



Standards of Learning (SOL) Remediation at Middle and High Schools: *Comprehensive Evaluation*

By Heidi L. Janicki, Ph.D., Director of Research and Evaluation
and Robert A. Veigel, M.S., Research Specialist

Comprehensive Evaluation
Report
January 2016



Department of Planning, Innovation, and Accountability
Office of Research and Evaluation
Virginia Beach City Public Schools

Table of Contents

Executive Summary	4
Key Evaluation Findings	4
Recommendations and Rationale	7
Introduction	9
Background	9
Purpose	9
Program Overview	9
Program Goals and Objectives	9
Evaluation Design and Methodology	10
Evaluation Design	10
Evaluation Questions	10
Instruments and Data Sources	10
Surveys	11
Data Analysis	11
Evaluation Results and Discussion	12
Operational Components	12
SOL Remediation Activities	12
Staffing Related to SOL Remediation Activities	15
Tracking and Monitoring Students Who Participated in SOL Remediation	16
Students Receiving SOL Remediation	17
Target Population	17
Identification Methods	17
Demographic Characteristics of Students	18
Progress Toward Meeting Goal	18
Staff Perceptions	20
Additional Cost	21
Recommendations and Rationale	22
Appendices	24
Endnotes	26

Tables

1	Tests Associated With SOL Remediation Activities by School Level.....	10
2	Middle School Activities Provided and Considered as SOL Remediation	13
3	High School Activities Provided and Considered as SOL Remediation	14
4	Percent of Survey Respondents Who Indicated Their School Had a Formal SOL Remediation Plan by Level	14
5	Subject Areas for SOL Remediation Efforts	15
6	Time During Which SOL Remediation Activities Were Provided	15
7	Staff Members Providing SOL Remediation.....	16
8	Percent of Middle School Administrators/SISs and Teachers Who Indicated the Identification Methods for SOL Remediation at Their School.....	17
9	Percent of High School Administrators/SISs and Teachers Who Indicated the Identification Methods for SOL Remediation at Their School.....	18
10	Demographic Characteristics of Middle School SOL Remediation Students.....	18
11	Demographic Characteristics of High School SOL Remediation Students	18
12	Percent of Middle School SOL Remediation and Remediation Recovery Students Who Passed Corresponding SOL Test(s).....	19
13	Percent of High School SOL Remediation and Remediation Recovery Students Who Passed Corresponding SOL Test(s).....	19
14	Additional SOL Remediation Costs for 2014-2015.....	21

Figures

1	Middle School Understanding of SOL Remediation Components and Plan	14
2	High School Understanding of SOL Remediation Components and Plan	15
3	Extent to Which Paid SOL Remediation Tutors Received Training in Remediation Techniques	16
4	Middle School Percent of Staff Who Agreed That Their School Tracks, Monitors, and Maintains Records of SOL Remediation Students	17
5	High School Percent of Staff Who Agreed That Their School Tracks, Monitors, and Maintains Records of SOL Remediation Students	17
6	Middle School Parental Support for SOL Remediation and Program Effectiveness	20
7	High School Parental Support for SOL Remediation and Program Effectiveness	20

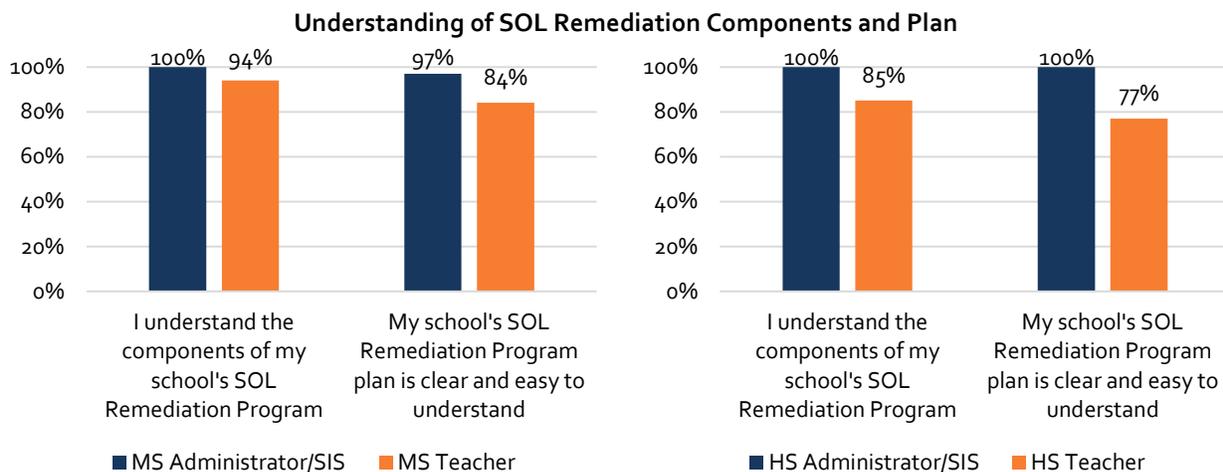
Executive Summary

The School Board approved the 2014-2015 Program Evaluation Schedule, which included a recommendation for a comprehensive evaluation of the Standards of Learning (SOL) Remediation Program at the middle and high school levels. The SOL Remediation Program provides additional targeted instruction and support to students with the primary purpose of ensuring students pass the SOL test. The SOL remediation activities are targeted toward students who have failed or who are at risk of failing any SOL test. The purpose of this evaluation was to assess the implementation of SOL remediation across the division and determine the program's effectiveness using a mixed-methods design with both qualitative and quantitative information. The evaluation focused on the operational components of the program, the students receiving SOL remediation, progress toward meeting the program's goal, staff perceptions, and the additional cost to the school division.

Key Evaluation Findings

Operational Components

- ❖ There was a wide variety of activities across the division that were considered SOL remediation.
- ❖ At the middle school level, 80 percent or more of the 15 schools had at least one administrator or school improvement specialist (SIS) survey respondent who considered the following to be part of SOL remediation: SOL Lab (93%), Algebra Readiness (87%), READ 180 class (87%), tutoring by paid tutors (87%), tutoring by teachers (87%), and academic support class (80%). There was less consensus that other activities were part of SOL remediation.
- ❖ At the high school level, 80 percent or more of the 12 schools had at least one administrator or SIS survey respondent who considered the following to be part of SOL remediation: SOL Boot Camp (100%), tutoring by paid tutors (100%), tutoring by teachers (100%), Algebra Readiness (92%), Algebra/Geometry lab class (92%), and academic support class (83%). There was less consensus across schools that other activities were part of SOL remediation.
- ❖ When asked about their school's SOL remediation plan, 77 percent of middle school administrator/SIS respondents and 54 percent of high school administrator/SIS respondents indicated that there was a formal written plan.
- ❖ A majority of administrators/SISs and teachers at the middle and high school levels indicated that they understood the SOL Remediation Program at their school and that their school's SOL remediation plan was clear and easy to understand.



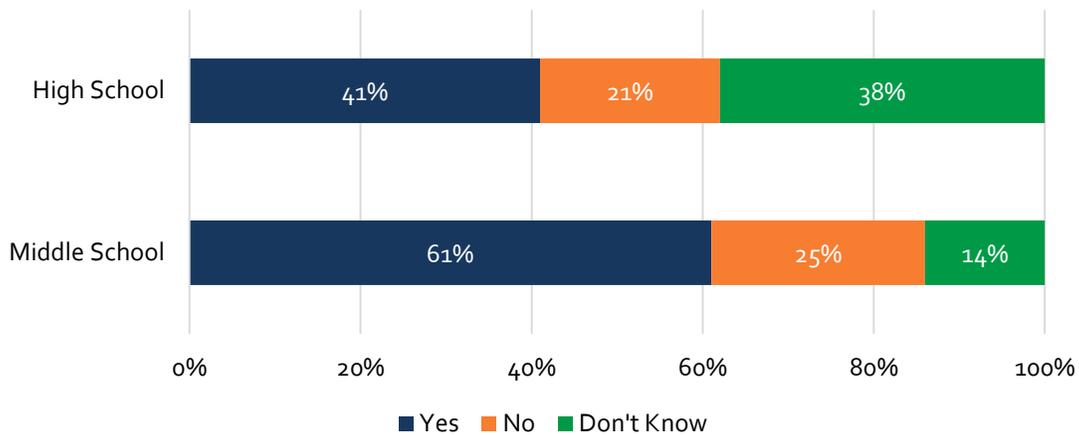
- ❖ Standards of Learning remediation was offered in five subject areas. At the middle and high school levels, mathematics was the most common area for SOL remediation activities.

Percent of Administrator/SIS Survey Respondents Who Indicated Their School Provided SOL Remediation Activities in Subject Areas During 2014-2015

	Middle School (n=30)	High School (n=37)
Mathematics	97%	92%
Reading	90%	86%
Writing	63%	84%
Science	63%	86%
Social Studies/History	53%	86%

- ❖ Standards of Learning remediation activities were offered before school, during school, after school, and weekends. At least 90 percent of survey respondents from both middle and high schools indicated that most SOL remediation activities occurred during school or after school.
- ❖ Responses from administrators and SISs indicated that SOL remediation was generally provided by core teachers or paid tutors.
- ❖ From 41 to 61 percent of middle and high school administrators/SISs indicated that the paid tutors received training in remediation techniques.

