District Improvement Advisory Committee proposed a strategy that would directly strengthen the outcomes for those student subgroups. The committee selected a nationally known approach designed for improving instruction for LEP students. Sheltered Instruction Observation Protocol (SIOP®) is also closely aligned with Marzano's best practices (Marzano, 2001). It has since been used in the district as the primary strategy to meet the needs of LEP and students with disabilities (SWD). Subsequently, it was also used to support other student subgroups in elementary and middle schools. In 2009-10, two more approaches were added to support the students at the secondary level: adolescent literacy and secondary mathematics initiatives targeted secondary mathematics and English Language Arts. By 2011-12, SIOP® had been systematically implemented for four years. Two newer initiatives (secondary mathematics and adolescent literacy) were in place for two years, and four more initiatives were designed in 2011-12 to expand instructional support even further. Two new approaches were designed to improve mathematics instruction and instruction provided to special education students. Differentiation training was offered at schools where administration perceived the need for such training and requested it. Finally, teacher assistants at Title I schools received support in becoming highly qualified (HQTA).

Annually, an evaluation was conducted of each implemented initiative, and an outcomes evaluation was conducted for the three initiatives that had been in place for two or three years. The changes made to the District Improvement initiatives in 2011-12 as an implementation of the recommendations made in the evaluation report in 2010-11 are described in Appendix E. The outcomes analysis showed some positive results for the schools that received training and coaching support in SIOP® for no less than three years (Bulgakov-Cooke, 2010; Bulgakov-Cooke & Baenen, 2011, Paeplow, 2011).

This report is the last one in the District Improvement initiatives evaluation series. In May 2012, the United States Department of Education approved North Carolina's flexibility waiver request from some of the requirements of NCLB as specified in the Elementary and Secondary Education Act (ESEA), which will remain in effect for the 2012-13 and 2013-14 school years. This will free WCPSS and other NC school districts from some of the possible sanctions of NCLB and will allow a more flexible approach to using the state developed accountability measures.

Each initiative outlined its goals and specified the activities aligned to meet those goals. Typically, a logic model was used to graphically lay out the needs for each initiative, its long-term goals, strategies used to achieve those goals, and short-term and intermediate goals that

would lead to achieving the long-term goal. Table 4 lists the grade levels, subject areas, and subgroups affected by the initiatives.

Table 4
District Improvement Initiatives and their AYP Subgroup Targets by Subject and School Level

	AYP Subgroups Needing Additional Support							
	Black		ED		SWD		LEP	
	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics	Reading	Mathematics
Elementary								
SIOP®Training, Coaching, and SIOP® Lessons	X	X	X	X	X	X	X	X
Elementary Mathematics Coaching		X		X		X		X
Training for Special Education Teachers					X	X		
Differentiation Training	X	X	X	X	X	X	X	X
Middle								
Differentiation Training	X	X	X	X	X	X	X	X
SIOP® Training, Coaching, and SIOP® Lessons	X	X	X	X	X	X	X	X
Training for Special Education Teachers					X	X		
Secondary Literacy Training and Coaching	X		X		X		X	
Secondary Mathematics Teacher Training		X		X		X		X
High								
Differentiation Training	X	X	X	X	X	X	X	X
Training for Special Education Teachers					X	X		
Secondary Literacy Training and Coaching	X		X		X		X	
Secondary Mathematics Teacher Training		X		X		X		X

Source: District Improvement Implementation Report, 2010-11.

The Needs District Improvement Initiatives Were Designed to Meet

The District Improvement initiatives' needs, goals, and strategies are summarized in Tables 5 to 7 to follow. Each table presents all District Improvement initiatives. Thus, Table 5 illustrates the needs that were to be met by implementation of the District Improvement initiatives.

Table 5

District Improvement Initiatives: Needs to Meet

Initiatives	Needs
SIOP©	Students in the targeted subgroups are more likely to perform below grade level or to not graduate from high school, and should be offered additional assistance. Because systematic structures for intervention are still evolving, there is concern that some students within these subgroups may not receive the needed support.
Adolescent Literacy	With the increased targets for 2011, WCPSS did not meet AYP in Reading in grades 6-8 (Black, ED, LEP, SWD) and at grade 10 (Black, American Indian, ED, LEP, and SWD). Students who are three or more years behind in reading are more likely to perform below grade level and not graduate from high school. Because WCPSS lacks a systematic structure for student literacy intervention assistance in all grade spans or an in-depth understanding about literacy among many secondary teachers, there is a concern that some of these students may not receive the necessary support.
Secondary Mathematics	Secondary mathematics teachers who provide instruction to NCLB student groups performing below grade level in courses leading up to and including Algebra I need additional support in the form of professional development.
Elementary Mathematics	This initiative seeks to improve mathematics instruction in the 32 lowest performing elementary schools.
Differentiation	Differentiated instruction provides a continuous flow of assessment, teaching, and learning. The 2010-11 district-wide needs survey of principals and Central Office staff supports the need for professional development in differentiation to support learning of all students and the targeted AYP subgroups.
Special Education	This initiative seeks to increase the number of courses passed/skills mastered by SWDs in general education classes; and to increase the number of SWDs proficient in English I and Algebra I by 5%.
Highly Qualified Teacher Assistants	To improve the academic skills of teacher assistants to better support instruction in the classroom, teacher assistants in all Title I schools need to meet the NCLB Highly Qualified requirements by July 2012 by building skills in reading, writing, and mathematics – AYP tested areas for all Title I schools to operate under the school-wide model.

Goals of District Improvement Initiatives

Table 6 presents the long-term, intermediate, and short-term goals for all initiatives. Intermediate and short-term goals typically reflected an expectation of increase in coaching and training numbers, implementation of training in the classroom, and some included improved student outcomes. A long-term goal for many initiatives reflected improved student outcomes.

Table 6

District Improvement Initiatives: Goals

Initiative	Long Term Goals	Intermediate and Short-Term Goals
SIOP®	▪ Student learning improves: Increased reading and mathematics achievement of the targeted NCLB subgroups in elementary, middle, and high schools; ▪ Reduced number of targets missed: WCPSS makes AYP two consecutive years and is no longer in district improvement; ▪ Targeted schools demonstrate implementation to fidelity of the SIOP® model in all components.	**Targeted Schools:** ▪ New teachers receive SIOP® training. One school completes school-wide training. ▪ 80% to 90% of classroom teachers receive coaching support. ▪ 100% of schools develop and implement a SIOP® professional development plan and include SIOP® in SIP Plan. ▪ 30% 3-8 teachers and 15% of content teachers in targeted schools utilize 4 to 6 components of the SIOP® model in lesson planning and delivery. ▪ Deeper training in SIOP® implementation in at least 3 schools. **Non-Targeted Schools:** ▪ 250 teachers receive SIOP® training ▪ 60% awareness of on-line training opportunities through Blackboard. ▪ 60% of SIOP® trained teachers apply SIOP® principles in their classroom instruction. ▪ Increased opportunities for hands-on manipulatives use with targeted groups. ▪ 4 schools complete school-wide training, one school completes Foundations of SIOP®.
Adolescent Literacy	**Training goals**: An increased percentage of students in classes of teachers implementing literacy strategies reach growth targets. The number of AYP targets met in trained schools increases. District meets AYP at middle and high school level. **Goals in coaching**: English I proficiency and reading EOG proficiency in grades 6-8 increase by 2%. Middle and high schools meet AYP in reading.	▪ 75% or more of trained teachers are implementing strategies from training. ▪ Increased percentages of students of the coached teachers meet growth targets in English I (high school) and reading EOG (middle school). ▪ A 2 percentage point increase in reading or English proficiency of students of middle and high school teachers who participated in training; for teachers who received coaching support - increased percentage of students who met ABCs growth targets in English or reading. ▪ Number of AYP targets missed decreases.

Initiative	Long Term Goals	Intermediate and Short-Term Goals
Secondary Mathematics	Make all Algebra and mathematics teachers in grades 6-8 familiar with appropriate processes and effective practices in mathematics and apply them to support students.	▪ 75% of teachers trained or receiving coaching support use training strategies; ▪ 3% more students overall and in AYP subgroups in schools where teachers were trained reach ABCs growth targets and are proficient on the EOG/ EOC tests; ▪ 5% more of students in schools with coaches reach ABC growth targets and are proficient on the EOG/EOC tests.
Elementary Mathematics	Provide evidence of effectiveness of math coaches in improving student achievement.	▪ Increase use of Math Expressions; ▪ Increase the use of math talk; ▪ Improve the protection of math instructional time; ▪ Increase the levels of rigor in math instruction; ▪ Increase student engagement in math; ▪ Improve instructional practices in math; ▪ Increase students' math EOG proficiency and percentage making growth
Differentiation	Increase student engagement; Develop and retain HQ teachers; Narrow the achievement gap.	▪ ***Short-term*****:** Develop 5 online training modules; train 50 champions' differentiation expertise; increased use of pre-assessment (from 26 to 40) as reflected in survey; ▪ All Champions plan, implement, and reflect on differentiated lessons. ▪ ***Intermediate***: develop additional modules; 90% of participants finish coursework; ▪ Champions implement a differentiation lesson, demonstrate use of 5 differentiation initiatives.
Special Education	Increased number of SWDs achieving passing grades, number of courses passed in general education classes increase. Number of SWDs who are proficient in English I and Algebra I increases by 5% over 3 years.	***Short-Term***: ▪ 50% of trained collaborative teams use at least 3 of the 6 approaches to co-teaching. ▪ 45% of trained teachers exhibit parity based on parity checklist. ***Intermediate*****:** ▪ Differentiated instruction is provided in at least 40% of the co-teaching classrooms. ▪ 60% of the collaborative teachers will plan lessons as a team at least once a week. ▪ 60% of trained collaborative teachers use at least 3 of the 6 co-teaching approaches.
Highly Qualified Teacher Assistants	Teacher assistants complete a teacher education program to meet the HQ requirements. Student achievement is positively impacted because teacher assistants better assist students in reading, writing, and math.	▪ ***Short-Term***: All non-highly qualified teacher assistants will enroll in the Career Readiness Program and will be provided the time to complete the program online. ▪ ***Intermediate*****:** Teacher assistants feel empowered by new instructional skills. ▪ Teacher assistants will take and pass the reading, writing, and math assessments.

Key Strategies of the District Improvement Initiatives

All strategies were designed to provide support to teachers, not directly to the students, as the District Improvement Title I funds could only be used on professional development. Key strategies from the initiatives included either offering training to teachers providing instruction in EOG subjects, or providing coaching support, or both.

Table 7

District Improvement Initiatives: Strategies

Initiatives	Strategies
SIOP®	▪ SIOP® coaching, PLT collaboration, follow the SIOP® professional development plan. ▪ Provide content-specific training (including school-wide and online training delivery methods).
Adolescent Literacy	▪ Train self-selected teachers in Reading Interventions for Adolescent Learners (RIAL) and Foundations of Reading. ▪ Five District Improvement-funded Literacy Coaches identify students at risk of reading failure and support their teachers in helping meet the needs of these students.
Secondary Mathematics	▪ Train 100 self-selected secondary mathematics teachers in best practices for mathematics instruction; ▪ Provide coaching support to math teachers in targeted middle and high schools with high numbers of targeted student subgroups performing below grade level.
Elementary Mathematics	Provide coaching support in mathematics instruction at 32 elementary schools: create coaching plans, participate in PLTs, offer professional development and individual coaching cycles, maintain communication with principal and IRT.
Differentiation	▪ Develop 5 online training modules; provide ongoing training and support of school-based champions to manage school-wide implementation of online training modules; ▪ Develop a continuum of professional knowledge and application for differentiation.
Special Education	Train 75 teachers at 2 elementary, 2 middle, and 2 high schools selected at the request of school administrators and based on AYP results. Monitor the effectiveness of the training by observing 50% of the trained teachers.
Highly Qualified Teacher Assistants	Teacher assistants enrolled in the career readiness program successfully complete the program.

Schools Selected for Support

Below is a color-coded diagram of district schools that received coaching support from District Improvement-funded initiatives. Schools that are highlighted in yellow or blue were supported through a District Improvement initiative. Schools were primarily targeted for support based on student outcomes, but a request from the principal was also a factor in the school selection.

Table 8

WCPSS Elementary Schools Targeted for Coaching Support by District Improvement Initiatives in 2011-12

Central	Eastern	Northeastern	Northern	Southern	Southwestern	Western
Combs	Carver	Brentwood	Baileywick	Aversboro	Apex	Adams
Conn	Forestville Road	Durant Road	Brassfield	Ballentine	Barwell Road	Alston Ridge
Hunter	Hodge Road	Forest Pines	Brier Creek	Banks Road	Baucom	Briarcliff
Joyner	Harris Creek	Fox Road	Brooks	Creech Road	Bugg	Carpenter
Lacy	Knightdale	Heritage	Douglas	East Garner	Dillard Drive	Cary
Olds	Lake Myra	Jones Dairy	Green	Fuquay-Varina	Fuller	Cedar Fork
Partnership	Lockhart	N. Forest Pines	Hilburn Drive	Herbert Akins Road	Laurel Park	Davis Drive
Poe	Rolesville	River Bend	Jeffreys Grove	Holly Grove	Middle Creek	Farmington Woods
Powell	Sanford Creek	Wakefield	Lead Mine Road	Holly Ridge	Oak Grove	Green Hope
Root	Wakelon	Wake Forest	Leesville Road	Holly Springs	Olive Chapel	Highcroft
Underwood	Wendell	Wilburn	Lynn Road	Lincoln Heights	Penny Road	Kingswood
Washington	Zebulon	Wildwood Forest	Millbrook	Rand Road	Salem	Mills Park
Wiley			North Ridge	Smith	Swift Creek	Morrisville
			Pleasant Union	Timber Drive	West Lake	Northwoods
			Stough	Vance	Yates Mill	Reedy Creek
			Sycamore Creek	Vandora Springs	Walnut Creek	Turner Creek
			York	Willow Springs		Weatherstone

Elementary Mathematics, SIOP®.

Table 9

WCPSS Middle Schools Targeted for Coaching Support by District Improvement Initiatives in 2011-12

Central	Eastern	Northeastern	Northern	Southern	Southwestern	Western
Carnage	East Wake	Durant Road	Carroll	East Garner	Apex	Davis Drive
Centennial	Wendell	East Millbrook	Leesville Road	Fuquay-Varina	Dillard Drive	East Cary
Daniels	Zebulon	Heritage	Mt. Vernon	Holly Grove	Lufkin Road	Mills Park
Ligon		River Oaks	West Millbrook	Holly Ridge	Salem	Reedy Creek
Martin		Wakefield		N. Garner	West Lake	West Cary
Moore Sq.		WF Rolesville				

Table 10

WCPSS High Schools Targeted for Coaching Support by District Improvement Initiatives in 2011-12

Central	Eastern	Northeastern	Northern	Southern	Southwestern	Western
Athens Drive	East Wake School of Engineering Systems	Heritage	Leesville Road	Fuquay-Varina	Apex	Cary
Broughton	East Wake School of Art, Educ., & Global St.	Wakefield	Millbrook	Garner	Middle Creek	Green Hope
Enloe	East Wake School of Health & Science	WF-Rolesville	Sanderson	Holly Springs	Southeast Raleigh	Panther Creek
Longview	East Wake School of Integrated Technology				Wake Early College of Health and Science	
Phillips	Knightdale					
NCSU STEM Early College						

Adolescent Literacy, Secondary Mathematics, SIOP®.

Schools were selected for coaching support based on the schools' 2010-11 student outcomes. Individual teachers were not targeted. The focus was rather on subject areas that would affect the school district's District Improvement status, such as elementary mathematics, English I, or Algebra I. Training support offered by the initiatives was frequently provided to self-selected schools or teachers. This was true for SIOP®, differentiation training, and secondary literacy training. The HQTA initiative supported all teacher assistants in the district in becoming highly qualified.

Table 11

Targeting Support

Initiatives	Schools/ Teachers Targeted for Support
SIOP®	Face-to-face or on-line training was offered to self-selected teachers. One-day overview or whole school training offered to schools per principal's request.
Adolescent Literacy	Training*:* teachers were self-selected Coaching: Six middle schools and six high schools were selected for coaching support based on percentages of students at level I and II proficiency in reading.
Secondary Mathematics	Five middle and five high schools were selected based on EOG/EOC data (proficiency and growth) and EVAAS data. (middle schools: Moore Square, Centennial, Carroll, East Millbrook, Wendell; high schools: East Wake Sch. and Enloe.)
Elementary Mathematics	Thirty-two lowest performing schools were targeted based on EOG composite score below 75% proficiency).
Special Education	Six elementary, middle, and high schools (with high percentage of special education students with low scores and high teacher turnover) were initially targeted for collaborative training support. More schools were added at principals' request. Other teaching teams were selected based on requests from principals who had concerns about special education students' achievement.
Differentiation	Self-selected schools whose principals and staff expressed interest in receiving differentiated instruction training.
Highly Qualified Teacher Assistants (HQTA)	Priority was given to teacher assistants who were not highly qualified as stated in NCLB regulations. 345 Teacher Assistants at 36 Targeted Assistance Title I schools who needed to meet Highly Qualified Standards (96 hours of staff development and proficient scores on Reading, Writing, and Math assessments).