Percent of Administrator/SIS Survey Respondents Who Indicated That Paid SOL Remediation Tutors Received Training in Remediation Techniques



- ❖ Based on feedback from principals, tracking student participation for approximately 60 percent of the SOL remediation components was done with Excel spreadsheets, tracking for 35 percent of the components was done using Synergy, and tracking for approximately 15 percent of the components was done with teacher attendance sheets. Participation in some components was not tracked.
- ❖ At the middle school level, 87 to 100 percent of administrators/SISs and teachers agreed that their school tracked student participation, monitored students' progress, and maintained records of whether or not students who participated in SOL remediation passed the corresponding SOL test(s). At the high school level, 74 to 100 percent of respondents agreed with these items.

Students Receiving SOL Remediation

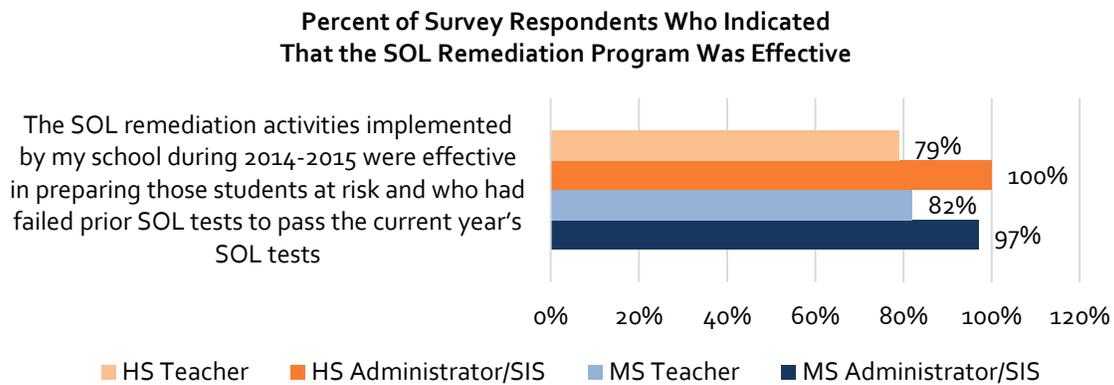
- ❖ Of the SOL remediation components listed by principals at each school, approximately 81 percent were targeted towards students who failed an SOL test, 76 percent were targeted towards students at risk of failing, and 38 percent were targeted towards students who were new to Virginia.
- ❖ Teachers and administrators/SISs at the middle school level indicated that the most commonly used criteria for a student to receive SOL remediation were previous SOL scores and course grades. At the high school level, the most commonly used criteria were course grades followed by prior SOL scores and teacher recommendations.
- ❖ Middle and high school SOL Remediation Program participants' demographic characteristics were compared to the division. Students in SOL remediation across the division were more likely to be African American, economically disadvantaged, or special education students.

Progress Toward Meeting Goal

- ❖ The goal of the SOL Remediation Program is that students who receive remediation pass the corresponding SOL test(s). Overall, the pass rate for all tests taken by students following SOL remediation was 53 percent at the middle school level and 73 percent at the high school level.
- ❖ At the middle school level, passing percentages for remediation students ranged from 40 percent on the grade 8 reading test to 100 percent for the end-of-course (EOC) Earth Science test. High school participants' passing rates on end-of-course tests ranged from 50 percent on the EOC World History I test to 92 percent for EOC Chemistry.
- ❖ When students who were identified as Remediation Recovery Program participants' scores were examined, the overall pass rate on all tests was 45 percent at the middle school level and 69 percent at the high school level.

Staff Perceptions

- ❖ Of the administrators/SISs and core teachers responding to the survey, at least 82 percent at middle school and at least 75 percent at high school agreed that parents supported their school's remediation efforts.
- ❖ Relatively high percentages of staff survey respondents indicated that the SOL Remediation Program at their school was effective in preparing students to pass the corresponding SOL test(s).



Additional Cost

- ❖ The overall cost for SOL remediation at the middle school level was \$419,729, with the largest expenditures related to staffing.
- ❖ The overall cost for SOL remediation at the high school level was \$350,930, with the largest expenditures related to staffing.
- ❖ The overall cost for the SOL remediation, including the cost of instructional supplies used across the middle and high school levels, totaled \$790,901.

Recommendation #1: Compare the SOL remediation activities provided by the schools to the program’s purpose and make recommendations regarding the need to have a more defined and focused SOL Remediation Program across the division. (Responsible Departments: Department of Teaching and Learning and Department of School Leadership)

Rationale: Data collected from principals, assistant principals, and SISs in the fall and spring demonstrated the wide variety of activities that schools offered and considered as part of their SOL Remediation Program. At the middle school level, 80 percent or more of the schools considered the following to be part of SOL remediation: SOL Lab, Algebra Readiness, READ 180 class, tutoring by paid tutors, tutoring by teachers, and academic support class. At the high school level, 80 percent or more of the schools considered the following to be part of SOL remediation: SOL Boot Camp, tutoring by paid tutors, tutoring by teachers, Algebra Readiness, Algebra/Geometry lab class, and academic support class. However, there were multiple other activities that at least some schools considered to be SOL remediation (at least 11 other activities at middle schools and 9 other activities at high schools). There were no activities that all respondents agreed were offered and were part of every school’s SOL Remediation Program. Although administrators and SISs thought that the guidance provided by central administration regarding SOL remediation was “about right” based on survey results, multiple teachers noted in survey comments that there was no formal plan or guidelines at their school, especially at the middle school level. While flexibility is necessary for schools to meet the needs of their students, discussions should occur to determine whether there should be a divisionwide SOL Remediation Program with core elements to provide consistency across schools. Further, given the wide range of passing rates for students participating in SOL remediation at middle schools (40% to 100%) and high schools (50% to 92% on EOC tests), it could be advantageous to identify core SOL Remediation Program activities. The effectiveness of these core activities could then be assessed divisionwide to determine those that provide the most benefit to students given the cost of SOL remediation to the school division.

Recommendation #2: Identify and determine the feasibility of divisionwide methods for collecting student participation data to allow for more efficient and effective means of determining the program’s effectiveness. (Responsible Departments: Department of Teaching and Learning, Department of School Leadership, Department of Technology)

Rationale: Based on the Department of Teaching and Learning’s SOL Remediation Guidelines document, “the progress of each student participating in SOL remediation tutoring must be monitored” and “schools must maintain records of whether each student did or did not meet the expected remediation goal.” Although at least 74 percent of staff at the middle and high schools agreed that their school tracks the participation of students in SOL remediation, monitors progress, and maintains records of whether students pass the corresponding SOL test, not all schools provided detailed participation records that included the subject area of the remediation for the purposes of this evaluation. Schools used various methods with varying levels of details to track participation including school-developed Excel files, several different options in Synergy, and teacher-level attendance sheets. Further, in some cases, schools used different methods of tracking participation even if the type of SOL remediation activity was the same across schools. This resulted in a lack of a consistent and efficient manner in which the student outcome goal of passing the SOL tests could be assessed. In addition, because some records from schools did not contain information about the subject area of the remediation, these students were not able to be included in the analyses. While flexibility for schools to offer various activities to meet their students’ needs is part of the program, it is recommended that divisionwide methods for collecting student participation data be determined at least for the core elements of the division’s SOL Remediation Program that are offered at most or all schools. One potential method for collecting student participation data in SOL remediation activities that could be discussed is developing SOL lab course codes or other identifiers at the division level that are specific to the subject area in which students are receiving remediation.

Recommendation #3: Ensure that tutors in the SOL Remediation Program receive training in remediation techniques and are equipped to provide effective tutoring in specific subject areas. (Responsible Department: Department of Teaching and Learning)

Rationale: According to the Department of Teaching and Learning’s SOL Remediation Guidelines document, “tutors working in SOL Remediation programs must have received training in remediation techniques” and “principals or their designees must certify that all tutors participating in the program have completed training in remediation techniques.” However, based on the spring survey of principals, assistant principals, and SISs, 25 percent of the respondents at the middle school level indicated that the tutors did not receive training and 14 percent did not know. At the high school level, 21 percent of the respondents indicated that the tutors did not receive training and 38 percent did not know. In addition, one of the themes of comments from respondents to the administrator/SIS spring survey was the need for knowledgeable and qualified tutors and the need for training.

Recommendation #4: Identify individual schools that are experiencing success with SOL remediation and conduct a qualitative study of how their programs operate to identify best practices. (Responsible Departments: Department of Planning, Innovation, and Accountability and Department of Teaching and Learning)

Rationale: On the spring survey, 97 to 100 percent of administrators/SISs and 79 to 82 percent of teachers at middle and high schools agreed that the remediation activities at their school were effective in preparing students to pass the SOL tests. In addition, one of the most prevalent themes of the comments from respondents on the spring survey was that their SOL remediation activities were effective. However, at the middle school level, pass rates ranged from 40 to 100 percent for the SOL tests taken by those who had participated in SOL remediation, and pass rates at the high school level ranged from 50 to 92 percent on EOC tests. Given this variation and the variation in activities and methods at each school, a review of the outcome data at each school is recommended for the purpose of selecting individual schools that are experiencing success. After a sample of schools is selected, interviews with the administrators and/or the SISs could help identify any commonalities in practices for the purpose of sharing those best practices with schools across the division.

Introduction

Background

The School Board approved the 2014-2015 Program Evaluation Schedule, which included a recommendation for the Standards of Learning (SOL) Remediation Program at middle and high school levels to undergo a comprehensive evaluation. The SOL Remediation Program was recommended for evaluation by the Program Evaluation Committee primarily due to community and stakeholder interest, cost, and because the program has not been formally evaluated by the Department of Planning, Innovation, and Accountability's Office of Research and Evaluation. Although individual remedial programs have been evaluated by the Office of Research and Evaluation in the past (e.g., Read 180, Middle School Academic Support), the intent of the current evaluation was to focus on activities that were specifically for SOL remediation purposes. The SOL Remediation Program supports students who have failed any SOL assessment or who are at risk of failing any SOL assessment by providing additional instruction.¹ The goal is for participating students to pass the SOL test(s) for which they are receiving remediation.²

Purpose

This evaluation provides the Virginia Beach City Public Schools (VBCPS) School Board and the Superintendent with information about the SOL Remediation Program's operation in middle and high schools. Because the initiative operates with local resources, evaluation of the initiative is required by School Board Policy 6-26. The comprehensive evaluation of the SOL Remediation Program at the middle and high school levels focuses on the operational components of the program such as SOL remediation activities, staffing, and monitoring; characteristics of students who received services; progress made toward meeting the program goal; staff perceptions of SOL remediation; and the additional cost to the division.

Program Overview

The Standards of Learning (SOL) Remediation Program in VBCPS includes additional instruction for students who have failed or are at risk of failing any SOL assessment. Based on the Department of Teaching and Learning's SOL Remediation Guidelines document, the additional instruction in middle school may occur before or after school, on weekends, or during noncore hours within the school day. Additional instruction in high school may occur before or after school, on weekends, or during lunch and/or study blocks. A subset of the SOL Remediation Program is the Remediation Recovery Program (RRP). In accordance with the Virginia Department of Education's (VDOE) Virginia

Standards for Accrediting Schools (Standard: 8 VAC 20-131-30.C), school divisions may voluntarily implement a remediation recovery program for students in English (Reading) and/or mathematics to encourage successful remediation of students who do not pass certain SOL tests in English and mathematics.³ Local school divisions are responsible for developing an RRP with the guidance that "it is important that each school be given the flexibility to customize its RRP to best meet the needs of its community."⁴ Students who are successfully remediated and pass the applicable SOL test(s) contribute positively to the school's accreditation rating. In order to comply with VDOE's guidance, schools must maintain evidence of student participation in RRP. The school improvement specialist (SIS) at each school is responsible for planning, coordinating, and overseeing intervention, remediation, and tutoring activities at the school site under the direction of the principal.⁵

During the initial planning for the evaluation of SOL remediation, it became apparent that there was limited documentation regarding SOL remediation at the division level. The SOL Remediation Guidelines document from the Department of Teaching and Learning provides guidance on the purpose of remediation, the role of the site coordinator, the goal of SOL remediation, expenses, transportation, and tutor requirements, but does not address instructional elements of SOL remediation. The Remediation Recovery Program memorandums to middle and high school principals from the departments of Teaching and Learning and Planning, Innovation, and Accountability specify that "instruction in the program will be focused on the identified content deficiencies of each individual student related to the applicable SOL test(s)" and that a variety of instructional strategies and tools will be utilized. As a result, one of the elements of the evaluation included gathering information from schools about the activities that were considered part of their SOL Remediation Program. To gather this information and for the purpose of this evaluation, SOL remediation was defined as targeted additional instruction and support that is provided to students with the *primary* purpose of ensuring that students pass the SOL test. As noted previously, the target population of students for SOL remediation included students who have failed or who were at risk of failing *any* SOL test.

Program Goals and Objectives

The overarching goal of the SOL Remediation Program was that participating students pass the SOL tests that corresponded to the subject for which they received remediation. To assess this goal, the percentage of students who participated in any type of SOL remediation (as defined by each school) who passed the corresponding SOL test was analyzed by subject area.⁶ As a subset of SOL remediation,

the percentage of students who completed an RRP and passed the corresponding SOL test was also analyzed by subject area. Table 1 displays the SOL tests that had SOL remediation activities associated with them in middle and high schools.

Table 1: Tests Associated With SOL Remediation Activities by School Level

Middle School	High School
Grades 6, 7, and 8 Reading	Grade 8 Reading
Grade 8 Writing	Grade 8 Mathematics
Grades 6, 7, and 8 Mathematics	EOC Reading
Grade 8 History and Social Science	EOC Writing
Grade 8 Science	EOC Algebra I
EOC Algebra I	EOC Algebra II
EOC Geometry	EOC Geometry
EOC Earth Science	EOC Virginia & US History
	EOC World Geography
	EOC World History I
	EOC World History II
	EOC Biology
	EOC Chemistry
	EOC Earth Science

Evaluation Design and Methodology

Evaluation Design

The purpose of the evaluation was to assess the implementation of and student outcomes related to the SOL Remediation Program. The evaluation utilized a mixed-methods design to collect both quantitative and qualitative information about the program during 2014-2015. Interviews with central office staff and selected principals were conducted, school-based staff responded to questionnaires and surveys, and data regarding student characteristics and outcomes were collected from the VBCPS data warehouse based on student participation data submitted by the schools, as well as participation data available in the data warehouse.

The evaluation assessed SOL passing rates by subject for students who participated in SOL remediation as an overarching program, as well as for students who were specifically identified as participating in the Remediation Recovery Program. Passing percentages were calculated for the overall division.

Evaluation Questions

Evaluators in the Office of Research and Evaluation developed the evaluation questions. The questions focused on areas that are typically addressed in comprehensive

evaluations within the school division. The specific questions for the 2014-2015 comprehensive evaluation are listed below.

- What were the operational components of the SOL Remediation Program implementation?**
 - What types of activities did schools consider to be part of their SOL Remediation Program?
 - In what subject areas were SOL remediation provided?
 - When was SOL remediation provided?
 - Who provided SOL remediation to students?
 - Were SOL remediation tutors trained in remediation techniques?
 - How did schools track and monitor students who participated in SOL remediation?
- Who were the students who received SOL remediation?**
 - What was the target population for SOL remediation?
 - What measures did schools use to identify students for SOL remediation?
 - What were the demographic characteristics of students who received SOL remediation (i.e., grade, gender, ethnicity, socioeconomic status, special education status, gifted status)?
- What progress was made toward meeting the goal of the SOL Remediation Program?**
- What were staff perceptions of the SOL Remediation Program?**
- What was the additional cost of the SOL Remediation Program to the school division during 2014-2015?**

Instruments and Data Sources

Multiple instruments and data sources were used to gather data for the evaluation throughout the 2014-2015 school year. Quantitative data were gathered through the VBCPS data warehouse and survey responses. Qualitative data were collected through informational meetings and open-ended questionnaire and survey questions. The specific data collection methods utilized by evaluators from the Office of Research and Evaluation are outlined below.

- ✦ Examined SOL remediation documentation.
- ✦ Conducted informational meetings with the division's academic support coordinator and school improvement specialists (SIS).
- ✦ Collected implementation-related data from middle school and high school principals and SISs via interviews, presurveys, and questionnaires at the beginning of the school year.
- ✦ Collected student participation data from SISs quarterly throughout the school year.

- ❖ Collected student participation data from the VBCPS data warehouse when possible (e.g., Remediation Recovery Program, participation in courses that the schools designated as part of their SOL Remediation Program).
- ❖ Collected data from the VBCPS data warehouse related to student demographic characteristics and SOL performance.
- ❖ Collected survey data from principals, assistant principals, SISs, and core teachers at the end of the school year.
- ❖ Collected budget and cost information from the Department of Budget and Finance and the Office of Differentiated Academic Programs and Professional Learning in the Department of Teaching and Learning.

Surveys

The Department of Planning, Innovation, and Accountability developed several questionnaires and surveys to gather information about the schools' SOL Remediation Program from middle and high school administrators, school improvement specialists, and core teachers. The questionnaires were focused on gathering factual information about the schools' activities from those who implemented the program, while the surveys were focused on gathering perception data.