District Improvement Budget and Costs

Over $3.7 million were requested in 2011-12 for the implementation of all District Improvement initiatives. The initiatives with the coaching component requested more funding than the initiatives that included only training. During the 2011-12 school year, some of the funds were reallocated to elementary mathematics initiative to cover a higher than initially estimated math coaches' salary. At the same time, some initiatives did not use all funds. For example, HQTA did not need all funds for tuition support, as most teacher assistants either submitted documentation of the needed coursework or were eligible for tuition waiver based on their income. This allowed a reallocation of funds to the initiatives with higher needs. By the end of 2011-12, almost $3 million of the $3.7 million in funds allocated for District Improvement were used. Although most initiative coordinators had to estimate the needed funding at the beginning of the year, their initial estimates appear to have been able to cover all actual expenses with some funds left in most cases.

Table 12

2011-12 District Improvement Initiatives Budget

District Improvement Initiative	# of Teachers Trained	Estimated Number of Teachers Receiving Coaching Support	Beginning Balance	Expenditures
SIOP®	419	+587	$584,917.11	$476,500.68
Secondary Literacy	104	+97	$401,958.88	$344,136.81
Secondary Mathematics	25	+47	$979,811.53	$295,417.28
Elementary Mathematics	na	+928**	$1,671,168.52	$1,766,124.21
Special Education	119	na	$14,939.04	$1,354.52
Differentiation*	75	na	$46,724.80	$26,873.00
Highly Qualified Teacher Assistants (HQTA)***	na	na	$67,180.00	$1,701.95
Grand Total			**$3,766,669.88**	**$2,912,108.45**

* Funding of curriculum writers training was not included in this table, as the initiative was not fully implemented after the coordinator left WCPSS.

** Estimating an average of 29 classroom teachers per elementary school.

*** Eight teaching assistants received financial support to cover tuition.

Implementation. Tables 13 and 14 offer summaries of the 2011-12 initiative implementation. Descriptive information on the new initiatives with teacher feedback is presented in more detail in the text to follow.

Table 13

District Improvement Initiatives: Implementation of Training

Initiatives	Implementation of Training
SIOP®	▪ 420 teachers trained, including 171 receiving whole-school training, 43 with online training, and 119 trained by a coach. ▪ Training was provided from July 2011 to June 2012.
Adolescent Literacy	▪ 104 teachers trained: 66 in Reading Intervention for Adolescent Learners; 38 in Foundations of Reading. ▪ Training for various sessions was provided in June 2011 through March 2012. ▪ 90% implementation of training in the classroom; skills gained made a difference for 87% of teachers.
Secondary Mathematics	▪ A total of 25 teachers trained: 8 in Differentiation; 17 in Algebra I Concepts. ▪ Training was provided in February and March 2012. ▪ Ratings of training were 100% positive for both workshops. ▪ 100% implementation of training.
Elementary Mathematics	▪ No training was planned.
Special Education	▪ Effective co-teaching training for a general educator and a special education teacher teams. ▪ 119 elementary and middle school teachers trained, with the initial target of 75 teachers. ▪ Training was provided September through March. ▪ Implementation of training in the classroom; 67% co-planned lessons, 59% jointly made decisions on teaching responsibilities, 61% shared responsibility in assessing students, 70% shared differentiated instruction, 84% shared ideas and materials.
Differentiation	▪ 5 modules designed, with 77 teachers attending, 64 teachers completed training on four or all five modules at 33 schools. ▪ Training was provided June through January. ▪ Surveys showed that 42% of teachers varied instructional strategies based on pre-assessment data, 46% adjusted learning tasks to meet individual student's needs; 42% used a variety of assignment formats with their students to motivate them; 58% used flexible grouping to organize students by instructional needs. ▪ Champions' sample differentiation lessons plans and reflections on the lessons were available from at least 22 schools.
Highly Qualified Teacher Assistants	▪ 253 of 265 teacher assistants received credentials to become highly qualified; ▪ Most received a tuition fee waiver for the career readiness program; ▪ 8 teacher assistants received $175.00 each for course registration.

Table 14

***District* Improvement Initiatives: Outcomes of Coaching Support**

Initiatives	Implementation of Coaching
SIOP®	Five coaches were placed at 10 elementary and middle schools at the beginning of the year. Reached grades K-8, with an emphasis at elementary level on grades 3 and 4, provided resources, offered coaching cycles to individual teachers; worked with whole school, grade levels, and leadership teams, provided staff development. About half of the observed teachers supported by a coach were just above the median implementation level of 3 in application of SIOP® components.
Adolescent Literacy	Five literacy coaches were placed in 6 middle and 6 high schools at the beginning of the year. Staff was in place by September 2011. At least 100 teachers were reached for coaching support; most supported monthly. Frequent assistance with planning lessons was provided, as well as observation feedback (70 teachers). Ratings of coaching were "very" to "mostly helpful" (83% to 90%).
Secondary Mathematics	7 coaches were placed at the beginning of the year at 5 middle and 2 high schools. Coaches reached 5 to 14 teachers each. Over half of teachers (55% or 26 teachers) worked with the coach weekly or bi-weekly. Almost all teachers received resources; 70% received assistance with planning; 91% teachers instruction was observed and 72% received feedback. Additionally, about half of teachers stated that the coach co-taught with the teacher or modeled instruction (55%). Over half of teachers noted that support in co-teaching and through post-conferences (receiving feedback on instruction) was very helpful (52% and 55%). Close to half of teachers (46% to 48%) rated modeling of instructional practices, analyzing data, and providing professional development as very helpful. Nearly half of teachers reported growth in student classroom engagement after working with the math coach (46%), one third saw growth in math skills and improved motivation (34%). A quarter of teachers (26%) reported growth in classroom performance.
Elementary Mathematics **(8 of 9 implementation goals met)**	32 coaches were placed at 32 elementary schools. All teachers received coaching support: 91% reported having a coaching plan for their grade level; 82% improved instruction as a result of collaboration with the coach; 77% noted increased student engagement and performance. Most reported planning with the coach (91%) and receiving feedback on instruction (82%). A high percentage of teachers (78%) had pre-conferences with the coach or had coaches model a lesson. Other frequently received support was in implementation of math talk (64%), rigor (43%), and student leaders (42%).
Other Initiatives:	Coaching is not a strategy for Special Education, Differentiation, or Highly Qualified Teacher Assistants (HQTA).

Implementation Findings

SIOP®

Training

Most of the SIOP® professional development was provided by the SIOP® trainer through face-to-face or whole-school training, with some online training. Whole-school training was offered to 137 teachers at Moore Square Middle, Reedy Creek Middle, and Underwood Elementary. Those who preferred a format different from traditional training received training online. For example, teachers at Ballentine Elementary received Foundations SIOP® training online. The training at Brentwood Elementary was school-wide but was conducted by the SIOP® trainer, either through face-to-face or in online format. School-based staff, namely science and social studies coordinating teachers, assisted in content-specific training in their subject areas.

Since training attendance was not perfect, and the decision needed to be made of who to include in final training counts, two types of counts are offered in the report: counts of teachers who attended more than 60% of the training sessions and those who attended at least 75% of trainings. These two counts include many of the same teachers and are not independent.

Table 15

2011-12 SIOP® Training

Type of Training	Number Attending >60% of Training Sessions	Number Attending >75% of Training Sessions
Face-to face (including whole school or subject specific) training	257	231
Online training	43	41
Total	**300**	**272**

Additionally, SIOP® coaches also trained 119 teachers at targeted schools. With a 60% attendance count and a coach training, 419 teachers were SIOP® trained in 2011-12. A total of 279 teachers who attended less than 60% of all sessions were not included in any counts. A grand total of 2,746 teachers were trained since 2008-09. It is noteworthy that by 2011-12 some of the teachers who had previously received SIOP® training were no longer working in WCPSS.

In addition to the full SIOP® trainings, at the principals' requests, brief overview SIOP® presentations were made at four elementary schools: Vance, Briarcliff, Northwoods, and Wildwood Forest, and at West Millbrook Middle School (370 attended). The presentations were offered either by the SIOP® trainer, or SIOP® curriculum writer, or District Improvement Coordinator. A one-day SIOP® Foundations training was also offered at Ballentine Elementary School (54 attended). These brief trainings were not included in the trained counts.

Coaching

All five SIOP® coaches provided their input on their coaching work in a focus group held in April 2012, which offered a glimpse into the school-level implementation. The coaches started the discussion by mentioning the benefits of using SIOP®. They felt that SIOP® made teachers ready for Common Core teaching. Thanks to SIOP®, teachers were able to become more explicit and mindful about their teaching and more open to the idea that all of them are teachers of English irrespective of the content they teach. SIOP® coaches felt that SIOP® implementation in the classroom helped not only LEP students but benefited all students who became more engaged and exhibited fewer behavior problems.

Overall, teachers at targeted schools appreciated feedback from SIOP® coaches and welcomed them into their classrooms. Enhanced coaching cycles (pre-conference, co-planning, co-teaching, observations, and post conference) were offered during the year as part of the one-on-one support. Partnering with another coach at a different location was cited as an advantage, as two coaches were able to offer 100% support at both schools.

According to the SIOP® coaches, they were given strong support at the schools. On the high end of the range of support were Fox Road and Hodge Road Elementary Schools, which showed high administrative and teacher support for SIOP®. They made SIOP® an integral part of the schools' improvement plans. During the year, teachers at the two schools were offered differentiated coaching support according to their needs, while peer coaching and training from the previous year continued.

Green and Kingswood Elementary Schools and Centennial Middle were new to coaching, but did show strong SIOP® support. Staff at all three schools were open to coaching and welcomed observations and feedback. The SIOP® coaches were respected, and their advice was sought out.

Durant Road Elementary demonstrated moderate buy-in for coaching cycles. Daniels Middle administration and a group of teachers strongly supported SIOP®, with other staff starting to build relationships with the coach. Professional development was offered mostly through PLTs; as for individual support, teachers asked for ideas, but not for help with co-teaching.

Brentwood Elementary is a Renaissance school which underwent restructuring. The majority of teachers who had been previously SIOP® trained, were no longer there. With a high percentage of LEP students at the school (30%), all new staff were SIOP® trained in 2011-12. Although SIOP® was one of many new initiatives implemented in Brentwood Elementary in 2011-12, the administration and the staff supported SIOP® implementation.

When asked about the relative difficulty in implementing the SIOP® components, the coaches noted that the best implemented components were Vocabulary, Building Background, Comprehensible Input, Strategies, and Lesson Delivery. The components more difficult to implement were Practice and Application (e.g., use of manipulatives was still lower than

desired). Review and Assessment also needed more focus, with wait time and feedback on language at times difficult to implement. Coaches felt that teachers tended to watch more for content, and give less priority to language. Lack of technology was noted in some schools.

Discussing challenges, coaches noted that administrative support is imperative for the success of the coaching efforts. Without administrative support "it did not matter if a SIOP® coach was in the school or not". Being split between two schools was seen as another challenge which "broke up momentum". Such setup did not allow attendance of all the meetings that the coaches felt they needed to attend at the school. At times, because of being split between schools coaches felt "they did not belong anywhere". One of the challenges was teachers' perception that SIOP® is just a group of strategies rather than a framework of instruction. Lack of energy and teachers' lack of time were also cited as a challenge.

Coaching logs: Coaching logs showed that five SIOP® coaches at elementary schools worked with all grade levels, with most frequent coaching support provided to EOG grades 3 and 4. Table 2A in Appendix A reflects the distribution of times the coaches spent working with elementary grades during the year. Unfortunately, the coaching logs were set up to count the number of times various types of support were offered to staff, not the actual number of teachers the coaches supported.

Individual work with teachers involved implementing the coaching cycle. The most frequently implemented elements of the coaching cycle (except "enrolling" teachers for coaching support) were classroom observations and post-observation conferences. It is noteworthy that elementary school coaches co-taught on average 100 times each during the school year.

Table 16
Coaching Cycles

Coaching Cycle Elements	Number of Times
Enrolling	587
Observations	555
Post Observation Conferences	465
Co-teaching	303
Pre- Observation Conferences	271
Modeling	125

Additionally, the coaching logs provided a view of group activities that coaches implemented. Most frequently coaching activities involved pulling instructional resources and co-planning with teachers. Attendance of staff meetings and meetings with the principal were also part of the coaching schedule. Other activities included presenting at various leadership team meetings at schools (PLTs, grade level, SIP, SST, or leadership team meetings).

SIOP® observation results: To estimate the SIOP® implementation levels among all trained teachers, an observation sample of 103 teachers was created using the combined longitudinal

roster of teachers who were SIOP® trained from 2008-09 to 2011-12. The observation sample was randomly selected and proportionally represented elementary and middle schools, various grades with an emphasis on EOG grades, and various subjects with an emphasis on EOG subjects. The schools where higher numbers of teachers were trained had a higher number of teachers observed (see Appendix A, Tables 5A and 6A).

Teachers at 20 schools (11 elementary and 9 middle schools) were observed. The SIOP® coaches, the SIOP® trainer, and the District Improvement Coordinator were all trained in the use of the observation checklist to demonstrate the appropriate levels of inter-rater agreement. SIOP® coaches observed teachers at the schools other than their own. The observation sample included all grades while purposefully over-representing the EOG grades (2-5 and 6-8). The majority of observations were conducted in language arts and mathematics classrooms, but included classrooms in other subject areas as well.

Table 17

Number of Observations by Subject Area at Elementary and Middle Schools

Subject Area	Elementary	Middle	Total Number of Classrooms
Language Arts	29	21	50
Mathematics	22	19	41
Science	3	5	8
Social Studies	2	4	6
ESL	1	0	1
Other	1	2	3

Similar to the previous year, the summary of implementation ratings showed that about half of the observed teachers (53%) were at or just above the median implementation level of 3-3.99. Another similarity to the previous year was that the second most frequent rating was a little below "average," at 2-2.99. Overall, the great majority of the observed teachers were in fact either just above or right below the median implementation level of 3, with no one at the high implementation levels of 4 - 5, and a small percentage (6 teachers or 5.9%) at the low implementation level 1 to 1.99.

Table 18

Implementation Ratings for Elementary and Middle Schools

Rating Groups	Elementary		Middle		Total Ratings	
4-5.00	0	0.0%	0	0.0%	0	0.0%
3-3.99	31	53.4%	23	52.3%	54	52.9%
2-2.99	23	39.7%	19	43.2%	42	41.3%
1-1.99	4	6.9%	2	4.5%	6	5.9%
Level Total	**58**	**100.0%**	**44**	**100.0%**	**102**	**100.0%**

Among the eight SIOP® components, Building Background, Strategies, and Lesson Delivery were at a higher implementation level, while Interaction and Review and Assessment were at the lower range of the implementation continuum. This is consistent with the coach focus group data. Table 19 presents the SIOP® components in the order in which they appear in the SIOP® observation instrument.

Table-19
Ratings of Implementation of SIOP® Components

SIOP® Components	Mean Ratings
Lesson Preparation	2.9
Building Background	3.1
Comprehensible Input	2.9
Strategies	3.0
Interaction	2.7
Practice and Application	2.9
Lesson delivery	3.2
Review and Assessment	2.7

To summarize, both the training and the coaching elements of SIOP® were implemented according to the goals set in the SIOP® logic model. Application of training and coaching were monitored through observations which showed moderate levels of implementation.

Adolescent Literacy Training and Coaching

Adolescent literacy initiative included both the training and the coaching components.

Training

"Taking Action: Reading Intervention for Adolescent Learners" and "The Foundations of Reading" were two workshops provided to teachers in 2011-12 through the Adolescent Literacy initiative funded by the District Improvement funds. According to the trainers, the "Taking Action: Reading Intervention for Adolescent Learners" training was designed for teachers of grades 6-12. It provided teachers with the latest research on adolescent readers and offered strategies for meeting the needs of their adolescent learners struggling with reading. It helped teachers understand the terms and the concepts related to reading instruction and offered support in administering informal reading assessments to help teachers in implementing reading strategies targeted to student needs.