- ❖ **School Improvement Specialist Questionnaire** – A questionnaire was developed to gather preliminary background information about the schools' SOL Remediation Program. The questionnaire focused on the subject areas in which the schools provided remediation, the target population who received the services, when and how remediation occurred, and the process the schools used to track or monitor students who received SOL remediation. The questionnaire was completed by SISs at a regularly scheduled SIS meeting on September 11, 2014. A total of 14 middle school-level sites and 12 high school-level sites completed the questionnaire.
- ❖ **Principal Questionnaire** – The principal questionnaire was developed to capture information on each specific component of the schools' SOL Remediation Program. The principals were asked to identify a component and then answer questions regarding the component. They provided a description of the component, the subject areas addressed, the time when it occurred, the target group, how participation was monitored, whether all students who participated in the component specifically received SOL remediation, and whether students earned course credit for participating. Principals responded to these questions for each SOL remediation component they identified. They were also asked to identify the top three components that were central to their school's SOL remediation efforts. The questionnaire was

administered online in October 2014, and all middle and high school principals provided the requested information.

- ❖ **Principal, Assistant Principal, and School Improvement Specialist Survey** (administrator/SIS survey) – An instrument gauged administrators' and SISs' perceptions of SOL remediation in their schools. The survey included closed-ended questions regarding demographics, perceptions of the program, activities utilized and considered SOL remediation at schools, SOL remediation funding, and overall perceptions of SOL remediation. Additionally, there was one open-ended question where respondents were able to provide any additional information about SOL remediation activities. The survey was administered online in June 2015. A total of 30 (48%) middle school principals, assistant principals, and school improvement specialists responded to the survey, and a total of 37 (52%) high school principals, assistant principals, and school improvement specialists responded. A total of 15 middle school-level sites (100%) and 11 high school-level sites (92%), along with Renaissance Academy, were represented in the results based on the respondents.
- ❖ **Core Teacher Survey** (teacher survey) – An instrument gauged teachers' perceptions of SOL remediation in their schools. The survey included closed-ended questions regarding demographics, perceptions of the SOL Remediation Program, and overall perceived effectiveness of specific activities. Additionally, there was one open-ended question where respondents were able to provide any additional information about SOL remediation activities. The survey was administered online in June 2015. A total of 374 (64%) middle school core teachers and 339 (45%) high school core teachers responded to the survey. A total of 15 middle school-level sites (100%) and 12 high school-level sites (100%), along with Renaissance Academy, were represented in the results based on the respondents. Core teachers who responded to the survey were asked to indicate whether they provided SOL remediation to students who failed or were at risk of failing an SOL test during 2014-2015. Of the 374 middle school teachers who responded, 89 percent indicated that they provided SOL remediation. Of the 339 high school teachers who responded, 79 percent indicated that they provided SOL remediation.

Data Analysis

Each school's school improvement specialist or designee was asked to submit student participation data quarterly to the Office of Research and Evaluation. In order to reduce the data collection burden on the schools, schools were asked to submit the participation data in any format that they currently used to track or monitor students. Data were received in a

variety of formats such as Microsoft Excel, Google docs, emails, and paper copies. In addition, the information that was provided varied by school with some schools specifying details such as the subject area of the remediation, the type of remediation, who provided the remediation, and the topics addressed, while other schools provided minimal information. The Office of Research and Evaluation staff merged all data files to create a master student participation file from the various documentation that was received. The master participation data file included the school name, the student's identification number if available or able to be found by the Office of Research and Evaluation staff members, the subject for which SOL remediation was received if available, and the quarter in which it was received. In addition to the data received directly from the schools, the evaluators reviewed the fall principal questionnaire results for any student information system (i.e., Synergy) course codes that schools indicated they used to identify students receiving SOL remediation. Student lists were then compiled based on the course codes supplied by principals if the principals indicated that *all* students participating in the course received SOL remediation. Data from all sources were combined, unduplicated by subject area, and merged with demographic data and SOL results data from the VBCPS data warehouse using query statements. Student demographic and SOL performance data were then extracted from the data warehouse and exported to Microsoft Excel spreadsheet files to allow for data analysis.

Due to the variety of formats used by the schools to collect SOL remediation data, there were several limitations that impacted the quality of the data for this evaluation. In some cases, the subject area in which the student was receiving SOL remediation could not be identified. In other cases, students' identification numbers were not provided by the schools and the students could not be matched with students in VBCPS based on the information provided. Therefore, data from these students could not be used in the analyses for this evaluation. Furthermore, there were multiple SOL remediation components noted by the schools in the principal questionnaire where there was no tracking or monitoring of student participation or participation was kept on paper sign-in sheets, in teacher gradebooks, or on attendance forms that would not necessarily be accessible to the SIS to submit to the Office of Research and Evaluation. It is difficult to obtain an accurate assessment of the impact of this missing data on the evaluation. However, as an indication, at least 45 student records provided by the schools could not be matched with a student in the data system, and over 5,500 records of enrollment in course codes associated with SOL remediation that were provided by principals could not be included because the subject area associated with the remediation was unknown (unless schools provided the records as part of their own in-house recordkeeping system with the subject area specified).

For questionnaire and survey data, research and evaluation staff downloaded survey results from the online SurveyMonkey system. Survey agreement percentages reported in the evaluation were based on those who answered the survey item.

Evaluation Results and Discussion

The comprehensive evaluation focused on the operation of SOL remediation and student outcomes. The following sections of the report provide the results associated with each evaluation question and a discussion of the results. Results are provided separately for middle and high schools. Where appropriate, details of the Remediation Recovery Program are discussed separately.

Operational Components

The first evaluation question focused on the operational components of the SOL Remediation Program. This evaluation question addressed elements of SOL remediation activities, including subject areas in which remediation was provided and when remediation was provided; who provided remediation and whether they received training in remediation; and methods of monitoring students who participated in SOL remediation.

SOL Remediation Activities

It was essential to determine what schools considered as SOL remediation activities because schools have the flexibility to design their remediation activities to meet their students' needs and there was little documentation about SOL remediation activities at the division level. On the fall principal questionnaire, preliminary information was gathered by asking all principals to list the components of their SOL Remediation Program and provide details about the components. Principals listed a variety of components, some of which were mentioned by multiple schools and others that were unique to specific schools. Appendix A provides descriptions of the various activities based on information provided by the principals.

Based on the list of all components mentioned by the schools, the spring survey for principals, assistant principals, and school improvement specialists was developed to assess the extent to which all schools offered the various activities during 2014-2015 and whether they were considered to be part of the schools' SOL Remediation Program. Tables 2 and 3 display the percentages of the respondents (i.e., principals, assistant principals, school improvement specialists) who indicated that an activity was offered and that it was part of SOL remediation. The tables also display the percentage of the *schools* that offered an activity and considered it part of SOL remediation based on the schools represented in the survey results (15 middle schools and 12 high schools).

A school was included in the list if at least one of the staff members indicated the activity was offered or part of SOL remediation.

As the results show in Table 2 for middle school and Table 3 for high school, there was a wide variety of activities across the division that were considered SOL remediation. At the middle school level, the activities with the highest percentage of respondents indicating they consider it as an SOL remediation activity were SOL Lab (93%), tutoring by paid tutors (83%), and tutoring by teachers (80%). At the middle school level, 80 percent or more of the 15 schools had at least one administrator or SIS respondent who considered the following to be part of SOL remediation: SOL Lab (93%), Algebra Readiness (87%), READ 180 class (87%), tutoring by paid tutors (87%), tutoring by teachers (87%), and academic support class (80%). There was less consensus that other activities were part of SOL remediation.

At the high school level (see Table 3), the activities with the highest percentage of respondents indicating they consider it as an SOL remediation activity were tutoring by paid tutors (92%), SOL Boot Camp (89%), and tutoring by teachers (81%). At the high school level, 80 percent or more of the 12 schools had at least one administrator or SIS respondent who considered the following to be part of SOL remediation: SOL Boot Camp (100%), tutoring by paid tutors (100%),

tutoring by teachers (100%), Algebra Readiness (92%), Algebra/Geometry lab class (92%), and academic support class (83%). There was less consensus across schools that other activities were part of SOL remediation.

It should be noted that there were large discrepancies between the percentage of schools that provided the activities and the percentage that considered it an SOL remediation activity. Furthermore, it is evident from the large range of results that there is little consensus across schools as to what is considered an SOL remediation activity. When examining these results from a divisionwide perspective, it appears that very few activities could be considered as part of a divisionwide SOL Remediation Program. Rather, schools implement varied activities as part of school-specific programs. This finding has a large impact on the ability to evaluate the effectiveness of a divisionwide SOL Remediation Program because effectively, a divisionwide program does not exist. However, the schools appeared to be satisfied with the amount of guidance provided by central administration regarding SOL remediation. Ninety percent (90%) of middle school and 85 percent of high school administrators/SISs indicated that the guidance provided by central administration was “about right.” There was a somewhat greater percentage of high school respondents who indicated the guidance provided was “not enough” (15%) compared to middle school respondents (7%).

Table 2: Middle School Activities Provided and Considered as SOL Remediation

Activity	Results Based on Percentage of Respondents (n = 30)		Results Based on Percentage of Schools Represented in Results (n = 15)	
	Provided by School	Consider it SOL Remediation	Provided by School	Consider it SOL Remediation
Academic Support Class	90%	77%	93%	80%
Algebra Readiness	97%	70%	100%	87%
Algebra/Geometry Lab Class	13%	10%	20%	13%
Core Plus	77%	33%	87%	47%
Homework Center	50%	13%	67%	20%
Independent Reading for Middle School	93%	57%	93%	73%
Math Center	17%	7%	27%	7%
Read 180 Class	93%	67%	93%	87%
Saturday School	23%	7%	47%	13%
SOL Boot Camp	73%	73%	73%	73%
SOL Lab	93%	93%	93%	93%
Special Education Resource Class	80%	43%	87%	67%
Study Block	10%	3%	20%	7%
Tutoring by Paid Tutors	93%	83%	93%	87%
Tutoring by Peers/Students	33%	10%	47%	13%
Tutoring by Teachers	97%	80%	100%	87%
Writing/Literacy Center	17%	17%	27%	27%

Note: Activities that were not considered to be part of SOL remediation by any respondents were not included in the table.

Table 3: High School Activities Provided and Considered as SOL Remediation

Activity	Results Based on Percentage of Respondents (n = 37)		Results Based on Percentage of Schools Represented in Results (n = 12)	
	Provided by School	Consider it SOL Remediation	Provided by School	Consider it SOL Remediation
Academic Support Class	89%	35%	100%	83%
Algebra Readiness	81%	65%	92%	92%
Algebra/Geometry Lab Class	86%	68%	100%	92%
Effective Reading Skills for High School	84%	46%	100%	67%
Math Center	5%	3%	17%	8%
Read 180 Class	76%	46%	100%	67%
Saturday School	19%	8%	42%	25%
SOL Boot Camp	92%	89%	100%	100%
SOL Lab	59%	54%	83%	75%
Special Education Resource Class	86%	46%	100%	75%
Study Block	59%	22%	100%	58%
Tutoring by Paid Tutors	92%	92%	100%	100%
Tutoring by Peers/Students	73%	32%	83%	67%
Tutoring by Teachers	89%	81%	100%	100%
Writing/Literacy Center	27%	22%	50%	33%

Note: Activities that were not considered to be part of SOL remediation by any respondents were not included in the table.

On the spring survey, administrators, SISs, and core teachers were asked about their school’s SOL Remediation Program plan. Table 4 displays the percentage of survey respondents who indicated the various levels of program formality at their school. At the middle school level, 77 percent of administrator/SIS respondents and 54 percent of core teacher respondents indicated that there was a formal written plan. Percentages were lower at the high school level with 54 percent of administrator/SIS respondents and 30 percent of core teacher respondents indicating that there was a formal written plan. Most other respondents at both levels indicated there was an established plan, but it was not written.

Table 4: Percent of Survey Respondents Who Indicated Their School Had a Formal SOL Remediation Plan by Level

Status of SOL Remediation Program Plan	Middle School		High School	
	Administrator/SIS	Core Teacher	Administrator/SIS	Core Teacher
There is a formal written plan	77%	54%	54%	30%
There is an established plan but it is not written	23%	25%	43%	32%
There is no established plan	0%	8%	0%	8%
Don't Know	0%	13%	3%	29%

Respondents to the spring survey were also asked about their understanding of their school’s program and the extent to which it was clear and easy to understand. Figure 1 provides the percentage of middle school respondents who agreed with the statements, and Figure 2 provides the agreement percentages for high school respondents. As may be expected, administrators and SISs who administer the SOL remediation plan were more likely to agree that they understood the components and that the plan was clear and easy to understand. Middle school core teacher respondents were more likely to agree with the survey items than high school core teacher respondents.

Figure 1: Middle School Understanding of SOL Remediation Components and Plan

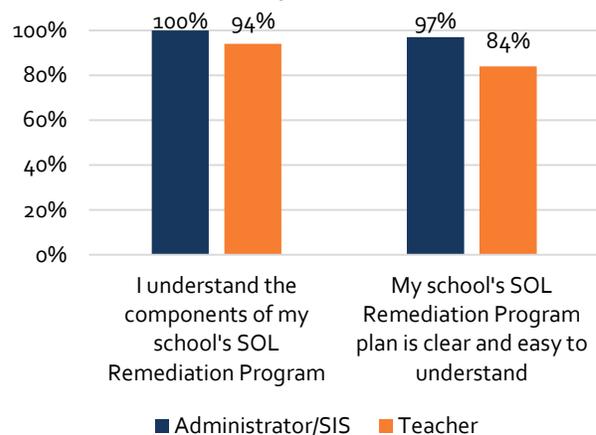
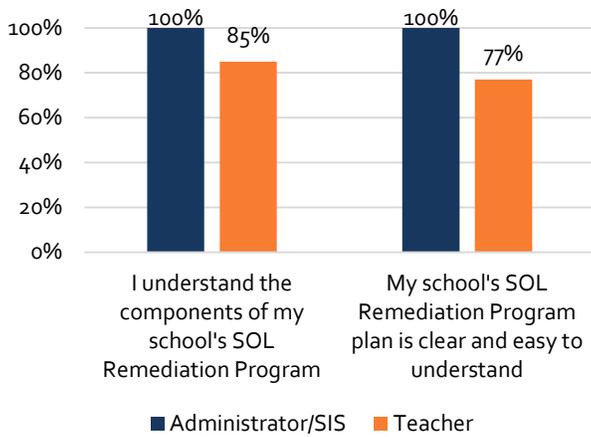


Figure 2: High School Understanding of SOL Remediation Components and Plan



Subject Areas. Across the division, SOL remediation was offered in the subject areas of mathematics, reading, writing, science, and social studies/history. Principals, assistant principals, and school improvement specialists were asked on the spring survey to select the subject areas for their SOL remediation efforts. Table 5 displays the percentage of respondents who indicated their school provided SOL remediation activities in a specific area. At both middle and high school levels, the largest percentage of respondents indicated that SOL remediation was provided in mathematics (97% and 92%, respectively). At middle schools, most SOL remediation efforts appeared to be in mathematics and reading. At high schools, SOL remediation efforts were more evenly distributed among all subject areas. These results were also consistent with the results from the fall principal questionnaire which showed that the largest percentage of SOL remediation components at the middle school level were focused on mathematics and reading, while the focus of SOL remediation at the high school level was distributed more across all subject areas.

Table 5: Subject Areas for SOL Remediation Efforts

	Middle School (n=30)	High School (n=37)
Mathematics	97%	92%
Reading	90%	86%
Writing	63%	84%
Science	63%	86%
Social Studies/History	53%	86%

Time Remediation Activities Were Provided.

According to the Department of Teaching and Learning's SOL Remediation Guidelines document, additional instruction may occur before or after school, on weekends, or during noncore hours within the school day (e.g., lunch, study blocks). Principals, assistant principals, and school improvement specialists were asked about the use of these different options during 2014-2015. Table 6 displays the percentage of survey respondents who selected the various times in which their school provided SOL remediation

activities. At both middle and high schools, the largest percentages of respondents indicated that SOL remediation was provided during school hours or after school (90% or higher). Middle schools were more likely than high schools to indicate that they provided SOL remediation before school, while high schools were more likely than middle schools to indicate that they provided SOL remediation on weekends. These results were also consistent with the results from the fall principal questionnaire which showed that the largest percentage of SOL remediation components at both levels occurred during the regular instructional day and after school.

Table 6: Time During Which SOL Remediation Activities Were Provided

	Middle School	High School
Before School	60%	19%
During School	93%	92%
After School	90%	92%
Weekends	7%	46%

Staffing Related to SOL Remediation Activities

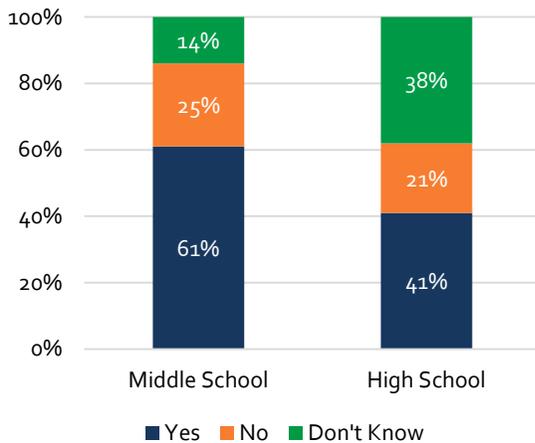
The SIS at each school plays a major role in the SOL remediation activities. As stated in the job description for a SIS, the SIS is responsible for planning and coordinating remediation activities as well as identifying appropriate remediation services for students based on test scores and course grades. Additionally, the SIS is responsible for coordinating the staff and/or substitutes necessary to facilitate SOL remediation programs. Schools use a variety of sources to staff the programs including core teachers, paid tutors, peer tutors (students), and volunteer tutors. Table 7 displays the percentage of principals, assistant principals, and school improvement specialists who indicated that the various staff members provided SOL remediation during 2014-2015. Results from respondents at middle schools indicated that SOL remediation was generally provided by core teachers (93%) or paid tutors (90%). This was also the case at the high school level with 92 percent of respondents indicating that the remediation was provided by core teachers or paid tutors. The use of peer tutors and volunteer tutors to provide SOL remediation was more prevalent at the high school level. In addition to the four aforementioned categories, one middle school respondent indicated the Advancement Via Individual Determination (AVID) teacher provided SOL remediation, while another respondent noted that teaching assistants also provided remediation. Four high school respondents indicated that special education teachers provided SOL remediation.