"The Foundations of Reading" was a training designed for presenting research-based best practices in literacy instruction to teachers throughout North Carolina. It was originally designed for presentations to special education teachers, but as more and more struggling readers were receiving at least part of their literacy instruction in general education, the training has been opened up to all school personnel. The training has been continually updated through research review in order to present teachers with the most current information and the ways to apply it to have the greatest impact on student achievement in reading. Both adolescent literacy training workshops were made available to teachers at all WCPSS secondary schools. Teacher participation was voluntary. The expectation was to train 100 teachers through both workshops. The goal was exceeded, with 104 teachers trained. Training took place during the summer and the fall of 2011. District Improvement funds were used either for stipends for teachers who received training or for substitutes.

Table 20

Training Focus for Literacy Efforts in 2011-12

Topic	Target Audience
Taking Action: Reading Interventions for Adolescent Learners (RIAL) - five sessions	Grades 6-12: English/Language Arts, Special Education, English as a Second Language, Intervention
Foundations of Reading - two sessions	K-5 general, K-12 intervention, Special Education, English as a Second Language

Table 21

Training Participation in Literacy in 2010-11 and 2011-12

Topic	2010-11	2011-2012
Taking Action: Reading Interventions for Adolescent Learners (RIAL)	104	66
Foundations of Reading	30	38
Total Number of Teachers	**134**	**104**

After the training, feedback on training sessions was provided in eSchools by the majority of participants of the Taking Action: Reading Interventions for Adolescent Learners (RIAL) workshop and the participants of the Foundations of Reading workshop.

Table 22
Training Participation and Follow-up Feedback in 2011-12

Session	Number Attending	Number of Follow-up Responses
Reading Interventions for Adolescent Learners	66	42
Foundations of Reading	38	21
Total	**104**	**63**

The responses were quite positive. The initial training feedback indicated that the great majority of teachers (88% to 97%) were satisfied with the training and felt that the training was beneficial to them:

- 97% of teachers "agreed" or "strongly agreed" that strong rationale was provided that explained the relevance of the training to their work.
- 97% of teachers felt that training content built on their prior level of knowledge/skills.
- 90% agreed that the training helped them develop strategies to make instruction more relevant for diverse learners.
- 88% responded that what they learned would significantly enhance the effectiveness of their work in their classroom.

In the follow-up training evaluation for both trainings, 88% and 95% of teachers, a subset of all trained, indicated that they implemented in their classroom the activities presented at the training or used the skills they learned; 83% and 95% noted that the skills they gained in the training made a positive difference in the effectiveness of their work.

Table 23
Classroom Application of Knowledge and Skills Learned in the Training

Taking Action: Reading Interventions for Adolescent Learners (RIAL) workshop (n=42)	Strongly Disagree	Disagree	Agree	Strongly Agree
I have applied the knowledge and implemented skills that I learned in the training in my classroom/in my job.	0.0%	11.9%	26.2%	61.9%
Knowledge and skills I gained from this training made a positive difference in the effectiveness of my work.	4.8%	11.9%	21.4%	61.9%
Foundations of Reading (n= 21)	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
I have applied the knowledge and implemented skills that I learned in the training in my classroom/in my job.	0.0%	4.8%	19.0%	76.2%
Knowledge and skills gained from this training made a positive difference in the effectiveness of my work.	0.0%	4.8%	19.0%	76.2%

Source: eSchools.

Coaching

Coaching was another component of the adolescent literacy initiative designed to increase teacher support to at-risk students who were one or more grade levels behind in reading. Coaching support to teachers at targeted schools was to ensure higher growth and improved student outcomes in reading for grades 6 through 8 and/or English I. Five adolescent literacy coaches were funded through the District Improvement funds and supported two schools each, except the four East Wake High Schools which were supported by one coach.

Table 24

Schools with 2011-12 Adolescent Literacy Coach Placements

Middle Schools
Daniels
Martin
East Garner *
Zebulon *
Carnage
Mt Vernon
High Schools
East Wake (4 campuses)*
Knightdale *
Southeast Raleigh *

Note: Schools marked with an * also had a literacy coach in 2010-11.

Coaches were expected to provide literacy coaching and training at the schools targeted based on student needs. They collaborated with intervention coordinators and other staff at their schools to identify students needing reading interventions and helped teachers of those students to develop structures for interventions. Coaches worked with English I PLTs, full staff, or with other PLTs and individual teachers.

To receive teacher feedback on coaching support, a survey of teachers at all schools with adolescent literacy coaches was conducted in March 2012. Although the survey was received from all schools with literacy coaches, only the schools with District Improvement-funded coaching positions were of interest for the purposes of this report. A total of 97 teacher responses were received from the schools that received District Improvement-funded coaching support.

Table 25
Teacher Survey Responses by School

DI Funded Schools	# of Responses
East Wake High	25
Southeast Raleigh High	23
Martin Middle	14
Daniels Middle	13
E. Garner Middle	11
Zebulon Middle	4
Carnage Middle	3
Knightdale High	2
Mt. Vernon Middle	2
Total	**97**

Survey respondents who received a survey request represented various subject areas, which indicated that literacy coaches worked with all content areas, maintaining primary focus on English Language Arts. In addition to English Language Arts teachers, survey responses came from a school counselor, a media specialist, a teacher in the in-school suspension, alternative learning center, AIG resource teacher, and sport medicine area.

Table 26
Teacher Survey Responses by Grade

Subject Areas	Number
English Language Arts	27
Science	18
Mathematics	10
Social Studies	10
Special Education	9
Career &Technical Ed	8
English as a Second Language	3
Foreign Language	3
Music, Art, Theater Arts	3
Reading support, reading intervention	2
Other	7
Total	100*

* Three teachers indicated that they taught two subjects.

According to the survey results, about 75% of respondents regularly met with the literacy coach (monthly, weekly, or bi-weekly). While about half of teachers worked with the coach monthly (44 teachers or 46%), about one third of the respondents (29 teachers or 31%) met with the coach even more frequently (weekly or bi-weekly).

Table 27
Frequency of Individual Support Offered to Teachers

Frequency	Number of Responses
Bi-Weekly	13
Weekly	16
Monthly	44
3-5 times	18
1-2 times	4

The goal for the literacy coaches was to identify students at risk of reading failure in the schools and support their teachers to help meet the needs of those students. Working with teachers individually, coaches most frequently provided resources to support literacy in the classroom along with completing the elements of the one-on-one coaching cycle. Most frequent types of support, except providing resources, were assisting teachers with planning their lessons or providing feedback on observed instruction. More than 70 teachers received that type of support. Generally, teachers were observed once or twice during the year and were provided feedback on instruction following an observation. Somewhat less frequently, the coaches modeled lessons (50 teachers). A smaller number of teachers also co-taught with the coach (25 responses).

Table 28
Frequency of Individual Support Offered to Teachers by Type of Support

	Weekly	Monthly	3-5 Times	1-2 Times	Never
Assisted with planning (n=74)	6	**28**	16	**24**	23
Modeled instruction (n=50)	1	**19**	12	**18**	47
Co-taught with teachers (n=25)	3	3	3	**16**	72
Observed instruction (n=52)	4	7	11	**30**	45
Provided feedback on instruction (n=72)	6	15	**22**	**29**	25
Provided literacy resources (n=86)	23	**40**	20	3	11

*Note: Bold numbers indicate highest frequency of support. E.g., most coaches provided literacy resources monthly.

Teachers were further asked about how helpful their secondary literacy coach was in supporting them with planning, modeling instruction, co-teaching, or observing classes and providing feedback. The majority of teachers rated individual instructional support within the coaching cycle as either "very" or "mostly helpful". Modeling instruction (90%), providing feedback (84%), assisting with planning (80%), observing instruction (76%), and co-teaching (75%) were all rated highly.

Table 29
Helpfulness of Elements of the Coaching Cycle

	Very Helpful	Mostly Helpful	Somewhat Helpful	Not Helpful
Assisting with planning (n= 73)	56.2%	23.3%	17.8%	2.7%
Modeling instruction (n=50)	52.0%	38.0%	6.0%	4.0%
Co-teaching (n=28)	60.7%	14.3%	10.7%	14.3%
Observing instruction (n=49)	55.1%	20.4%	12.2%	12.2%
Providing feedback (n=76)	51.3%	32.9%	10.5%	5.3%

Adolescent literacy coaching support was not limited to coaching cycles. The coaches also provided teachers with resources for instruction, offered literacy professional development to staff, and presented on literacy topics at PLTs and other team meetings. Other coaching support included serving as a valuable resource for information regarding all aspects of middle school or high school literacy: assessing students using the CORE materials; analyzing data for student placement/plan of instruction; and reviewing and evaluating the appropriateness of commercially made materials. One teacher also specifically mentioned support and encouragement with difficult classes or students.

Table 30
Support Provided to Groups of Teachers

Group Support	Number of Teachers Receiving Support
Providing appropriate resources for instruction	79
PLT meetings or other team meetings	72
Providing literacy professional development	73
Analyzing data to plan and deliver instruction	35

All literacy coaching support beyond the coaching cycle was rated by teachers as "very" to "mostly helpful" and included suggesting ways to create a literacy-rich classroom environment (90% of teachers), providing resources (84%), offering literacy professional development (87%), sharing instructional practices at team meetings (81%), and analyzing data (83%).

Table 31
Helpfulness of Coaching Support Beyond the Coaching Cycle

Type of Support	Very Helpful	Mostly Helpful	Somewhat Helpful	Not Helpful
Suggesting ways to create a literacy-rich classroom environment (n=96)	62.5%	27.1%	9.4%	1.0%
Providing appropriate resources for instruction (n=91)	62.6%	20.9%	16.5%	0.0%
Providing literacy professional development (n=91)	60.4%	26.4%	13.2%	0.0%
Sharing instructional practices at PLT or other team meetings (n=84)	63.1%	17.9%	16.7%	2.4%
Analyzing data to plan and deliver instruction (n=60)	48.3%	35.0%	15.0%	1.7%

After beginning work with the coach, teachers noted improvement in their instructional skills or instruction. Three-fourths of teachers cited improved awareness of literacy practices (77%), over half improved use of literacy instructional practices (59%) and knowledge about literacy (56%).

Just less than half also improved their ability to address struggling students‘ needs (49%) and their ability to differentiate instruction (41%), see Table 32.

Table 32
Perceived Improvement in Skills or Instruction

Improvement in Skills or Instruction	Percent of Respondents
Awareness of literacy instructional practices (n=75)	77.3%
Ability to use literacy instructional practices (n=57)	58.8%
Knowledge about literacy (n=54)	55.7%
Addressing struggling student needs (n=47)	48.5%
Ability to differentiate instruction (n=40)	41.2%

After beginning their work with the coach, almost two-thirds of teachers noted increased student engagement (63%). Less than half of teachers noted some improvement in students' reading and comprehension skills (47%), classroom performance (43%), and motivation (40%).

Table 33
Perceived Student Growth

Improvement in Skills or Instruction	Percent of Respondents
Engagement (n=61)	62.9%
Reading and comprehension skills (n=46)	47.4%
Classroom performance (n=42)	43.3%
Motivation (n=39)	40.2%

One third of teachers felt that 75%-100% of students in their classes may have benefited from work with the coach. Almost a quarter of teachers felt that 50% -74% of student may have benefited. This shows that half of teachers expected positive effects of coaching support for half of their students or more.

Table 34
Percent of Students Who Have Benefited from the Coaching Support

Number and Percent of Teachers		Percent of Students
32	33.0%	75% - 100%
22	22.7%	50% - 74%
16	16.5%	25% - 49%
18	18.6%	24% or less

Secondary Mathematics Training and Coaching

Secondary mathematics support focused on strengthening mathematics instruction and student learning at the secondary level. Providing training to teachers in mathematics instruction and offering individual or group level coaching support were the two methods used for enhancing mathematics instruction, with the primary focus on subject leading to and including Algebra I. The goals for 2011-12 reflected implementation of training and coaching in the classroom by 75% of teachers and improved outcomes for their students.

Training

In 2011-12, unlike the previous years, secondary mathematics initiative offered mathematics teachers only two workshops, "Differentiation in the Secondary Mathematics Classroom" and "Algebra I Concepts", which may be explained by the priorities on training teachers in Common Core. The trainings offered to self-selected teachers in March 2012 were attended by 25 teachers: 17 attended the Algebra I Concepts training and eight received the Differentiation training. Over a period of three years, from 2009-10 to 2011-12, a total of 308 secondary mathematics teachers received various content-related trainings funded by the District Improvement funds. In 2011-12, no specific goal for training numbers was set.

Table 35
Number of Teachers Trained in Secondary Mathematics in 2009-10 - 2011-12

Session Name	Number of Teachers Attending		
	2009-10	2010-11	2011-12
Technology Training	Not offered	70	Not offered
Math Matters	Cancelled	Cancelled	Not offered
Algebra I Concepts	71	56	17
Differentiation Training	Not offered	58	8
Foundational Algebraic Concepts	28	Not offered	Not offered
Total	**99**	**184**	**25**

All 17 teachers who attended Algebra I Concepts training provided 100% positive feedback on their training in e-schools. Teachers appreciated the handouts of activities designed to increase student engagement. All participants believed the training was relevant to their job and that it built on their prior knowledge. All teachers felt that the strategies they learned were relevant for teaching diverse learners.

The eight Differentiation training participants also provided feedback on their training. They indicated that if they implemented what they learned from the training it would significantly enhance the effectiveness of their work in the classroom (100%). All participants applied the knowledge and implemented the skills that they learned in the training in their classroom. For

all, the knowledge and skills they gained from this training made a positive difference in the effectiveness of their work.

Although teachers seem to be satisfied with the training, the number of teachers trained was one-fourth of that previously budgeted. This could be partially explained by the change of focus or the sense of priority which in 2011-12 shifted to the Common Core Curriculum training.

Coaching

Seven secondary mathematics coaches were hired in 2011-12 to provide mathematics teachers in selected middle and high schools with knowledge of appropriate processes and effective practices to support students. The seven coaches were assigned to five middle schools and five high schools (only two of the five coaching positions were filled in high schools that were initially selected for coaching support). One coach worked with four East Wake High Schools. The schools were selected for coaching support based on the EOC/EOG results and EVAAS® results. The seven secondary math coaches closely worked with teachers in 10 schools and most indicated providing some support to all mathematics teachers in the school.

Table 36
Schools with Secondary Mathematics Coaches

Middle Schools	High Schools
Moore Square Middle	East Wake High (4 schools)
East Millbrook Middle	Enloe High
Wendell Middle	
Centennial Middle	
Carroll Middle	

Coaching was provided on various topics related to mathematics and included support in use of small groups, use of math talk, identifying strategies to increase student engagement, classroom management and other topics. According to coaching logs, coaches worked with eight to 19 teachers each in middle school and five to nine teachers in high school. Coaches also worked with individual grade levels and provided professional development to staff. Feedback on coaching support for secondary mathematics was collected both from coaches and from the teachers who received such support.

Feedback from coaches. At the end of the 2011-12 year coaches were asked to provide an estimate of the number of teachers they worked with and the type of support they offered. The East Millbrook Middle School mathematics coach worked with 14 teachers in grades 6-8; five of those were new or first year teachers. The coach helped with math activities for increased student engagement and for use in small groups, she also helped with lesson planning and with developing assessment items. The coach modeled instruction to some teachers, helped with classroom management to others. She helped with instructional pacing, reviewing data for instruction, and discussed raising student expectations. At the request of the principal, she also supported the mathematics teachers' implementation of the Formative Assessment with Technology Project coordinated by North Carolina Department of Public Instruction (NCDPI).

The Enloe High School mathematics coach worked with seven teachers individually and provided professional development to groups of teachers. Her one-on-one work involved supporting cooperative grouping, using mathematics activities for increased student engagement, higher-level questioning, increasing math talk, use of differentiation techniques, and behavior management when needed. Professional development was provided on many relevant issues including Common Core, algebraic concepts, developing high functioning PLTs, use of math talk, development of summative assessments, implementing the school's student enrichment (remediation) program, and the use of literacy strategies in the math classroom.

The East Wake High School mathematics coach supported five teachers in classroom management, instructional strategies, and using data to inform Algebra I instruction. Unfortunately, only two of the teachers who received coaching support are still teaching at East Wake.

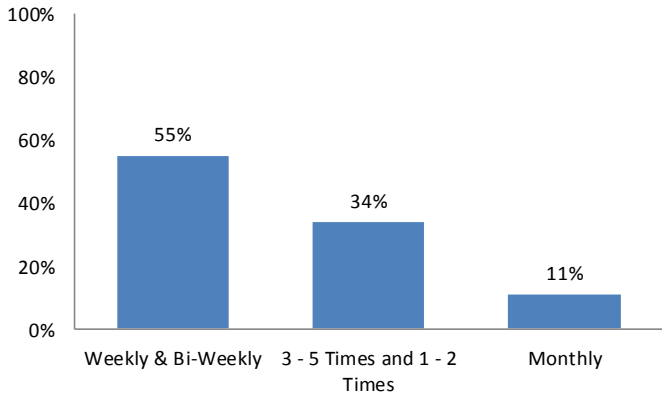
Moore Square Middle School coach worked with all mathematics teachers who were at different levels of need. According to the coaching log, this coach worked more closely with 15 mathematics teachers, including six grade 6 and 7 math teachers and two grade 8 teachers. She worked most closely with two teachers by offering co-teaching, observation feedback, and providing materials and resources.