Table 7: Staff Members Providing SOL Remediation

	Middle School	High School
Core Teachers	93%	92%
Paid Tutors	90%	92%
Peer Tutors (Students)	17%	46%
Volunteer Tutors	13%	35%

Training Received by Providers. According to the Department of Teaching and Learning’s SOL Remediation Guidelines document, “tutors working in SOL Remediation programs must have received training in remediation techniques.” The spring survey assessed the extent to which this occurred based on responses from principals, assistant principals, and school improvement specialists. Figure 3 displays the percentages of these respondents who indicated if the paid tutors utilized for SOL remediation received training in remediation techniques. At the middle school level, 61 percent of respondents indicated that the tutors received training in remediation techniques, while 25 percent indicated the tutors did not receive training. Additionally, 14 percent of respondents indicated they did not know if the tutors received training. At the high school level, 41 percent of respondents indicated that the SOL tutors received training, while 21 percent indicated that the tutors did not receive training. Furthermore, 38 percent of high school survey respondents did not know if the tutors received training.

Figure 3: Extent to Which Paid SOL Remediation Tutors Received Training in Remediation Techniques



Tracking and Monitoring Students Who Participated in SOL Remediation

Based on the SIS job description, the SIS at each school is responsible for tracking and monitoring students through the SOL Remediation Program. Based on the initial fall questionnaire completed by each SIS, it became apparent that schools had a variety of methods for tracking student participation and monitoring students’ progress. In addition to differences in what schools considered as SOL

remediation, there were differences in methods for tracking student participation. Some schools kept detailed spreadsheets (e.g., Excel, google docs) that all SOL remediation staff had access to and used to enter students in real time. Other schools had students sign in on paper when they arrived for remediation activities or teachers tracked attendance using attendance sheets or their gradebook. Other schools viewed specific classes as SOL remediation and, therefore, used the course lists generated in Synergy, the division’s student information system. In contrast, some schools did not keep records of students’ participation in certain activities that they considered SOL remediation (e.g., tutoring, after school help offered by teachers). To gather preliminary information on methods and the extent to which participation in various SOL remediation activities was monitored, principals were asked how they tracked participation on the fall principal questionnaire for each SOL remediation component they listed. Tracking participation for approximately 60 percent of the components was done with Excel spreadsheets, tracking for 35 percent of the components was done using Synergy (although not always using the same method), and tracking for approximately 15 percent of the components was done with attendance sheets (usually by the individual teacher). For at least 5 percent of the components listed, participation was not tracked according to principals.

Based on the Department of Teaching and Learning’s SOL Remediation Guidelines document, “the progress of each student participating in SOL remediation tutoring must be monitored.” Further, “schools must maintain records of whether each student did or did not meet the expected remediation goal” which is to pass the SOL test. On the spring survey, school staff members were asked to express their level of agreement to statements regarding their school’s tracking and monitoring practices related to SOL remediation. Figure 4 displays the percentage of middle school administrators/SISs and teachers who agreed that their school tracks participation of students in SOL remediation activities, that their school monitors the progress of students participating in SOL remediation, and that their school maintains records of students who participated in SOL remediation and whether they passed the corresponding test(s). Results showed that relatively high percentages of staff agreed with the survey items (87% or higher), although teachers demonstrated lower agreement than administrators and SISs involved in implementing the program.

Figure 4: Middle School Percent of Staff Who Agreed That Their School Tracks, Monitors, and Maintains Records of SOL Remediation Students

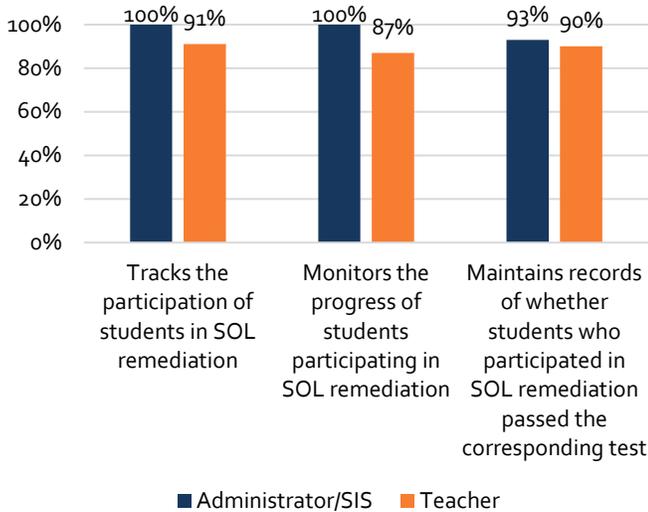
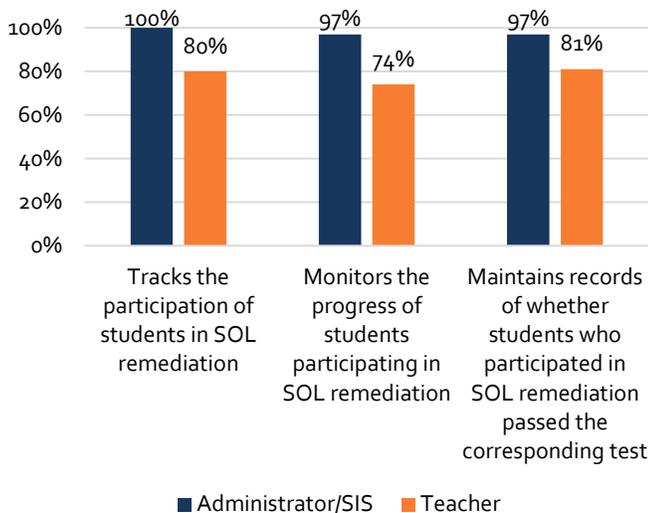


Figure 5 displays the percentage of high school administrators/SISs and teachers who agreed that their school tracks participation, monitors progress, and maintains records. At the high school level, all administrators/SISs agreed that their school tracks participation, and 97 percent indicated that their school monitors the progress of remediation students and maintains records. Lower percentages of teachers agreed with the statements, with less than 80 percent agreeing that their school monitors the progress of students participating in SOL remediation.

Figure 5: High School Percent of Staff Who Agreed That Their School Tracks, Monitors, and Maintains Records of SOL Remediation Students



Students Receiving SOL Remediation

Target Population

According to documentation from the Department of Teaching and Learning, SOL remediation should be provided to students who have failed SOL tests and those at risk of failing. Remediation Recovery is targeted towards students who fail certain English and mathematics SOL tests, including the grade 8 reading and mathematics tests and the end-of-course reading, Algebra I, Algebra II, and Geometry tests. Based on the fall principal questionnaire, the principals confirmed that these groups of students were generally the target audience for SOL remediation. Of all the SOL remediation components listed by principals at each school, approximately 81 percent were targeted towards students who have failed an SOL test, 76 percent were targeted towards students at risk of failing, and 38 percent were targeted towards students who were new to Virginia.

Identification Methods

Administrators, SISs, and teachers were asked to indicate which methods (e.g., attendance, course grades, previous SOL scores, and teacher recommendations) were used to identify students for SOL remediation. Table 8 displays the percentage of middle school respondents who indicated specific measures were used to identify students for SOL remediation. At the middle school level, the most prevalent identification methods based on administrator/SIS and teacher responses appeared to be course grades and previous SOL scores. Administrators/SISs also were more likely to indicate that teacher recommendations were used to identify students for SOL remediation compared to teachers.

Table 8: Percent of Middle School Administrators/SISs and Teachers Who Indicated the Identification Methods for SOL Remediation at Their School

Identification Method	Administrator/SIS	Teacher
Attendance	63.3%	38.2%
Course Grades	96.7%	84.8%
Previous SOL Scores	93.3%	94.4%
Teacher Recommendations	93.3%	67.4%
Other	23.3%	10.2%

Table 9 displays the percentage of high school respondents who indicated specific measures were used to identify students for SOL remediation. At the high school level, the most prevalent identification methods based on administrator/SIS and teacher responses appeared to be course grades and previous SOL scores. Administrators/SISs also were more likely to indicate that teacher recommendations were used to identify students for SOL remediation compared to teachers.

Table 9: Percent of High School Administrators/SISs and Teachers Who Indicated the Identification Methods for SOL Remediation at Their School

Identification Method	Administrator/SIS	Teacher
Attendance	75.7%	48.7%
Course Grades	89.2%	72.6%
Previous SOL Scores	86.5%	66.1%
Teacher Recommendations	89.2%	64.9%
Other	24.3%	14.2%

Demographic Characteristics of Students

Based on the collection of participation data from individual schools and from the VBCPS data warehouse, the demographic characteristics of students who received SOL remediation were analyzed. Table 10 displays the demographics for middle school students who received SOL remediation and the division’s middle school population for comparison. When compared to the division, a higher percentage of middle school students who received SOL remediation services were African American, economically disadvantaged, or special education students, while a lower percentage of SOL remediation students were Caucasian or gifted. The grade levels of the students who received SOL remediation were relatively evenly distributed across sixth (32%), seventh (34%), and eighth (35%) grades.

Table 10: Demographic Characteristics of Middle School SOL Remediation Students

Student Demographics	SOL Remediation (n=5,602)	Division (N=15,662)
Female	46.4%	49.0%
Male	53.6%	51.0%
African American	37.2%	24.5%
American Indian	0.3%	0.2%
Asian	4.4%	6.0%
Caucasian	38.9%	50.7%
Hispanic	10.4%	9.7%
Native Hawaiian	0.4%	0.5%
Two or More Ethnicities	8.4%	8.3%
Economically Disadvantaged	52.4%	38.5%
Special Education	19.7%	10.5%
Gifted	4.5%	16.6%

Table 11 displays the demographics for high school students who received SOL remediation and the division’s high school population for comparison. When compared to the division, a higher percentage of high school students who received SOL remediation services were African American, economically disadvantaged, or special education students, while a lower percentage of SOL remediation students were Caucasian or gifted. The students who received SOL

remediation were most likely to be in ninth grade (44%) followed by tenth grade (28%). Fewer students were in eleventh (17%) and twelfth (10%) grades.

Table 11: Demographic Characteristics of High School SOL Remediation Students

Student Demographics	SOL Remediation (n=3,772)	Division (N=16,972)
Female	51.4%	49.5%
Male	48.6%	50.5%
African American	36.0%	25.4%
American Indian	0.3%	0.3%
Asian	5.3%	6.2%
Caucasian	41.2%	50.7%
Hispanic	10.7%	9.6%
Native Hawaiian	0.4%	0.4%
Two or More Ethnicities	6.2%	7.2%
Economically Disadvantaged	41.4%	33.5%
Special Education	12.7%	8.9%
Gifted	8.0%	16.0%

Progress Toward Meeting Goal

The student outcome goal of the SOL Remediation Program is that students who receive remediation in the various subject areas will pass the corresponding SOL tests.⁷ Tables 12 and 13 display the percent of all SOL remediation students and the subset of remediation recovery students who passed the tests by subject and level. Division results are presented for reference.

At the middle school level, the percent of SOL remediation students passing their SOL tests ranged from 40 percent for grade 8 reading to 100 percent for EOC Earth Science. The highest passing rates were for high school level end-of-course tests and lower for the middle school SOL tests. Remediation students had lower passing rates on all tests when compared to the division except for the EOC Earth Science test. The passing rates for remediation recovery students ranged from 34 percent (grade 7 mathematics and grade 8 reading) to 89 percent (Algebra I). When compared to the division and all middle school remediation students, remediation recovery students had lower passing rates on all comparable tests. Overall, the pass rate for all tests that were taken by SOL remediation students was 53 percent and 45 percent for remediation recovery students. These were substantially lower than the 83 percent pass rate for the middle school students.

Table 12: Percent of Middle School SOL Remediation and Remediation Recovery Students Who Passed Corresponding SOL Test(s)

Test	All Remediation		Remediation Recovery		Division - MS	
	# Who Took Test	% Pass	# Who Took Test	% Pass	# Who Took Test	% Pass
EOC Algebra I	366	98%	45	89%	2,711	99%
EOC Earth Science	10	100%			2,195	100%
EOC Geometry	92	99%			1,051	100%
Grade 6 Mathematics	1,245	65%	865	57%	3,975	85%
Grade 6 Reading	1,554	48%	903	42%	5,129	82%
Grade 7 Mathematics	1,272	42%	915	34%	4,141	72%
Grade 7 Reading	1,530	50%	996	47%	5,168	84%
Grade 8 Writing	380	44%			5,208	73%
Grade 8 History & Social Science	153	76%			5,159	91%
Grade 8 Mathematics	1,343	59%	1,065	52%	3,529	78%
Grade 8 Reading	1,373	40%	894	34%	5,216	80%
Grade 8 Science	234	66%			5,108	84%
Overall	9,552	53%	5,683	45%	48,590	83%

At the high school level, the percent of SOL remediation students passing their end-of-course SOL tests ranged from 50 percent for EOC World History I to 92 percent for EOC Chemistry. Passing rates for the two middle school tests were lower. Remediation students had higher passing rates on the Algebra I, Algebra II, Chemistry, and grade 8 SOL tests compared to the division test takers. When compared to the division, remediation recovery students had higher passing rates on the EOC Algebra I and grade 8 reading tests, but a lower passing rate than the division on the EOC Reading test. Overall, the pass rate for all tests that were taken by SOL remediation students was 73 percent and 69 percent for remediation recovery students. These were noticeably lower than the 82 percent pass rate for the high school students.

Table 13: Percent of High School SOL Remediation and Remediation Recovery Students Who Passed Corresponding SOL Test(s)

Test	All Remediation		Remediation Recovery		Division - HS	
	# Who Took Test	% Pass	# Who Took Test	% Pass	# Who Took Test	% Pass
EOC Algebra I	1,354	72%	397	77%	3,162	69%
EOC Algebra II	713	89%			4,113	86%
EOC Biology	142	72%			5,363	83%
EOC Chemistry	354	92%			3,537	89%
EOC Earth Science	296	58%			3,447	71%
EOC Reading	274	70%	25	84%	5,131	90%
EOC Writing	181	75%			5,184	84%
EOC Geometry	890	69%	*	*	3,872	73%
EOC VA & US History	114	57%			5,035	86%
EOC World Geography	41	83%			1,622	94%
EOC World History I	104	50%			5,092	78%
EOC World History II	128	70%			3,604	79%
Grade 8 Mathematics	15	7%	*	*	36	3%
Grade 8 Reading	86	30%	84	31%	99	27%
Overall	4,692	73%	515	69%	49,297	82%

*Less than 10 test takers

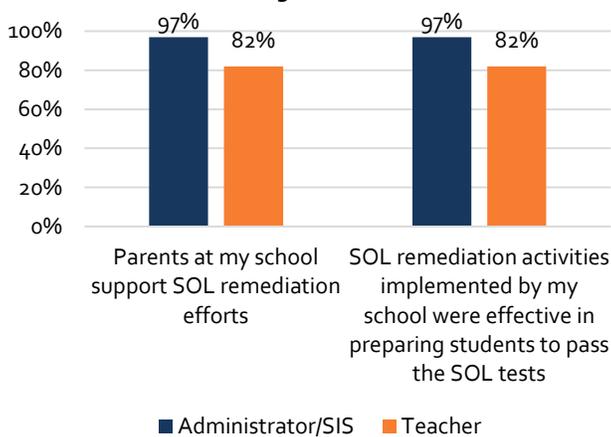
Staff Perceptions

The fourth evaluation question was focused on staff perceptions of the SOL Remediation Program. Staff included principals, assistant principals, and SISs as well as core teachers. Students and parents were not included in the survey effort at this time due to the wide variety of activities that individual schools considered to be part of SOL remediation and the difficulty in ensuring that students and parents would distinguish activities that schools considered to be SOL remediation from other remediation or tutoring assistance.

All staff members were asked about parental support at their school for SOL remediation efforts and their perceptions of the programs' effectiveness in preparing students. Figure 6 displays the percentage of survey respondents who agreed with the statements. As shown in Figure 6, relatively high percentages of middle school respondents agreed that parents supported the schools' SOL remediation efforts and that the program was effective, although agreement was higher for administrators/SISs. Regarding perceptions of program effectiveness, agreement percentages were the same for all teachers (82%) and teachers who indicated that they provided SOL remediation in 2014-2015 (82%).

Administrators/SISs were asked to list the SOL remediation activities at their school that were most effective at preparing students to pass SOL tests. The SOL remediation activities listed most often by middle school respondents were tutoring by paid tutors or teachers, academic support class, SOL boot camp, and SOL Lab.

Figure 6: Middle School Parental Support for SOL Remediation and Program Effectiveness

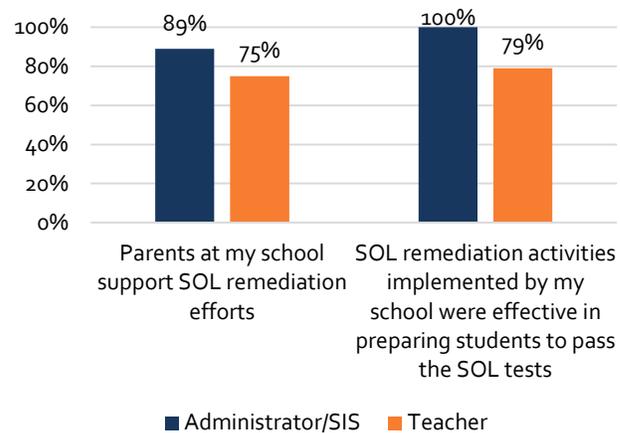


Lower percentages of administrators/SISs agreed that parents supported the schools' efforts at high school compared to middle school, but agreement from administrators/SISs was relatively high (see Figure 7). At high school, all administrator/SIS respondents and 79 percent of teachers agreed the program was effective at preparing students to pass the SOL tests. Regarding

perceptions of program effectiveness, agreement percentages were similar for all teachers (79%) and teachers who indicated that they provided SOL remediation in 2014-2015 (80%).