Feedback from teachers. Mathematics coaches emailed a survey link to the teachers who received coaching support, and requested feedback on coaching. A total of 50 teachers responded with feedback on coaching support, with three teachers indicating they did not work with the math coach. Thus, 47 survey responses from seven schools were analyzed. The respondents taught various levels of mathematics, including grade 6 to 8 mathematics, introductory math, Pre-Algebra, Algebra I and II, Geometry, Calculus, Discrete Math, and NovaNET.

Over half of teachers (55% or 26 teachers) worked with the coach weekly or bi-weekly. Another 11% met monthly. Thus, 66% of survey respondents met with their mathematics coach at least monthly or more frequently. The remaining one-third of teachers met with the coach either 3-5 times or 1-2 times (34%) during the year.

Figure 1

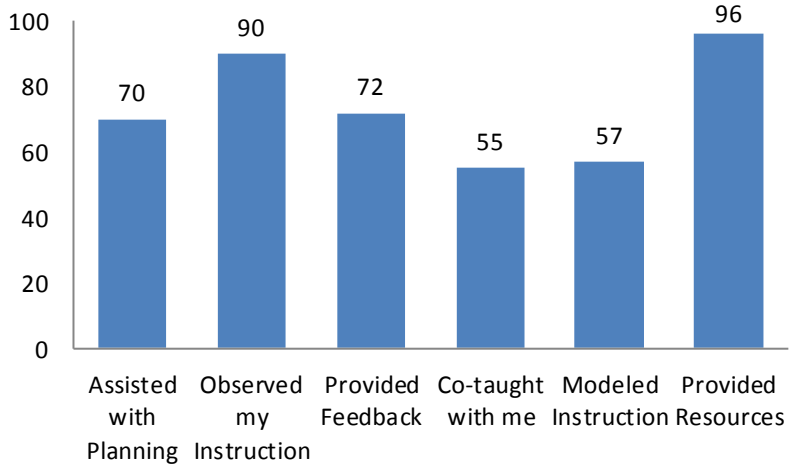
Frequency of Work with a Mathematics Coach



In individual work with teachers, coaches implemented elements of the coaching cycle and provided resources. Major components of the coaching cycle included co-planning, modeling in the classroom, and post-observation feedback. Almost all teachers noted that they received resources, and 70% received assistance with planning. About half of teachers stated that the coach co-taught with them or modeled instruction. Unlike secondary literacy coaches, secondary mathematics coaches less frequently provided feedback on the observed instruction (91% teachers instruction was observed but only 72% of teachers received feedback).

Figure 2

Percent of Teachers Who Received Various Support From a Mathematics Coach



Teachers rated co-teaching with a coach and receiving feedback on their instruction the highest (over half of teachers felt this type of support was very helpful). Close to half of teachers also rated modeling instructional practices, analyzing data and providing professional development as very helpful. At the same time, teachers rated coaches' assistance with planning and observation of instruction (if no feedback was provided) as less helpful.

Table 37

Rating the Helpfulness of the Secondary Mathematics Coach's Work

	Very Helpful	Mostly Helpful	Somewhat Helpful	Not Helpful
Providing feedback on my instructional practices (n=33)	55%	21%	21%	3%
Co-teaching with me (n=23)	52%	17%	26%	4%
Analyzing data to help me plan and deliver instruction (n=29)	48%	14%	31%	7%
Modeling instructional practices in my classroom (n=28)	46%	21%	25%	7%
Providing professional development (n=39)	46%	31%	21%	3%
Assisting me with planning (n=35)	37%	20%	34%	9%
Observing my classroom instruction (n=37)	38%	24%	24%	14%
Participating in and/or leading PLT meetings or other team meetings (n=45)	44%	27%	27%	2%

After working with the coach, 28% of teachers reported implementing differentiation strategies (13 teachers), 37% applied SIOP® strategies including using higher-order questioning techniques (17 teachers), and applying SIOP® literacy strategies in teaching mathematics (11%); additional 6% implemented formative assessments strategies, and 6% focused on common core curriculum.

Table 38

Implementation of Techniques from Coaching

	Percent of Teachers
Implemented differentiation strategies	28%
Applied SIOP® strategies including using higher-order questioning techniques	37%
Applied SIOP® literacy strategies in teaching mathematics	11%
Implemented formative assessments strategies	6%
Focused on common core curriculum	6%

Nearly half of teachers reported growth in student classroom engagement after working with the math coach, and one third saw growth in math skills and improved motivation. Growth in classroom performance was only reported by a quarter of teachers.

Table 39
Student Growth Noted by Teachers after Beginning to Work with the Mathematics Coach

Areas of Student Growth	Percent of Teachers
Engagement (n=23)	**46%**
Math Skills (n=17)	34%
Motivation (n=16)	32%
Classroom Performance (n=13)	26%

Teacher perceptions of the proportions of students who benefited from their work with the coach varied. It may have depended on whether the weaker students or the whole classroom benefited more. About one-third of teachers each reported that either less than 25% of students may have benefited from the coach's support or that 50% - 74% of students benefited (see Table 40 for more detail). Overall, 41% of teachers felt that at least half of the students benefited from the coaching support provided to the teacher, and 50% believed less than half of students benefited.

Table 40
Percentage of Students Who Benefited from the Teacher's Work with the Coach

Percent of Students	Number of Teacher responses	Percent of Teacher responses
24% or less	**14**	**32%**
25% - 49%	9	20%
50% - 74%	**13**	**30%**
75% - 100%	5	11%
None	3	7%

Elementary Mathematics Coaching Initiative

To provide instructional support in teaching mathematics, 32 elementary mathematics coaches were hired for 32 elementary schools. The elementary schools were selected based on the analysis of the schools' previous year's mathematics EOG proficiency rates. The schools with proficiency levels below 70% and the schools with proficiency below 75% and low EVAAS data were allocated a full coaching position each.

Table 41

EOG Data Used to Select Schools for Coaching Support

School Name	09-10 Mathematics EOG Proficiency	School Name	09-10 Mathematics EOG Proficiency
Barwell Road Elementary	53.0	Lake Myra Elementary	64.9
Creech Road Elementary	53.9	Hilburn Elementary	65.1
Wilburn Elementary	53.9	Wendell Elementary	66.3
Brentwood Elementary	56.1	Millbrook Elementary	67.0
Poe Elementary	60.5	Green Elementary	67.6
Wakelon Elementary	60.9	Zebulon Elementary	68.3
Lynn Road Elementary	61.2	Aversboro Elementary	68.8
Fred A. Smith Elementary	61.6	Lincoln Heights Elementary	69.0
Fox Road Elementary	63.0	Timber Drive Elementary	69.1
Hodge Road Elementary	64.8	Douglas Elementary	69.8

Table 42

EVAAS Data Used to Select the Schools with Below 75% Proficiency Rate

School Name	09-10 Mathematics EOG Proficiency
Stough Elementary	70.9
Conn Elementary	71.5
Forest Pines Elementary	73.1
Yates Mill Elementary	73.2
Fuquay-Varina Elementary	74.1
Herbert Akins Elementary	74.3
Hunter Elementary	74.5
North Ridge Elementary	74.5

Bugg, Jeffreys Grove, and Knightdale Elementary Schools, and Walnut Creek Elementary School were later added to this list. Before the start of the school year, elementary mathematics coaches were trained in the use of the goal setting, coaching logs, elements of the coaching cycle, and the use of the observation instrument for monitoring classroom instruction. The coaches were also trained in instructional coaching (a 2.5 day training from North Carolina State University) and in delivering professional development in:

- Rigor in the Elementary Classroom;
- Math Talk;
- Common Core State Standards for Mathematics.

Implementation feedback on coaching support was collected through the teacher survey at the schools with mathematics coaches. Teachers were emailed a link to the survey with a request for feedback. A total of 592 responses were received from 31 schools.

Survey Results

Approximately 91% of respondents stated that their grade level had a coaching plan with the math coach. The plan focused on the priorities set for the 2011-12 school year: increased instructional rigor, implementation of Math Talk, and use of student leaders. When asked about the type of support teachers received from the mathematics coach, they responded that they most frequently received support in the following:

- implementation of Math Talk (64% of teachers),
- rigor (43%), and
- student leaders (42%).

A smaller percentage of teachers received support in implementation of daily routine/quick practice (14%), manipulatives (7%), and other practices. Other research-based practices that grade levels were working on included daily five, math rotation, math stations (8%), use of technology (6%), pacing and wait time (5%), differentiation (4%), flexible grouping (3%), higher-order thinking questions (3%),building concepts (2%), problem solving strategies (2%), intervention (2%), etc.

Table 43

Research-Based Practices that Were a Focus for Grade Levels

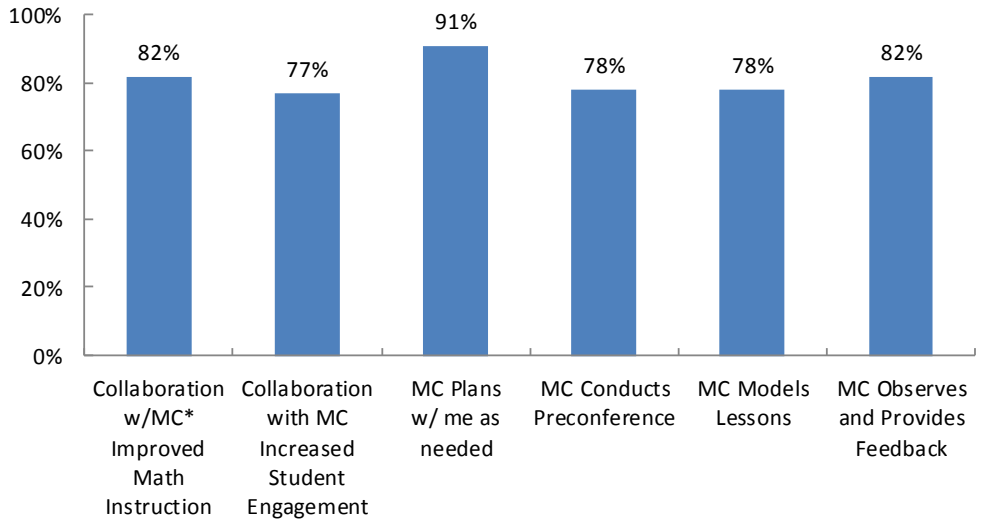
Research-Based Practices	Number Of Teachers	Percent Of Teachers
Math Talk*	379	64%
Rigor	253	43%
Student Leaders	248	42%
Implementing Daily Routine/Quick Practice	84	14%
Manipulatives	43	7%
Other, please specify	53	9%

Note: Teachers could checkmark more than one response.

The survey results also reflected the individual support teachers received through the coaching cycle: almost all teachers planned with the coach (91%) and were provided feedback on their instruction (82%). Three-fourths of teachers (78%) met with the coach for pre-conferences prior to an observation or a coach model research-based practices in their classroom. Teachers were also asked about any changes they may have noticed in their instruction as a result of the coaching support and any improvements in student behavior.

Figure 3

Teacher Responses on the Effects of Coaching and the Coaching Cycles



The majority of teachers reported improvement in their instructional practices (82%) and an increase of student engagement (77%). Feedback on the coaching efforts was also monitored by the coordinator through coaching logs which were not part of this evaluation.

Observation Results

In 2011-12 monitoring of instructional practices was conducted by the elementary mathematics team through classroom walkthroughs. The observations were structured so that each mathematics classroom in each school that had a coach was observed at least three times during the year, with Renaissance schools being observed 4 times. After each visit, the principal received a summary of observations with indications of the areas of strength and areas of improvement.

Analysis of implementation of the goals set for 2011-12 showed that implementation goals set for the elementary mathematics initiative were met.

- The classroom observations were conducted at all 32 elementary schools with District Improvement funded mathematics coaches.
- Each school was visited three times during the year, with all mathematics classrooms observed during each observation.
- Training for mathematics coaches was provided as planned through North Carolina State University.

Three other implementation goals were exceeded as compared to the targets set for 2011-12.

- Math Talk was observed in 57% rather than 50% of classrooms (see Appendix C).

- 99% of teachers rather than the targeted 95% were teaching mathematics on the day of observation.
- 32% of classrooms vs. expected 25% showed rigor in instruction.

Use of Math Expressions was initially targeted at 70%; at least 67% of classrooms demonstrated the use of the resource at the time of the observations. While missing the full attainment of the objective, this still showed a 3.8% increase from the previous year. Overall, elementary mathematics initiative was designed, planned, and implemented with high fidelity.

Differentiation Training Initiative

Professional development in differentiation was one of the ways to address the learning needs of the low achieving subgroups of students who did not meet AYP by helping teachers to provide positive, meaningful learning experiences for a diverse student population. Professional development of teachers in 39 schools was initially designed to focus on effective use of differentiation strategies to better meet student needs. Several levels of training were to be offered over the next 3 to 4 years, with 39 schools participating in the first level of training in 2011-12.

The plan for professional development in differentiation was created in collaboration with principals, staff development contacts, IRTs, and Differentiation Champions (classroom teachers who were enthusiastic and supportive of this training). In 2011-12, the training was designed to offer six sessions for Level 1 training **(**an overview + 5 content modules) during the fall of 2011. According to the initial design, schools could choose to approach the staff training on a school-wide basis or through targeted PLTs. In the spring of 2012, a repeat of the entire series was to be offered for additional self-selected schools. School-based facilitators (Differentiation Champions) were to have a responsibility for oversight implementation of their school's Differentiation Action Plan. Additional online modules were to be developed by the trainer in the following years for deeper knowledge of differentiation strategies.

Training

The differentiation trainer developed five online Differentiation Modules that led training participants through the entire process of implementation of the differentiated instruction, from planning to reflection(see Appendix D for the modules). The training was offered to one to five "Differentiation Champions" (highly motivated, enthusiastic leaders) at the self-selected schools. The Champions, after acquiring the differentiation skills from the training, were to implement the train-the-trainer model through the use of the modules and further support differentiation efforts in their schools.

Module 1. *Mindset, Knowing the Learner and Relationships.*
Module 2. *Quality Curriculum and Assessment*.
Module 3. *The Nuts and Bolts of Differentiation*.
Module 4. *Bringing It All Together*.
Module 5. *Managing the Differentiated Classroom* (see Appendix D for details).

From April to September 2011, almost twice as many self-selected schools than the expected 39, expressed interest in receiving differentiated instruction training. However, with only one trainer leading the entire initiative, only two Champions per school could be trained in the train-the-trainer model. As a result, by the end of 2011-12, 77 Champions registered for training, and after two dropped out, 75 received the training. Champions received face-to face training on the differentiated modules and were to use the online training modules to apply the train-the-trainer model to support other staff at the school. According to the attendance records, one to five Champions per school in 35 self-selected elementary, middle, and high schools were trained. A total of 68 Champions were trained in 4 to 5 modules; with 51 completing all five modules. Seven mastered fewer than four modules.

Survey results. Pre- and post-training survey responses reflect the use of differentiation approaches before and after receiving the differentiation training. The self-reported results reflect consistent increases in implementation of differentiation strategies after the training.

Table 44

Select Survey Responses to Pre- and Post- Differentiation Training Survey

Topics	Survey Taken in Summer 2011	Survey Taken at the End of 2011-12
I pre-assess students to determine their readiness for each new unit or series of lessons.	78.0%	84.8%
I use ongoing formative assessments to adjust my instructional plan to respond to differing learning needs.	96.0%	100%
I gather information about my students' interests in curriculum topics.	83.0%	91.0%
I know my students' learning preferences (multiple intelligences).	70.0%	81.8%
I vary my instructional strategies based on pre-assessments.	81.0%	93.9%
Not everyone is doing the same learning activity on the same day every day.	78.0%	81.8%
I adjust learning tasks to meet individual students' needs to ensure a challenging learning experience.	91.0%	97.0%
I match my resources to students' reading readiness levels.	80.0%	84.8%
I match supplemental resources to my students' level of knowledge about a curricular topic.	82.0%	97.0%
I use a variety of choice assignment formats with my students to motivate them.	88.0%	87.9%
I use tiered assignments to match students with "just right, right now" tasks based on their learning needs.	74.0%	84.4%
I plan and use flexible grouping in my classroom to organize students by their instructional needs.	88.0%	97.0%

Lesson plans and reflections. The scheduled walkthroughs were not conducted after the WCPSS Curriculum and Instruction Department was reorganized and the initiative coordinator/trainer position was lost in early spring 2012. However, lesson plans and reflections were still collected by the trainer from the trained Champions to show the integration of newly learned skills into teaching. By spring of 2011-12, to present evidence of implementation of the new knowledge, Champions from 22 of 35 schools (63%) submitted their lesson plans and reflections. Some examples of reflections are included below:

> **"**I gave out the assigned activities based on the needs of the students. Those who mastered the basic pre assessment were given activities to hit the higher level thinking skills and required to think outside the box. Those who did not master the pre assessment were given an activity to help teach them the desired objective."
>
> **"**My lesson on equivalent fractions was differentiated by product. I decided to give students their choice as to which product they were the most interested in to complete. I chose differentiating by interest and product because these are areas I am not the most comfortable with differentiating. I always fall back on differentiating the content by student readiness and I wanted to challenge myself with this lesson."
>
> "The three different products gave students a wide choice of methods for communicating their learning. The linguistic learner had the option of developing a commercial to show their understanding of equivalent fractions. The kinesthetic learner had the opportunity to create the equivalent fraction cube in which they used a concrete method for showcasing their learning. The creative learner was able to create a unique game of concentration in order for students to practice matching equivalent fractions."

According to the trainer, one of the important goals of the differentiation training was to achieve greater use of the pre-assessment within a unit of study or topic. This allowed the teachers to plan instruction for flexible groups of students based on individual student needs. Knowledge of each student's skills and knowledge related to the objective supported scaffolding the instruction in order for all of the students to achieve mastery of the topic. The use of pre-assessment was mixed in the trained group. Reflection statements ranged from simply grouping students by proximity to using differentiated activities based on mastery of skills to include use of higher-order thinking skills.

Special Education Training Initiative

Training

The long-term goal of the special education initiative was to increase the number of courses passed and skills mastered by students with disabilities placed in general education classes. The implementation of the ultimate goal was not measured in this report, as this was a new District Improvement initiative with one year of implementation. The goal was to be ultimately achieved through the improved effectiveness of instruction provided to students with disabilities placed in general education classes. The instruction was frequently provided by a team consisting of a general education teacher and a special education teacher. From September to March 2011-12, pairs of special education and general education teachers were provided face-to-face training on effective co-teaching through collaborative teaming. The goal for 2011-12 was to train 75 teachers at six schools. End of the year counts show that this goal was far exceeded, with a total of 119 elementary and middle school teachers from 31 elementary and middle schools receiving the training in collaborative teaching. Five schools were initially targeted for training based on percentage of SWD students, their proficiency scores, and teacher turnover: Durant Road Middle, Dillard Drive Middle, Daniels Middle, Wakefield High, Wake Forest Rolesville High. Additionally, the North Forest Pines Elementary and Fox Road Elementary School principals asked to add their schools for support. The other 24 schools were selected for training based on the requests of the principals who had concerns about achievement of their students with disabilities. Table 45 shows that Curriculum Assistance for the Special Educator sessions were the most popular, with 20 schools participating in those sessions.

Table 45

Special Education Initiative Training Counts

Course Name	Number of Participants	Number of Schools
Collaborative Teaming	24	1
Effective Co-Teaching	17	2
Curriculum Assistance for the Special Educator	31	20
Effective Co-Teaching	47	8
Total Trained	**119**	**31**

After the training, follow-up observations using an observation checklist were conducted for 50% of the trained collaborative teams to evaluate implementation of the training in the classrooms. Each co-teaching pair was observed for 45 minutes. Thirty minute reflective sessions and feedback were offered after the observations.

Additionally, an end-of-year survey was administered to the trained teachers to collect teachers' perceptions on the ways the collaborative teaching model benefited their SWD students, to collect self-reports on implementation, and to measure support for the initiative by the school administration.

Survey. A total of 61 survey responses from the co-teaching teams trained in 2011-12 were collected through a survey link; 37 respondents were general education teachers and 24 were special education teachers. The majority of the respondents (82%) were co-teaching a co-taught class. The teachers taught a variety of subjects: 30 taught reading language arts, 31 mathematics, one to two taught social studies, science, writing, or English I and III, and two did not co-teach in 2011-12.

The overwhelming majority of teachers (92%) believed the collaborative teaching model was benefiting students with special needs. The majority (88%) also believed students learned better in a classroom with collaborative teaming. Although 59% reported sharing the lesson planning responsibilities, only 32% had a common planning time. Describing sharing the responsibilities in their teaching practices, the following percentages of teachers reported collaboration:

- 84% shared ideas, information, and materials
- 80% felt supported by their school administration
- 80% established and implemented classroom procedures and routines
- 70% shared responsibility for differentiating instruction
- 70% noted that both members of their team used a variety of co-teaching approaches (alternative, parallel, team teaching and one teach, one assist)
- 67% stated they planned to co-teach the following year
- 61% shared responsibility for how to assess students
- 59% stated that both members of the team decided who teaches each part of the lesson
- 47% have a regularly scheduled time to reflect and discuss their lessons
- 30% were mentors to those who wanted to co-teach, and
- 30% were mentors for others who wanted to co-teach.

The survey responses indicated that the majority of the trained teacher teams shared ideas, information, and materials, used a variety of co-teaching approaches, and shared the responsibility for differentiating instruction. Half of the teams reported making joint decisions on who taught what part of the lesson. Thus, the decision-making may have been frequently left to the general education teacher. The teaching teams frequently did not have a regularly scheduled time for planning their lessons or for reflecting on instruction. Finally, according to the survey results, special education teachers may still need to take more responsibility for assessing special education students. Full survey results are available both from the evaluator and the initiative coordinator.

Highly Qualified Teacher Assistants Support

This District Improvement initiative was aimed at supporting teacher assistants in WCPSS Title I schools in becoming highly qualified and thus more efficiently supporting classroom instruction. The underlying assumption behind this initiative was that elementary students in the AYP subgroups who needed additional help would benefit from working with the highly qualified professional.

By the end of 2011-12, all teacher assistants in WCPSS were expected to have credentials to demonstrate their ability to provide support to students in reading, writing, and mathematics. Those who did not have credentials and were not highly qualified as stated in NCLB regulations were offered financial support for registration at Wake Technical Community College for the Career Readiness Certificate (CRC) program to prepare them to successfully pass the required WorkKeys assessments in reading for information, business writing, and applied mathematics. Overall, 253 teacher assistants out of a total 265 WCPSS teacher assistants (or almost 96%) became highly qualified, retired or resigned by the end of 2011-12. Twelve teacher assistants on continuing assignments were reassigned to non-Title I schools.

Wake Technical Community College was able to give a fee waiver ($175 registration fee per person) to most of the teacher assistants who registered for the CRC program. In the end, WCPSS paid the fee for eight teacher assistants who did not qualify for the fee waiver based on their income. The Title I department had brochures printed to give to teacher assistants at the 12 regional meetings held to share the information about the requirement and the process for becoming highly qualified. If coverage could not be provided at the school level for teacher assistants who worked as a one-on-one support in a separate special education setting, or in a pre-K classroom, funds were used to pay for a substitute when teacher assistants had to be away from school during the day for registration or taking the WorkKeys Assessments. Over $67, 000 were initially budgeted for this initiative, with most of the amount ($65,978.05) unspent. The actual expenses were only $1,701.95.

Table 46
HQTA Budget

	Budget Spent Per Teacher Assistant	**Teacher Assistants Funded**	**Expenditures**	**Unspent Funds**
*Tuition Fee Paid	$175.00	8	**$1,400.00**	**$65,536.55**
Printing			**143.45**	
Substitutes	$600.00		**158.50**	441.50
Total			**$1,701.95**	**$65,978.05**

The success of the initiative could be measured in the percentage of teacher assistants who became highly qualified (almost 96%) and who now feel more confident in their skills and the ability to work with students.

Student Outcomes

The newest initiatives, such as differentiation or special education training, were implemented for one year only. Because no immediate effect on student outcomes was expected for those, the outcomes for these initiatives were not analyzed. Other initiatives, including SIOP®, adolescent literacy, and secondary mathematics, were implemented for more than one year. To examine the effectiveness of SIOP®, adolescent literacy, and secondary mathematics initiatives, analyses of student outcomes at targeted schools were conducted.

- SIOP® outcomes, including student proficiency rates and academic change that measures growth in EOG subject areas were examined first. The evaluator took two approaches to the analysis of student achievement: one was comparing SIOP® targeted schools to similar schools, and the other was looking at student outcomes at SIOP® targeted schools longitudinally, i.e., examining the outcomes before SIOP® support was provided to the schools and comparing them to the most recent results after three years of the coaching support.
- For adolescent literacy initiative, only a longitudinal approach was taken, because adolescent literacy coaching support funded through other sources was available to most high schools. This made it difficult to identify schools similar to the ones with District Improvement funded coaches that did not have literacy coaching.
- To match the approach to the analysis of the secondary literacy initiative outcomes, the outcomes for the secondary mathematics initiative were also examined longitudinally, before and after the coaching support was provided to the school.

The schools that received support from District Improvement-funded initiatives were as follows:

- Five elementary schools with the implementation of SIOP® for at least three years — Fox Road, Timber Drive, Durant Road, Green, and Hodge Road—and three middle schools—East Wake, West Millbrook, and Zebulon—received three years of coaching support in implementation of SIOP®.

- The adolescent literacy initiative offered literacy coaching support to English/Language Arts teachers at 12 schools which were selected based on their achievement needs: four East Wake High Schools, Southeast Raleigh High, Knightdale High, Martin Middle, Daniels Middle, East Garner Middle, Zebulon Middle, Carnage Middle, and Mt. Vernon Middle. A number of other middle and high schools received coaching support also, but coaching positions at those schools were funded through other sources and thus were not included in this analysis.

- The secondary mathematics initiative provided coaching support to grade 6-8 mathematics teachers and Algebra I teachers at 10 schools (five middle and five high schools): Moore Square Middle, East Millbrook Middle, Wendell Middle, Centennial Middle, Carroll Middle, four East Wake High Schools, and Enloe High School.

SIOP®

Since SIOP® schools were selected based on higher percentages of students in NCLB subgroups who performed at lower levels on EOGs, SIOP® schools were expected to have higher percentages of limited English proficient (LEP) students, economically disadvantaged (ED) students, and students with disabilities (SWD), compared to the district in general. Table 47 presents the student demographic characteristics both at SIOP® targeted schools and the district's elementary or middle schools.

The side-by-side comparisons show that SIOP® schools indeed had higher percentages of ED and LEP students (sometimes with percentages almost twice as high as the district) at both elementary and middle school level. Higher percentages of Black/African-American and Hispanic/Latino students at SIOP® targeted schools are also evident. This confirms that the selection of schools for SIOP® support was in fact purposeful and targeted. The two ethnic subgroups frequently benefit from increased academic support because of higher proportions of economically disadvantaged students in those subgroups.

Table 47
Characteristics of Students Attending SIOP® Schools, 2011-12 and the District Overall

	Students Attending SIOP® Elementary Schools		WCPSS Elementary Students		Students Attending SIOP® Middle Schools		WCPSS Middle Students	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
ED	2,201	60.1%	26,760	37.8%	1,444	56.5%	12,437	36.8%
SWD	396	10.8%	7,067	10.0%	426	16.7%	4,893	14.5%
LEP	741	20.2%	7,960	11.2%	216	8.5%	1,807	5.3%
Male	1,866	50.9%	36,147	51.0%	1,351	52.9%	17,202	50.9%
Female	1,797	49.1%	34,713	49.0%	1,204	47.1%	16,618	49.1%
American Indian	10	0.3%	211	0.3%	17	0.7%	110	0.3%
Asian	109	3.0%	4,752	6.7%	49	1.9%	2,101	6.2%
Black/African Am.	1,204	32.9%	16,159	22.8%	915	35.8%	9,011	26.6%
Hispanic/Latino	1,006	27.5%	12,057	17.0%	590	23.1%	4,708	13.9%
Multiracial	147	4.0%	3,049	4.3%	86	3.4%	1,393	4.1%
White	1,174	32.1%	34,528	48.7%	895	35.0%	16,442	48.6%
Total	**3,650**	**100%**	**70,756**	**100%**	**2,552**	**100%**	**33,765**	**100%**

Note: Students may appear in more than one category: race and gender, ED, SWD, and/or LEP.
Data Source: 2011-12 WCPSS End-of-Year Elementary and Middle School Student Rosters and WCPSS Demographics: School Statistics and Maps, 2011-12 at http://www.wcpss.net/demographics/reports/book11.pdf

Matched Group Analysis

To examine if there were any positive effects of coaching at the SIOP® targeted schools, student achievement at those schools was first compared to similar schools in a treatment and control group quasi-experimental design. Similar to the previous year, the eight schools in their third year of SIOP® support were the focus of this study. Cluster analysis was conducted to select five matched elementary schools and three middle schools for the eight SIOP® targeted schools. The analysis was run using the centroid method:[1] four variables were included in the model, 2010-11 performance composite, 2011-12 overall risk score, 2011-12 days in membership on the 20th day of school, and school level (Paeplow, 2011). The overall risk score was a school-level score calculated based on the percentages of students at each school with academic risk factors, such as ED status, LEP status, and SWD (Rhea, 2012). Similar to the previous year, the schools with school-wide SIOP® training or schools with SIOP® coaching support received for one or two years were excluded from the comparison. The resulting match was as follows:

Table 48
Three-Year SIOP® Schools and Matched Schools

SIOP® School	Matched School
Elementary Schools	
Hodge Road	Creech Road
Fox Road	Barwell Road
Durant Road	Dillard
Timber Drive	Douglas
Green	East Garner
Middle Schools	
East Wake	East Millbrook
West Millbrook	Fuquay-Varina
Zebulon	Carroll

Data Source: Cluster analysis utilizing the centroid method conducted using the 2011-12 school data file from WCPSS' Student Assignment Department.

Student Characteristics at District Improvement and Comparison Schools

Matches were created at the school level, rather than the student level. A limited number of schools were available for comparison purposes, because the schools with school-wide SIOP® training had to be excluded from the comparison pool. As a result, some disparities were found in the percentages of NCLB student subgroups between the matched and SIOP® schools. Matched schools had higher percentages of ED students at the elementary school level, Hispanic/Latino students at the middle school level, and Black/African-American students at both school levels. Thus, any results for SIOP® targeted schools where comparisons were presented need to be interpreted cautiously.

[1] "*Centroid method*. The cluster to be merged is the one with the smallest sum of distances between cluster means (centroids) for all variables. The centroid method also weights for differences in cluster size" (Garson, 2010).

Table 49
2010-11 Characteristics of Students Attending SIOP® Schools with 3 Years of Support

	SIOP® Elementary Schools with 3 Years of Support		Matched Elementary School Students		SIOP® Middle Schools with 3 Years of Support		Matched Middle School Students	
	Number	**%**	**Number**	**%**	**Number**	**%**	**Number**	**%**
ED	2,201	60.1%	1,790	67.0%	1,444	56.5%	1,609	57.3%
SWD	396	10.8%	298	11.2%	426	16.7%	487	17.3%
LEP	741	20.2%	518	19.4%	216	8.5%	216	7.7%
Male	1,866	50.9%	1,385	51.9%	1,351	52.9%	1,378	49.1%
Female	1,797	49.1%	1,285	48.1%	1,204	47.1%	1,430	50.9%
American Indian	10	0.3%	16	0.6%	17	0.7%	8	0.3%
Asian	109	3.0%	57	2.1%	49	1.9%	82	2.9%
Black/African American	1,204	32.9%	1,158	43.4%	915	35.8%	1,116	39.7%
Hispanic/Latino	1,006	27.5%	751	28.1%	590	23.1%	521	18.6%
Multiracial	147	4.0%	102	3.8%	86	3.4%	130	4.6%
White	1,174	32.1%	581	21.8%	895	35.0%	945	33.7%
Total	**3,650**	**100%**	**2,665**	**100%**	**2,552**	**100%**	**2,802**	**100%**

Note: Students may appear in more than one category: race and gender, ED, SWD, and/or LEP.
Data Source: 2011-12 WCPSS End-of-Year Elementary and Middle School Student Rosters and WCPSS Demographics: School Statistics and Maps, 2011-12 at http://www.wcpss.net/demographics/reports/book11.pdf

Growth Measures at SIOP® Schools and Matched Schools

One of the measures of student achievement is growth. Growth is operationalized by NCDPI as academic change. Academic change is the metric used in the state's ABCs growth model to determine whether a student has made "a year's worth of growth in a year's worth of time." A positive academic change indicates a gain in academic achievement, while a negative academic change indicates a loss.

First, academic change was compared for the SIOP® targeted schools and the matched schools. Surprisingly, at the elementary school level, comparisons of academic change scores for NCLB subgroups at SIOP® schools with a three-year support and at the matched schools showed lower average scores for NCLB students at the SIOP® schools, most of them significantly lower (Table 50, marked with an asterisk). Thus, on the average, when examining growth, NCLB subgroups of students at elementary SIOP® schools did not appear to have benefited from SIOP®.

Table 50
2011-12 Reading and Math EOG Average Growth NCLB subgroups at 3-Year SIOP® Elementary Schools and Matched Schools

	Reading			Mathematics		
	SIOP® Academic Change	Matched Academic Change	Difference	SIOP® Academic Change	Matched Academic Change	Difference
Black/African American	-0.0119	0.1024	-0.1143*	0.1413	0.2866	-0.1453*
Hispanic/Latino	-0.0292	0.1103	-0.1395*	0.1745	0.3831	-0.2086*
Multiracial	0.0141	0.0092	0.0049	-0.0274	-0.0119	-0.0154
LEP	0.0050	0.0609	-0.0558	0.2742	0.4329	0.1586
ED	0.0162	0.1115	0.0953*	0.1920	0.3084	0.1164*
SWD	-0.1388	0.1515	0.2903*	0.1208	0.0203	-0.1005

Note: Students may appear in more than one category: race, ED, SWD, and/or LEP. *An asterisk marks a statistically significant difference.

At the middle school level, comparisons of academic change scores for NCLB subgroups at SIOP® schools with a three-year support and the matched schools showed better results for the student subgroups in SIOP® schools in reading and for four subgroups in mathematics. However, not all results were significantly higher for SIOP®. Significantly higher results were found in both reading and mathematics for the Black/African-American subgroup, and in mathematics for the Hispanic/Latino, LEP, and ED subgroups. LEP students showed lower academic change scores in reading at SIOP® schools, but the difference was not significant.

Table 51
2011-12 Reading and Mathematics Average Academic Change Scores for NCLB subgroups at 3-Year SIOP® Middle School Schools and Matched Schools

	Reading			Mathematics		
	SIOP® Academic Change	Matched Academic Change	Difference	SIOP® Academic Change	Matched Academic Change	Difference
Black/African American	0.0397	-0.0396	0.0793*	0.1582	-0.0357	-0.1940*
Hispanic/Latino	0.0492	0.0146	-0.0346	0.1315	-0.0357	-0.1672*
Multiracial	0.0141	0.0092	-0.0049	-0.0274	-0.0119	0.0154
LEP	0.0235	0.0679	0.0444	0.1576	0.0165	-0.1411*
ED	0.0389	0.0021	-0.0368	0.1226	-0.0311	0.1537*
SWD	-0.0337	-0.0755	-0.0418	0.0683	-0.0181	-0.0864

Note: Students may appear in more than one category: race, ED, SWD, and/or LEP. *An asterisk marks a statistically significant difference.

The percentages of elementary school students in NCLB subgroups who met the 2011-12 ABCs growth targets in reading or mathematics also appeared to be consistently lower at the SIOP®

schools than at the matched schools (see Tables 52 and 53). (ABCs growth target is a score a student must achieve in order to demonstrate "a year's worth of growth in a year's worth of time" in the state's ABCs growth model.) In reading, the numbers were significantly lower for Black /African-American, Hispanic/Latino, ED, and SWD students. The only exception was the group of multiracial students who met the growth targets in mathematics at a higher rate than the matched group.

Table 52

Percentages of Elementary School Students Who Met Growth Targets in Reading by NCLB subgroup at SIOP® Schools and Matched Schools

	# and % of Students Who Met ABCs Growth Targets			
	SIOP® N=981		Matched N=701	
American Indian	1	na	3	na
Asian	14	51.85%	8	47.06%
Black/African American*	156	50.98%	172	57.91%
Hispanic/Latino*	122	50.41%	116	61.70%
Multiracial	32	62.75%	22	61.11%
White	210	59.83%	92	57.86%
ED*	282	52.42%	281	60.30%
LEP	62	53.91%	51	58.62%
SWD*	19	35.19%	20	60.61%
Total*	**535**	**54.54%**	**413**	**58.92%**

Note: Students may appear in more than one category: race, ED, SWD, and/or LEP. An asterisk* marks significant differences in reading growth between the groups.

Table 53

Percentages of Elementary School Students Who Met Growth Targets in Mathematics by NCLB subgroup at SIOP® Schools and Matched Schools

	# and % of Students Who Met Growth Targets			
	SIOP *N=1,003*		Matched *N=714*	
American Indian	2	na	2	na
Asian	21	75.00%	14	82.35%
Black/African American*	183	58.47%	216	71.29%
Hispanic/Latino*	160	63.24%	158	81.44%
Multiracial *	42	84.00%	23	62.16%
White	269	75.77%	116	72.96%
ED*	359	64.80%	356	74.48%
LEP*	90	70.87%	77	81.05%
SWD	40	60.61%	22	50.00%
Total*	**677**	**67.60%**	**529**	**74.23%**

Note: Students may appear in more than one category: race, ED, SWD, and/or LEP. An asterisk* marks significant differences in reading growth between the groups.

The percentages of middle school students in NCLB subgroups (all except Asian and LEP students in reading) who met the 2011-12 growth targets in reading and mathematics were significantly higher at the SIOP® schools than at the matched schools (see Tables 54 and 55).

Table 54
***Reading* Growth for Middle School Students**
Attending 3-Year SIOP® Schools and Matched Schools by NCLB subgroup

	SIOP		Matched	
	# and % of Students Who Met Growth Targets N=2,124		# and % of Students Who Met Growth Targets N=2,323	
American Indian	7	na	1	na
Asian	22	62.86%	38	64.41%
Black/African American*	384	53.41%	407	46.57%
Hispanic/Latino*	270	54.22%	227	50.78%
Multiracial *	42	60.00%	53	48.18%
White*	430	54.36%	476	57.77%
ED*	596	52.98%	622	49.48%
LEP	77	55.40%	86	55.84%
SWD*	102	48.80%	129	43.73%
Total*	**1,155**	**54.38%**	**1,202**	**51.79%**

Note: Students may appear in more than one category: race, ED, SWD, and/or LEP. An asterisk* marks significant differences in reading growth between the groups.

Table 55
***Mathematics* Growth for Middle School Students**
Attending 3-Year SIOP® Schools and Matched Schools by NCLB subgroups

	SIOP		Matched	
	# and % of Students Who Met Growth Targets N=2,146		# and % of Students Who Met Growth Targets N=2,332	
American Indian	8	na	6	na
Asian*	31	83.78%	34	52.31%
Black/African American*	457	62.95%	408	46.42%
Hispanic/Latino*	304	60.56%	224	50.22%
Multiracial	39	54.93%	53	48.62%
White*	461	57.77%	423	51.33%
ED*	700	61.24%	607	48.14%
LEP*	89	59.73%	93	56.36%
SWD*	124	55.36%	140	47.95%
Total*	**1,300**	**60.58%**	**1,148**	**49.23%**

Note: An asterisk* marks significant differences in reading growth between the groups.

When growth results (percentage of students who met growth targets) were compared for the SIOP® and the matched schools, only the growth results for the SIOP® middle schools were significantly better, with lower outcomes for elementary SIOP® schools than matched schools.

Longitudinal Analysis of Proficiency Levels at SIOP® Targeted Schools

There was a significant increase in reading and mathematics proficiency levels at elementary SIOP® schools from 2008-09 (before the SIOP® coaches were placed in the schools) to 2011-12. This closely followed the pattern described in the previous year's report.

- In reading, the percentage of students at Level I significantly decreased from 2008-09, while percentages at Level III significantly increased.
- In mathematics, percentages of students at Levels I and II significantly decreased, while percentages at Level IV significantly increased.

Proficiency levels at matched schools over time are presented for comparison purposes, to estimate how proficiency would have changed over time if SIOP® were not implemented. Although the same trend of positive change in proficiency levels was evident for matched elementary schools over time, the change was lower for matched schools both for reading and mathematics.

- While SIOP® schools showed a 4.6 percentage point decrease of students below proficiency in reading and the same amount of increase in percentage of students at proficiency levels, matched schools had a 3.5 percentage point change.
- In mathematics, there was an increase of 5.0 percentage points for SIOP® schools and 3.8 percentage points increase at matched schools.

Table 56
Reading and Mathematics EOG Levels for Elementary Students at SIOP® Schools with 3-Years of Support and Matched Schools

		Reading			Math		
		2008-09	2011-12	Change	2008-09	2011-12	Change
Level I	SIOP®	18.7%	12.5%	-6.2%*	4.7%	2.3%	-2.4%*
	Matched	17.4%	13.4%	-4.0%	3.6%	4.4%	0.8%
Level II	SIOP®	20.3%	21.9%	1.6%	17.9%	15.3%	-2.6%*
	Matched	22.6%	23.1%	0.5%	20.0%	15.4%	-4.6%
Level III	SIOP®	43.7%	49.2%	5.5%*	54.1%	54.5%	0.4%
	Matched	45.2%	50.0%	4.8%	54.1%	59.8%	5.7%
Level IV	SIOP®	17.4%	16.5%	-0.9%	23.2%	27.9%	4.7%*
	Matched	14.8%	13.5%	-1.3%	22.3%	20.5%	-1.8%

Note: * indicates the difference between 2008-09 and 2011-12 was significant based on a z statistic.

There was also a significant increase in reading and mathematics proficiency levels at middle SIOP® schools from 2008-09 (before implementing SIOP®). In reading, percentage of students at Level I significantly decreased from 2008-09, while percentage at Level III significantly increased. In mathematics, percentages of students at Levels I and II significantly decreased, while percentages at Levels III and IV significantly increased. Matched schools' proficiency levels over time were again offered for comparison purposes. Comparisons were in favor of SIOP® schools. While SIOP® schools showed a 4.3 percentage point decrease of the proportion of students below proficiency in reading and the same amount of increase in percentage at proficiency levels, matched schools only had about a 0.4 percentage point change. In mathematics, proficiency rate increase was at 7 percentage points for SIOP® schools, while matched schools had almost no change in proficiency levels.

Table 57
Reading and Mathematics EOG Levels for Middle School Students Attending SIOP® Schools with 3-Years of Support and Matched Schools

		Reading			Math		
		2008-09	2011-12	Change	2008-09	2011-12	Change
Level I	SIOP®	16.6%	11.1%	-5.5%	5.4%	3.3%	-2.1%
	Matched	15.3%	13.6%	-1.7%	7.7%	6.4%	-1.3%
Level II	SIOP®	22.2%	23.3%	1.1%	20.8%	15.8%	-5.0%
	Matched	21.3%	23.3%	2.0%	20.4%	21.9%	1.5%
Level III	SIOP®	46.1%	49.9%	3.8%	53.1%	55.9%	2.8%
	Matched	46.8%	48.9%	2.1%	51.8%	53.0%	1.2%
Level IV	SIOP®	15.1%	15.6%	0.5%	20.7%	25.0%	4.3%
	Matched	16.7%	14.1%	-2.6%	20.1%	18.7%	-1.4%

Note: * indicates the difference between 2008-09 and 2011-12 was significant based on a z statistic.

Student Characteristics at Middle and High Schools with Literacy and Mathematics Coaches

Before the discussion of outcomes, demographic characteristics of students at schools with adolescent literacy coaches or secondary mathematics coaches are presented for comparisons to demographics of WCPSS middle and high schools overall. In 2011-12, the schools with District Improvement support had higher percentages of ED, SWD, and LEP students as well as Black/African-American and Hispanic/Latino students and fewer White students than did WCPSS overall. Referring back to Tables 9 and 10 at the beginning of the report, a reader can

identify the geographical location of the supported schools, with most located in the Eastern or Central regions.

Table 58
Characteristics of Students Attending Schools Targeted by Adolescent Literacy or Secondary Mathematics Initiatives in 2011-12 and WCPSS

	Students at Schools with Adolescent Literacy Support		Students at Schools with Secondary Mathematics Support		WCPSS Secondary Students	
	Number	**Percent**	**Number**	**Percent**	**Number**	**Percent**
ED	4,773	48.0%	3,968	49.7%	24,670	33.1%
SWD	1,638	16.5%	1,310	16.4%	10,176	13.6%
LEP	517	5.2%	492	6.2%	3,365	4.5%
Male	5,077	51.1%	4,001	50.1%	38,091	51.1%
Female	4,859	48.9%	3,986	49.9%	36,513	48.9%
American Indian	43	0.4%	22	0.3%	294	0.4%
Asian	568	5.7%	486	6.1%	4,501	6.0%
Black/African American	4,362	43.9%	3,287	41.2%	19,755	26.5%
Hispanic/Latino	1,426	14.4%	1,226	15.9%	9,653	12.9%
Multiracial	442	4.4%	392	4.9%	3,168	4.2%
White	3,078	31.0%	2,516	31.5%	37,114	49.7%
Total	**9,919**	**100%**	**7,929**	**100%**	**74,485**	**100%**

Note: 1. Secondary schools include students attending middle and high school.
2. Students will appear in more than one category: race and gender, ED, SWD, and/or LEP.
Data Source: 2011-12 WCPSS End-of-Year Middle and High School Student Rosters

Adolescent Literacy

In 2011-12, a total of 21 middle schools and 19 high schools in the district had an adolescent literacy coach. The positions were funded through two different sources – special education and District Improvement. Because literacy support was provided to the majority of secondary schools, identifying similar (matched) schools for the District Improvement funded group of schools was problematic. Thus, only a longitudinal pre-, post- approach was taken to analyze student achievement results in reading or English I at the schools with an adolescent literacy coach. For that approach, the 2011-12 proficiency results in reading in middle schools and English I in high schools were compared to 2009-10 results, before the adolescent literacy coaching support was provided. 2009-10 was chosen for the comparison rather than 2010-11, because some of the schools had a literacy coach for two years.

The analysis of the proficiency results in reading by school was conducted first. The longitudinal results did not show any overall positive trend for middle schools, with only a 0.9 percentage points increase across the schools (a z-test did not show a significant increase). Proficiency levels at most schools with coaching support except Carnage and Martin Middle were lower than at the WCPSS middle schools overall.

Table 59
2009-10 and 2011-12 Comparisons of Proficiency in Reading at the Schools with Adolescent Literacy Coaches and WCPSS

Middle Schools	Percent Proficient	
	2009-10	2011-12
Carnage*	73.6%	80.2%
Daniels*	75.6%	69.9%
Zebulon	65.5%	66.6%
East Garner*	61.8%	66.5%
Martin	78.3%	76.8%
Total for Five Schools	71.5%	72.4%
Mt Vernon	35.0%	33.9%
WCPSS Middle Schools	**75.8%**	**76.7%**

Source of data: 2009-10 and 2011-12 ABCs School Reports.

* indicates significant results.

Among targeted high schools, East Wake School of Integrated Technology and East Wake School of Arts, Education and Global Studies were the only two high schools in the group with an adolescent literacy coach that had significantly higher proficiency levels in English I compared to 2009-10, see Table 60. In 2011-12, high schools with an adolescent literacy coach had lower proficiency rates than the WCPSS high schools overall. Overall, from 2009-10 to 2011-12 there was a 3.5 percentage point increase in proficiency at six high schools. The increase was statistically significant.

Table 60
2009-10 and 2011-12 Comparisons of Proficiency in English I
at the Schools with Adolescent Literacy Coaches and WCPSS

High Schools	Percent Proficient 2009-10	Percent Proficient 2011-12
East Wake School of Integrated Technology*	60.6%	85.4%
East Wake School of Health/Science	85.3%	81.6%
East Wake School of Engineering Systems	75.4%	76.9%
East Wake School of Arts, Education and Global Studies	74.2%	85.3%
Knightdale	78.7%	79.8%
Southeast Raleigh	72.5%	75.6%
Six School Total*	**75.4%**	**78.9%**
WCPSS High Schools	**85.1%**	**86.8%**

Source of data: 2009-10 and 2011-12 ABCs School Reports.
* indicates significant results.

Next, growth rates were longitudinally analyzed. Although three of the schools showed higher percentages of students who made growth from 2009-10 to 2011-12, only the results for Carnage were statistically significant. The middle schools with literacy coaches showed a 1.7 percentage point increase, while WCPSS middle schools had a lower percentage of students who made growth in reading in 2011-12 than in 2009-10.

Table 61
2009-10 and 2011-12 Comparisons of ABCs Growth Measures in Reading
at the Schools with Adolescent Literacy Coaches and WCPSS

Middle Schools	2009-10 Percent Met Growth Targets	2011-12 Percent Met Growth Targets
Carnage *	53.9%	60.1%
Daniels	53.9%	52.3%
Zebulon	55.8%	54.2%
East Garner	57.8%	59.2%
Martin	55.1%	56.4%
Five Schools Total	55.2%	56.9%
Mt. Vernon*	71.4%	42.2%
WCPSS Middle Schools	**58.6%**	**56.7%**

Source of data: 2009-10 and 2011-12 ABCs School Reports.
* indicates significant results.

Although all high schools except Knightdale increased the percentages of students who made growth, the increase was only statistically significant for Southeast Raleigh High School. Four of the six schools met high growth (60%) based on state standards. Overall, high schools with literacy coaches showed a 2.1 percentage point increase in growth in English I, which was higher than the increase in the WCPSS high schools.

Table 62
2009-10 and 2011-12 Comparisons of ABCs Growth Measures in English I at the Schools with Adolescent Literacy Coaches and WCPSS

High Schools	2009-10 Percent Met Growth Targets	2011-12 Percent Met Growth Targets
East Wake School of Integrated Technology	50.6%	53.3%
East Wake School of Health/Science	64.0%	66.3%
East Wake School of Engineering Systems	59.2%	64.1%
East Wake School of Arts, Education and Global Studies	60.9%	66.3%
Knightdale	56.7%	50.9%
Southeast Raleigh*	52.9%	60.8%
Six High Schools Total	**56.2%**	**58.3%**
WCPSS High Schools*	**62.2%**	**63.7%**

Source of data: 2009-10 and 2011-12 ABCs School Reports.
* indicates significant results.

Comparisons of growth by academic risk factor or by ethnic subgroup at schools with coaches and at WCPSS schools did not reveal any improved results in the percentages of students who reached growth targets at schools with secondary literacy coaches, except for Black/African-American students.

Table 63
Percent of Students at Schools with Adolescent Literacy Coaching Support Meeting Growth Targets in Reading in 2011-12

	Middle Schools with Adolescent Literacy Support	WCPSS Middle School Students	High Schools with Adolescent Literacy Support	WCPSS High School Students
ED	54.8%	54.2%	58.5%	57.2%
SWD	49.5%	53.0%	50.0%	50.7%
LEP	58.2%	57.0%	54.8%	57.2%
American Indian	na	na	na	na
Asian	63.1%	65.2%	57.9%	73.4%
Black/African American	55.1%	53.1%	55.6%	57.1%
Hispanic/Latino	54.4%	55.1%	59.3%	61.5%
Multiracial	56.4%	57.3%	62.0%	63.1%
White	56.2%	57.8%	64.3%	66.7%
Total	**56.4%**	**56.8%**	**58.6%**	**63.7%**

To summarize, coaching showed more effect at the high schools than at the middle schools. English I proficiency rates at high schools significantly increased, while only very slight improvement in proficiency rates in reading was identified at middle schools. A higher increase in the percentages of students achieving growth targets from 2009-10 to 2011-12 was observed in reading and English I at the middle and high schools with literacy coaches compared to WCPSS middle and high schools.

Secondary Mathematics

Analysis of student outcomes conducted for the middle school teachers who were trained did not show any improved proficiency or growth results from 2010-11 to 2011-12. Trained high school teachers did not have enough data (too few students) to conduct the analysis.

Matched School Comparisons

Proficiency and growth in Algebra I were compared for the middle schools with mathematic coaches and comparison middle schools. Schools selected for comparison were similar to the

schools with coaching support in overall performance and academic risk factors. The comparisons included East Garner, East Wake, Zebulon, and Fuquay-Varina Middle Schools. Both proficiency and growth in Algebra I were somewhat lower for the schools with coaches, which were by 2.2 percentage points lower in proficiency; and by 1.5 percentage points lower in achieving growth targets.

Table 64
2011-12 Comparisons of Proficiency and Growth Mathematics in Middle Schools with Mathematics Coaches and Similar Schools

	Mathematics 2011-12	
	Percent Students Proficient	**Percent Students Meeting Growth Targets**
Middle Schools with Mathematics Coaches	89.6%	42.5%
Comparison Schools	91.8%	44.0%

It was difficult to find schools similar to East Wake High Schools, which are small in size and have high percentages of ED students. A comparison thus was conducted with the schools which were only somewhat similar to the high schools with coaches in overall performance and percentages of ED and LEP students, but were larger in size and tended to be higher overall in performance and lower in academic risk factors to begin with. Due to these differences, the comparison results need to be interpreted cautiously. The comparison schools included Knightdale, Garner, and Southeast Raleigh High Schools. Although 2011-12 proficiency levels in Algebra I were comparable for both groups (2.2 percentage point difference), percentages of students meeting growth targets were much lower in the schools with the mathematics coaches (17.8%).

Table 65
2011-12 Comparisons of Proficiency and Growth in Reading and Mathematics in High Schools with Mathematics Coaches and Similar Schools

	Mathematics 2011-12	
	Percent Students Proficient	**Percent Students Meeting Growth Targets**
Middle Schools with Mathematics Coaches	80.6%	47.3%
Comparison Schools	82.8%	65.1%

Longitudinal Comparisons

A longitudinal approach was then taken to analyze student outcomes in Algebra I in the secondary schools with mathematics coaches. Proficiency rates and growth were examined before the coaching support was offered in 2010-11 and after a year of receiving coaching support in 2011-12. Even with East Millbrook Middle showing a six percentage point increase in mathematics proficiency level in just one year, none of the school-level changes at middle schools were statistically significant. Overall, proficiency levels in middle schools with coaches increased by 1.6 percentage points. Although the increase was not statistically significant, the change was positive, compared to the decreased proficiency levels in WCPSS middle schools overall.

Table 66
2010-11 and 2011-12 Algebra I Proficiency Levels
at the Middle Schools with Secondary Mathematics Coaches and in the WCPSS

Middle Schools	% Proficient	
	2010-11	2011-12
Centennial	95.5%	91.3%
Moore Square	97.3%	98.0%
East Millbrook	78.4%	84.3%
Wendell	92.6%	91.8%
Carroll	85.0%	86.7%
All Middle Schools with Coaches	88.0%	89.6%
WCPSS Middle Schools	97.0% (5,020)	95.3% (7,230)

Source of data: 2010-11 and 2011-12 ABCs School Reports.

* indicates significant results.

Among high schools, three of five had large increases in Algebra I proficiency from 2010-11 to 2011-12, while two schools had a decrease. East Wake School of Health/Sciences, Enloe, and East Wake School of Integrated Technology had a high 10.6, 12.6, and 15.3 percentage point increase in Algebra I proficiency respectively. Two of the three increases were statistically significant (at East Wake School of Integrated Technology and Enloe High Schools). In 2011-12, Enloe High School was the only school that had Algebra I proficiency rates higher than the WCPSS high schools. Overall, proficiency levels in high schools with coaches increased by 8.5 percentage points; the increase was statistically significant.

Table 67
2010-11 and 2011-12 Algebra I Proficiency Levels
at the High Schools with Secondary Mathematics Coaches and in the WCPSS

High Schools	Algebra I % Proficient	
	2010-11	2011-12
East Wake School of Arts, Education and Global Studies	83.9%	76.9%
East Wake School of Engineering Systems	74.0%	70.4%
East Wake School of Health/Science	68.0%	78.6%
East Wake School of Integrated Technology*	58.8%	74.1%
Enloe*	73.1%	85.7%
All high schools with coaches*	72.1%	80.6%
WCPSS High Schools*	83.0% (7,741)	84.9% (6,688)

* indicates significant results.

As for growth, both middle and high schools showed a mixed pattern of change in the percentages of students who made growth in Algebra I, see Table 68. Significantly higher percentages of students made growth in East Millbrook and Wendell Middle Schools in 2011-12 than in 2010-11, while Moore Square, Carroll and Centennial Middle had a decrease, and Centennial showing a significant decrease.

A mixed pattern of student growth was characteristic of the high schools: East Wake School of Integrated Technology and Enloe High Schools had a significantly higher percentage of students who met growth, and East Wake School of Arts, Education and Global Studies had a significantly lower percentage.

From 2010-11 to 2011-12, the middle schools with mathematics coaches showed stable results in the percentages of students who achieved growth targets in Algebra I, while fewer students at WCPSS middle schools met growth targets in Algebra I. High schools with mathematics coaches showed a significant 9.7 percentage point increase in growth in Algebra I in one year, which was higher than the increase in WCPSS high schools (2.8 percentage points).

Table 68
2010-11 and 2011-12 ABCs Growth Measures in Algebra I
at the Schools with Secondary Mathematics Coaches and in the WCPSS

Middle Schools	**2010-11 Percent Met Growth Targets**	**2011-12 Percent Met Growth Targets**
Centennial *****	65.1%	36.1%
Moore Square	57.7%	53.1%
East Millbrook*	25.3%	39.1%
Wendell*	30.2%	51.1%
Carroll	43.5%	34.9%
All Middle Schools with Coaches	42.3%	42.5%
WCPSS Middle Schools*	62.2%	54.4%
High Schools	**2010-11 Percent Met Growth Targets**	**2011-12 Percent Met Growth Targets**
East Wake School of Arts, Education and Global Studies**	59.2%	43.1%
East Wake School of Engineering Systems	31.7%	32.1%
East Wake School of Health/Science	32.4%	31.9%
East Wake School of Integrated Technology*	23.1%	50.0%
Enloe*	37.7%	54.8%
All High Schools with Coaches*	37.6%	47.3%
WCPSS High Schools*	58.0%	60.9%

* indicates significant results.

Comparisons of growth results for students grouped by educational risk factor or by ethnic subgroup at schools with secondary literacy coaches and at WCPSS schools overall did not reveal any increases in the percentages of students who reached growth targets in schools with coaches.

Table 69
Subgroups of Students at Middle and High Schools with Secondary Mathematics Coaching Support Making Growth in Mathematics and Algebra I in 2011-12

	Middle Schools with Secondary Mathematics Support (Mathematics)	WCPSS Middle School Students	High Schools with Secondary Mathematics Support (Algebra I)	WCPSS High School Students
	Percent	Percent	Percent	Percent
ED	49.4%	55.1%	32.9%	56.6%
SWD	47.0%	54.4%	31.0%	51.6%
LEP	52.4%	58.8%	26.3%	57.7%
American Indian	na	na	na	na
Asian	55.9%	72.6%	na	69.7%
Black/African American	49.2%	56.4%	48.5%	54.9%
Hispanic/Latino	51.7%	56.5%	49.3%	61.3%
Multiracial	57.6%	58.3%	40.0%	59.7%
White	53.8%	60.9%	38.6%	65.5%
Total	**51.7%**	**59.9%**	**41.9%**	**60.8%**

To summarize, high schools had significantly higher percentages of students who achieved growth targets in Algebra I after just one year of support. Increases in proficiency levels from 2010-11 to 2011-12 were significant in high schools and not significant in middle schools.

Elementary Mathematics Outcomes

From 2009-10 to 2011-12, elementary schools targeted for a mathematics coach support showed an average of 5.6 percentage point increase in the percentage of students who were proficient in mathematics. The majority of elementary schools that had a mathematics coach (81% or 26 schools) showed an increase in proficiency; while at six of the 32 schools proficiency levels went down by 0.8- 2.4 percentage points from 2009-10 (see Appendix C for more details on outcomes).

The goals set for growth for 32 schools were met in 2011-12, while proficiency goals were seemingly not met (see Appendix C for elementary mathematics goals and outcomes).

It is important to note that the proficiency goals for the targeted schools were set using 2009-10 WCPSS proficiency levels overall (84%), while the group of 32 schools had a lower proficiency level to begin with (76%). A three percentage point increase in proficiency levels projected for

2011-12 would have proficiency at 78%. With the change in proficiency levels from 76.4% to 82.0% the goal set for proficiency growth was exceeded.

The analysis of growth over two years (from 2009-10 to 2011-12) showed that the schools with an elementary mathematics coach showed a 10.5 percentage point increase (from 59.3% to 69.8%) in the proportions of students who demonstrated positive growth. The growth was high even with 10 of the 32 schools showing no growth.

Other Components

Since the remaining initiatives were in their first year of implementation, student outcomes for those initiatives were not analyzed.

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Appendix A

Table 1A. *SIOP® TRAINING*

SIOP®-Trained WCPSS Teachers by Year by School

School	2007-08	2008-09	2009-10	2010-11	2011-12
Adams ES		50	4	12	
Alston Ridge ES				2	2
Apex ES		5		2	1
Apex HS					1
Apex MS			1	2	3
Athens HS			3	2	1
Aversboro ES			2		
Baileywick ES		16		2	
Ballentine ES			13	9	6
Banks Rd. ES			1		1
Barwell Rd. ES		7	4	1	
Baucom ES				1	
Brassfield ES				1	1
Brentwood ES	27	5	35	34	26
Briarcliff ES					1
Brier Creek ES		1	1		2
Brooks ES			3	2	
Broughton HS			3	1	1
Bugg ES		9	14		
Carnage MS			1		1
Carpenter ES		9	3		
Carver ES			1		1
Cary ES			1	1	1
Cary HS		30	4		1
Cedar Fork ES				3	1
Centennial MS	0	2	1	62	8
Combs ES	9	62	48	1	1
Conn ES		1		1	1
Creech ES				1	
Daniels MS			2	79	4
Davis Dr ES		4			
Davis Dr. MS		1	4		
Dillard Dr. ES		2	0	1	
Dillard Dr. MS			2	1	3
Douglas ES				1	
Durant Rd ES	5	12	8	25	1
Durant Rd MS	9	14	1	10	2
E Garner ES	1			5	
E. Cary MS				5	1
E. Garner ES			6	7	
E. Garner MS	6	50	71	1	
E. Millbrook MS			1	8	5
E. Wake Health/ Sci			1		
E. Wake MS		10	60	11	10

School	2007-08	2008-09	2009-10	2010-11	2011-12
E.Wake Arts / Global				1	
Enloe HS				1	
Farmington Wds. ES			2	1	9
Forest Pine ES			1	1	
ForestvilleRd ES		1			
Fox Road ES	9	12	64	63	2
Fuller ES		3			
Fuquay-Varina ES	6	10	7		1
Fuquay-Varina HS			1	1	
Fuquay-Varina MS			2	1	
Garner HS	7	7	5		
Green ES		5	44	57	3
Green Hope ES		3	4		2
Green Hope HS			3	4	1
Harris Creek ES	7	13	10	18	2
Herbert Akins Rd. ES			1		
Heritage ES	9	10		3	2
Heritage HS					2
Highcroft ES			1		
Hilburn ES/Academy		8	2	1	3
Hodge Road ES		1	68	74	
Holly Grove ES			2		
Holly Grove MS				1	
Holly Ridge ES				1	1
Holly Ridge MS		1			19
Holly Springs ES			1		
Holly Springs HS		6		5	1
Hunter ES		1	3		

School	2007-08	2008-09	2009-10	2010-11	2011-12
Jeffreys Grove ES		1			1
Joyner ES		1		1	
Kingswood ES			52	38	4
Knightdale ES		7			
Knightdale HS		3	4	3	1
Lacy ES			1	4	4
Laurel Park ES			6	6	1
Lead Mine ES		1		2	1
Leesville Rd ES			1	1	1
Leesville Rd HS		1	2		
Leesville Rd MS			6	1	3
Ligon MS		1	1	4	3
Lockhart ES				1	
Longview HS			1		1
Lufkin Rd. MS			9	1	1
Lynn Road ES		2	3	5	
Martin MS			3	3	1
Middle Creek ES		3	5	7	
Middle Creek HS	14	6		1	2
Millbrook ES	7				
Millbrook HS	7	5	3		2
Mills Park ES			2	5	
Mills Park MS					
Moore Square MS					39
Morrisville ES		4	1	1	
Mt. Vernon MS			3	5	1
N. Garner MS	9	1	76	4	1
North Ridge ES		3	1		

School	2007-08	2008-09	2009-10	2010-11	2011-12
Northwoods ES				1	3
Oak Grove ES		1			
Olive Chapel ES			2	1	1
Penny Road ES			2	2	3
Phillips HS				1	
Pleasant Union ES				1	
Poe ES		6	25	12	
Rand Road ES		4	2		
Reedy Creek ES			50		
Reedy Creek MS				2	1
River Bend ES				1	1
River Oaks MS		1	1	1	
Rolesville ES		6	2	1	
Root ES				1	
S. E. Raleigh HS	5			1	1
Salem ES		25	10	6	
Salem MS			1	1	
Sanderson HS		2	3	2	
Sanford Creek ES			2	2	
Smith ES		1		1	1
Stough ES		7	1	1	1
Swift Creek ES				2	
Sycamore Creek ES	4	2	4	90	
Timber Drive ES	8	26	9	15	1

SIOP®-Trained WCPSS Teachers by Year by School

School	2007-08	2008-09	2009-10	2010-11	2011-12
Turner Creek ES		3	4	3	
Underwood ES				48	35
Vance ES		10	2	5	
Vandora Springs ES			4		
W. Cary MS					1
W. Lake ES	12	22	7	1	1
W. Lake MS			6	2	1
W. Millbrook MS	2	7	15	22	6
Wake Forest ES			5		
Wakefield ES	13	20	19		
Wakefield HS		1			1
Wakefield MS				2	1
Wakelon ES			1	1	
Weatherstone			1		1
Wendell ES			1	2	
Wendell MS			3	64	20
WF-Rolesville HS			1		
WF-Rolesville MS	9	5	4	3	9
Wilburn ES	11		24	18	
Wildwood Forest ES		1		1	1
Wiley ES			1		1
Willow Springs ES				2	
Yates Mill ES		1		8	1
Zebulon ES		2		2	
Zebulon MS	3	13	48	41	1
Grand Total	**197**	**592**	**899**	**958**	**297**

Table 2A
Coaching Support by Grade Level

Grade Levels	Number of Times
Third	627
Fourth	487
Kindergarten	346
First	332
Second	309
Fifth	300
Multiple Grade Levels	204

Table 3A
Coaching Support to School Staff

School Staff	Number of Times
Principal	112
Schoolwide	106
IRT	95
Assistant Principal	61
Special Ed	52
AIG Teacher	15
Intervention	13

Table 4A
Group Support Provided to Staff

Log of Activities	Number of Times
Pull/Provide Resources	384
Planning with Individual Teacher	127
Attended Staff Development	113
Meeting with Principal	112
Researching Instructional Practices	94
PLT Meeting	89
Grade Level Planning	69
Staff Meeting	46
Leadership Team Meeting	31
SIP Meeting	26
SST Meeting	3

Table 5A
Number of Classrooms Observed by School

School	Number of Observed Classrooms
Brentwood Elementary	3
Centennial Middle	6
Combs Elementary	5
Daniels Middle	9
Durant Road Elementary	4
East Garner Middle	8
East Wake Middle	2
Fox Road Elementary	9
Fuquay-Varina Elementary	2
Green Elementary	5
Harris Creek Elementary	4
Hodge Road Elementary	6
Kingswood Elementary	7
North Garner Middle	4
Timber Drive Middle	3
Wakefield Elementary	4
West Lake Middle	3
West Millbrook Middle	4
Wilburn Elementary	3
Zebulon Middle	5
Total	**103**

Table 6A
Number of Observations by Grade

Grade	Number of Classrooms
K	2
K-3	1
1	1
CCR	2
ESL	1
3	17
4	18
5	16
6	18
7	12
7-8	1
8	14
Total	**103**

Appendix B

LEA AYP Results

2010-11

Level	Reading	Math
High School – 10	MISSED –Black, American Indian, ED*, LEP,SWD	MISSED – LEP,SWD
Grades 6-8	MISSED -Black, ED, LEP, SWD	MISSED – All, American Indian, Black, Multiracial, ED, LEP, SWD
Grades 3-5	MISSED -Black, American Indian, ED	MISSED - All, American Indian, Black, ED, LEP, SWD

2009-10

Level	Reading	Math
High School – 10	MET	MISSED – Black, SWD
Grades 6-8	MET	MISSED - Hispanic
Grades 3-5	MET	MISSED – BLACK, ED

2008-09

Level	Reading	Math
High School – 10	MISSED – LEP	MISSED – Black, ED, SWD
Grades 6-8	MET	MET
Grades 3-5	MET	MET

2007-08

Level	Reading	Math
High School – 10	MET	MISSED – Black, Hispanic, ED, LEP, SWD
Grades 6-8	MISSED – Black, Hispanic, ED, SWD	MISSED – All Students, Black, Hispanic, Multiracial, ED, SWD
Grades 3-5	MISSED – Hispanic, ED, SWD	MISSED – Black, Hispanic, ED, SWD

2006-07

Level	Reading	Math
High School – 10	MISSED – LEP, SWD	MISSED - SWD
Grades 6-8	MISSED – SWD	MISSED – Black, Hispanic, ED, LEP, SWD
Grades 3-5	MISSED – SWD	MISSED – Black, ED, SWD

2005-06

Level	Reading	Math
High School – 10	MISSED – LEP, SWD	MISSED - SWD
Grades 6-8	MISSED – SWD	MISSED - SWD
Grades 3-5	MISSED – LEP, SWD	MET

* ED (economically disadvantaged).

Appendix C

Elementary Math Coach Initiative with Results

Status	Program Goal by June 2012	Data/Information Considered	Measurement Tool
MET	The elementary math department will support schools with district-hired math coaches by conducting a minimum of 3 walk-throughs.	Support and monitor the work of the district-hired math coaches.	Walk-through spreadsheet, summary reports
MET	North Carolina State University will provide 2.5 days of formal training on instructional coaching.	Provide structure and training to conduct coaching cycles.	Sign-in sheets, agenda, contracts
NOT MET 67% 3.8% increase	At least 70% of classrooms visited will be using Math Expressions or Alignment Lessons.	Based on walk-through data, the percentage of teachers using Math Expressions: • 09-10: 56.2%, 10-11: 63.2%	Data collected from a minimum of three walk-throughs per school
MET **57%** **16.9% increase**	At least 50% of classrooms visited will be using Math Talk as an instructional practice.	Based on walk-through data, the percentage of teachers implementing math talk: • 09-10: 13.5%, 10-11: 40.1%	Data collected from a minimum of three walk-throughs per school
MET 99% 9.5% increase	At least 95% of classrooms visited will be teaching math on the day of the observation.	Based on walk-through data, the percentage of teachers not teaching math on the day of observation: • 09-10: 6.4%, 10-11: 10.5%	Data collected from a minimum of three walk-throughs per school
MET **32%** **15.6% increase**	At least 25% of classrooms visited will be demonstrating rigorous mathematics instruction.	Based on walk-through data, the percentage of classrooms promoting deep conceptual math: • 09-10: 19.6%, 10-11: 16.4%	Data collected from a minimum of three walk-throughs per school
MET survey 82% 46% increase	At least 75% of classroom teachers report improved math instructional practices as a result of collaboration with the math coach.	Based on 2010-2011 teacher surveys: 36% reported increases in math instructional practices	Teacher surveys at mid- and end-year
MET survey 77% 43% increase	At least 75% of classroom teachers report increased student engagement and performance in mathematics.	Based on 2010-11 teacher surveys: 34% reported increases in engagement & performance	Teacher surveys at mid- and end-year
MET	Math coaches will spend the majority of their time supporting teachers through the use of coaching cycles and grade level collaboration.		Monthly Activity Report
NOT MET 85% All Schools 82% MC Schools	At least 87% percent of all students will demonstrate proficiency on the math EOG.	Based on EOG data: • 2008-2009: 86%, 2009-2010: 84% • 2010-2011: 85%	EOG data
MET Data unknown for all schools 70% MC Schools	At least 70% of all students will reach growth targets on the math EOG.	Based on EOG data: • 2008-2009: 61%, 2009-2010: 62% • 2010-2011: 67%	EOG data

Elementary Math Outcomes

	% Proficient			*Difference*	% Met Growth			*Difference*
SCHOOLS	2009-10	2010-11	2011-12	***2010-11 & 2011-12***	2009-10	2010-11	2011-12	***2010-11 & 2011-12***
AVERSBORO	78.2	84.2	85.6	**1.4**	54.7	84.4	70.9	**-13.5**
BARWELL	64.0	71.1	81.3	**10.3**	60.2	69.8	77.7	**7.9**
BRENTWOOD	71.5	70.3	73.2	**2.9**	84.2	67.6	64.2	**-3.4**
BUGG	86.5	73.6	83.9	**10.3**	70.2	41.6	76.9	**35.3**
CONN	78.8	77.1	82.2	**5.2**	73	74.4	74.7	**0.3**
CREECH ROAD	66.0	71.4	69.0	**-2.4**	57.1	73.6	68.3	**-5.3**
DOUGLAS	80.1	83.8	91.7	**7.9**	70.3	73.2	67.8	**-5.4**
FOREST PINES	78.3	82.4	85.9	**3.5**	33.8	53.8	65.5	**11.7**
FOX ROAD	72.6	79.0	78.2	**-0.8**	59.6	66.5	56.7	**-9.8**
FUQUAY-VARINA	81.1	89.4	91.8	**2.4**	57.6	83.4	83.0	**-0.4**
GREEN YR	74.8	75.8	81.5	**5.7**	62.9	74.6	71.8	**-2.8**
HERBERT AKINS	81.4	82.2	87.8	**5.6**	50.4	59	81.1	**22.1**
HILBURN DRIVE	75.2	76.8	88.2	**11.4**	62.0	70.7	83.2	**12.5**
HODGE ROAD	81.7	80.5	79.1	**-1.4**	68.7	61.4	61.7	**0.3**
HUNTER	79.0	74.7	73.2	**-1.5**	45.4	55.5	66.5	**11.0**
JEFFREYS GROVE	79.2	71.9	89.5	**17.6**	57.7	61.5	77.6	**16.1**
KNIGHTDALE	81.4	80.9	80.8	**-0.1**	63.7	66.7	47.8	**-18.9**
LAKE MYRA	76.7	82.3	81.2	**-1.1**	36.2	51.9	62.9	**11.0**
LINCOLN HEIGHTS	75.9	73.9	74.5	**0.6**	66.1	67.1	70.4	**3.3**
LYNN ROAD	68.4	74.9	76.4	**1.5**	67.8	70.3	72.6	**2.3**
MILLBROOK	77.0	74.8	80.7	**5.9**	64.6	59.2	81.5	**22.3**
NORTH RIDGE	78.4	75.5	85.2	**9.7**	62.4	57.8	74.1	**16.3**
POE	73.1	78.8	80.0	**1.2**	46.8	43.4	51.8	**8.4**
SMITH	72.0	75.0	78.0	**3.0**	54.7	53.4	48.3	**-5.1**
STOUGH	80.2	73.9	77.9	**4.0**	59.7	62.1	72.3	**10.2**
TIMBER DRIVE	78.3	83.2	88.0	**4.8**	69.4	70.7	68.1	**-2.6**
WAKELON	76.3	82.5	81.5	**-1.0**	64.8	68.4	60.0	**-8.4**
WENDELL	78.9	78.1	81.8	**3.7**	77.4	68.1	70.9	**2.8**
WILBURN	61.3	67.3	76.0	**8.8**	46.0	58.8	76.8	**18.0**
YATES MILL	83.5	91.1	93.2	**2.1**	63.4	60.7	77.9	**17.2**
ZEBULON	82.5	87.4	88.5	**1.1**	55.7	52.3	71.5	**19.2**
WALNUT CREEK			72.3				67.9	
TOTALS	**76.4**		**82.0**	**5.6**	**59.3**		**69.8**	**10.5**

Appendix D

Differentiation Training Modules

Module 1, *Mindset, Knowing the Learner and Relationships,* focused on collecting information on students' learning styles.

Module 2, *Quality Curriculum and Assessment*. The module introduced the use of "backward design" in planning instruction, starting with setting up unit objectives, moving on to presenting content through the framework of common standards, to determining the skills students are expected to learn. Participants discussed use of pre-assessment and assessment strategies to check student learning.

Module 3, *The Nuts and Bolts of Differentiation*. Training participants learned specific strategies for differentiating through content, process, and product according to students' readiness levels, interests, learning profiles. Participants learned to plan, implement, and assess a rigorous differentiated lesson or unit by providing an in-depth look at responsive teaching.

Module 4, *Bringing It All Together*. Participants constructed their own differentiated lesson plans using newly acquired knowledge from modules 1-4 and utilizing one of the four strategies presented within module 4. The four instructional strategies to support differentiation included learning contracts, tiered activities, webquests, and RAFT (a "writing across curriculum" strategy that focuses on reader, audience, format, and topic). Participants were presented accountability activities in planning a differentiated lesson and responding to information regarding tiered assignments. Additionally, training participants were presented with fun and simple technology tools to support student learning and assessment.

Module 5, *Managing the Differentiated Classroom*. PLTs/individuals planned, implemented, and reflected on a differentiated lesson by using the differentiation strategies from Module 4 and Module 5 classroom management techniques. Teachers learned the skills of flexible classroom management and creating order in the classroom to support flexibility through the use of a variety of grouping strategies.

Appendix E

Implementation of the 2010-11 Evaluation Recommendations

It was recommended in the 2010-11 evaluation report that staff should make a concerted effort to be intentional in outlining their strategies for 2011-12 if the goal of meeting Adequate Yearly Progress for targeted subgroups was to be met. The recommended steps are listed below, along with the program response for 2011-12 efforts. .

Setting strategic goals and systematically monitoring implementation.

Logic models were created to set specific goals and outline strategies by all initiatives that were part of District Improvement. Evaluation plans were developed and instruments for monitoring implementation were created.

Targeting intervention to teachers with the most students in NCLB groups in need of support.

The elementary mathematics initiative and the initiative to support highly qualified teacher assistants targeted either all teachers at the schools selected for additional support or all teachers in the district. Secondary literacy coaches also considerably expanded their coaching efforts compared to the previous year to target more English language arts teachers. Secondary math coaches were placed in schools with lower student proficiency levels. Special education considered both student achievement results and principal requests when providing training to the teaching teams. On the other hand, differentiation initiative relied on school administrators to request professional development to "Champions" (in the train-the-trainer model), with thirty-five self-selected schools expressing interest in mastering effective use of differentiation strategies. In 2011-12, after several years of coaching support, SIOP® considerably limited coaching efforts and hired only four coaches, while continuing to offer training in face-to face sessions, online sessions, overviews, and school-wide presentations.

Considering the number of schools and teachers to reach to make a difference in student outcomes.

Efforts were made to expand support to as many schools as District Improvement funding allowed. Elementary mathematics initiative offered coaching support to all schools that showed lower proficiency levels. Adolescent literacy initiative was only part of the larger effort to place literacy coaches in middle and high schools that needed such support. The initiative to support the highly qualified teacher assistants (HQTA) also ready to offer assistance to all teacher assistants who requested it. SIOP® , on the other hand, limited coaching efforts to a smaller number of schools but continued to provide school wide training. Differentiation initiative initially planned to target 50 schools, with actual training provided to 35 schools. The initial design was to continue training for two to three years to involve more schools.

Being intentional in all coaching efforts: a structured approach to each specific coaching initiative to enhance its effectiveness was to be developed.

Elementary mathematics provided training for the math coaches at the beginning of 2011-12. Coaching logs for all initiatives that included a coaching component helped maintain records of coaching activities,

although the use of the logs was less systematic for some first time users. An effort to positively affect as many teachers as possible was evident. For example, elementary math coaches were to develop coaching plans to support all grade levels, secondary literacy coaches also increase the number of teachers they were supporting.

Lessons learned from SIOP® were to be shared with the newer efforts to more efficiently plan, target, and deliver services.

In addition to logic models, coaching logs were used by all initiatives that included a coaching component. To monitor implementation of the coaching component, systematic observations were conducted by elementary mathematics and SIOP®. If there was training only provided, no observations were conducted, with teacher artifacts (lessons plans or reflections) collected instead. Regular monthly meetings were conducted to coordinate efforts and share updated. All initiatives except one kept training participation records.

Monitoring of coaching coverage and teacher implementation of strategies was to be part of the process. With fidelity of implementation, student achievement improvements were considered to be more likely to occur.

Coaches included specific data in their monthly logs to reflect the names of supported staff. SIOP® team developed a sampling plan for conducting systematic observations of the classrooms to examine the levels of implementation of SIOP® components. Additionally, the SIOP® curriculum writer observed a number of classrooms to estimate the levels of implementation of the SIOP® enhanced curriculum. Elementary mathematics team visited each elementary school where coaches were place three times over the school year and observed all math lessons I the school.

To build ownership and commitment at the school level and to ensure consistency in implementation, it was proposed that key district leaders should meet with school administrators to convey the importance of District Improvement efforts.

The District Improvement evaluation results and updated were presented to the District Improvement Advisory Committee. However, it is not clear to what extent school administrators were aware of the significance of selection of teachers for training and the importance of consistent implementation of key training strategies. According to the SIOP® coordinator, the Differentiation trainer and the special education initiative coordinator, a number of principals showed support of their teachers by taking advantage of the training opportunities and ensuring that AYP groups of students were targeted in the application of the new instructional skills.

Setting goals for 2011-12 and implementation of strategies and activities for all new initiatives were to take place in coordination with the existing approaches to optimize their effectiveness.

Regular collaborative quarterly meetings for all initiative managers took place in 2011-12 under the guidance of the District Improvement coordinator. Data collection (e.g., surveys) was also regularly coordinated with the District Improvement coordinator and Data and Accountability. Accountability on budget issues was maintained.