When high school administrators/SISs listed the SOL remediation activities at their school that were most effective at preparing students to pass SOL tests, they named the following most often: tutoring by teachers, SOL boot camp, tutoring by paid tutors, and Algebra/Geometry lab classes.

Figure 7: High School Parental Support for SOL Remediation and Program Effectiveness



On the spring survey, an open-ended item allowed respondents to provide comments concerning the SOL Remediation Program. Several general themes emerged from the comments provided by respondents to the administrator/SIS survey. Respondents noted the success of their programs and the need to continue funding for substitutes so teachers can work directly with their students and plan collaboratively for remediation work. Several respondents made comments regarding having knowledgeable and qualified tutors and the need for training. One respondent noted the need for a more uniform plan that is consistent throughout the division.

Comments from core teachers suggested that overall, many thought the SOL remediation activities at their school were successful as indicated by positive comments about the impact their program had on students. Several other themes from teachers' comments suggested that they believed it would be beneficial to provide remediation in subject areas that they teach, that students work with their own teachers, and that SOL remediation efforts begin or occur earlier in the school year. Some respondents also noted the difficulty in ensuring that students attend the remediation program, especially at the high school level. Several respondents thought that there needed to be more formal, organized plans across the division, with some respondents suggesting remediation materials be provided for them.

Additional Cost

The final evaluation question addressed the additional cost of the SOL Remediation Program to the school division during 2014-2015. Cost information for the 2014-2015 SOL Remediation Program was provided by the Department of Teaching and Learning. The Office of Business Services (payroll) was consulted about costs as well. Budgetary data that were analyzed included the cost for staffing (e.g., SOL tutors, substitutes, FICA) and instructional materials and supplies at the middle and high school levels. According to the Department of Teaching and Learning's SOL Remediation Guidelines document, additional bus runs are not available at the secondary level for SOL remediation; therefore, transportation costs are not included. Table 14 displays the cost categories for middle and high school SOL remediation activities during the 2014-2015 school year. The largest cost was for staffing which totaled \$724,238 based on information from the Department of Teaching and Learning budget spreadsheets. This included costs for substitutes to allow teachers to attend professional development or SOL remediation collaborative sessions. Additionally, cost for instructional supplies for the SOL Remediation Program in 2014-2015 totaled \$66,663 based on documentation. It should be noted that some instructional supplies and materials totaling \$20,242 were used across the secondary level, and therefore could not be attributed specifically to middle or high schools. However, these costs are represented in the "Overall" section of Table 14. The total additional cost for SOL remediation at the middle school level during 2014-2015 was approximately \$419,729. The total additional cost for SOL remediation at the high school level during 2014-2015 was approximately \$350,930. Overall, the total additional cost to VBCPS for the SOL Remediation Program during 2014-2015 was approximately \$790,901.

Table 14: Additional SOL Remediation Costs for 2014-2015

Cost Category		Expenditure
Middle School		
Staffing		
SOL Tutors		\$377,388
Substitutes		\$35,440
Staffing Total		\$412,828
Instructional Materials and Supplies		\$6,901
Total		\$419,729
High School		
Staffing		
SOL Tutors		\$302,492
Substitutes		\$8,918
Staffing Total		\$311,410
Instructional Materials and Supplies		\$39,520
Total		\$350,930

Table 14: Additional SOL Remediation Costs for 2014-2015 (continued)

Cost Category		Expenditure
Overall		
Staffing		
SOL Tutors		\$679,880
Substitutes		\$44,358
Staffing Total		\$724,238
Instructional Materials and Supplies		\$66,663*
Total Cost		\$790,901

*Instructional materials and supplies that were used for both the middle and high school level SOL remediation activities totaled \$20,242.

Additional information about the costs of the SOL Remediation Program was gathered on the spring survey of administrators and SISs. Approximately 93 percent of middle school principals, assistant principals, and school improvement specialist respondents indicated that their school received SOL Remediation Program funds from central administration for the 2014-2015 school year and that their school monitors the spending of the funds. Further, 31 percent of respondents indicated their schools spent school-based funds (not from central administration) on SOL remediation activities in 2014-2015. Thirty-four (34%) percent of respondents indicated that their schools did not spend any school-based funds, and 34 percent of respondents did not know if their school spent any school-based funds during 2014-2015. When asked for a general estimate of the amount of school-based funds spent, only one respondent provided a response (\$550).

At the high school level, approximately 88 percent of principals, assistant principals, and school improvement specialist respondents indicated that their school received SOL Remediation Program funds from central administration for the 2014-2015 school year and that their school monitors the spending of the funds. Further, 59 percent of respondents indicated their schools spent school-based funds (not from central administration) on SOL remediation activities in 2014-2015. Twenty-four (24%) percent of respondents indicated that their schools did not spend any school-based funds, and 18 percent of respondents did not know if their school spent any school-based funds during 2014-2015. When asked for a general estimate of the amount of school-based funds spent, eight respondents provided responses which ranged from \$800 to \$3,000 [\$800 (n=1), \$1,000 (n=2), \$2,000 (n=1), and \$3,000 (n=4)]. The total additional cost of SOL remediation to VBCPS did not include costs that schools covered with school-based funds because those funds would have been allocated to schools regardless of the program.

Recommendations and Rationale

Recommendation #1: Compare the SOL remediation activities provided by the schools to the program’s purpose and make recommendations regarding the need to have a more defined and focused SOL Remediation Program across the division. (Responsible Departments: Department of Teaching and Learning and Department of School Leadership)

Rationale: Data collected from principals, assistant principals, and SISs in the fall and spring demonstrated the wide variety of activities that schools offered and considered as part of their SOL Remediation Program. At the middle school level, 80 percent or more of the schools considered the following to be part of SOL remediation: SOL Lab, Algebra Readiness, READ 180 class, tutoring by paid tutors, tutoring by teachers, and academic support class. At the high school level, 80 percent or more of the schools considered the following to be part of SOL remediation: SOL Boot Camp, tutoring by paid tutors, tutoring by teachers, Algebra Readiness, Algebra/Geometry lab class, and academic support class. However, there were multiple other activities that at least some schools considered to be SOL remediation (at least 11 other activities at middle schools and 9 other activities at high schools). There were no activities that all respondents agreed were offered and were part of every school’s SOL Remediation Program. Although administrators and SISs thought that the guidance provided by central administration regarding SOL remediation was “about right” based on survey results, multiple teachers noted in survey comments that there was no formal plan or guidelines at their school, especially at the middle school level. While flexibility is necessary for schools to meet the needs of their students, discussions should occur to determine whether there should be a divisionwide SOL Remediation Program with core elements to provide consistency across schools. Further, given the wide range of passing rates for students participating in SOL remediation at middle schools (40% to 100%) and high schools (50% to 92% on EOC tests), it could be advantageous to identify core SOL Remediation Program activities. The effectiveness of these core activities could then be assessed divisionwide to determine those that provide the most benefit to students given the cost of SOL remediation to the school division.

Recommendation #2: Identify and determine the feasibility of divisionwide methods for collecting student participation data to allow for more efficient and effective means of determining the program’s effectiveness. (Responsible Departments: Department of Teaching and Learning, Department of School Leadership, Department of Technology)

Rationale: Based on the Department of Teaching and Learning’s SOL Remediation Guidelines document, “the progress of each student participating in SOL remediation tutoring must be monitored” and “schools must maintain records of whether each student did or did not meet the expected remediation goal.” Although at least 74 percent of staff at the middle and high schools agreed that their school tracks the participation of students in SOL remediation, monitors progress, and maintains records of whether students pass the corresponding SOL test, not all schools provided detailed participation records that included the subject area of the remediation for the purposes of this evaluation. Schools used various methods with varying levels of details to track participation including school-developed Excel files, several different options in Synergy, and teacher-level attendance sheets. Further, in some cases, schools used different methods of tracking participation even if the type of SOL remediation activity was the same across schools. This resulted in a lack of a consistent and efficient manner in which the student outcome goal of passing the SOL tests could be assessed. In addition, because some records from schools did not contain information about the subject area of the remediation, these students were not able to be included in the analyses. While flexibility for schools to offer various activities to meet their students’ needs is part of the program, it is recommended that divisionwide methods for collecting student participation data be determined at least for the core elements of the division’s SOL Remediation Program that are offered at most or all schools. One potential method for collecting student participation data in SOL remediation activities that could be discussed is developing SOL lab course codes or other identifiers at the division level that are specific to the subject area in which students are receiving remediation.

Recommendation #3: Ensure that tutors in the SOL Remediation Program receive training in remediation techniques and are equipped to provide effective tutoring in specific subject areas. (Responsible Department: Department of Teaching and Learning)

Rationale: According to the Department of Teaching and Learning’s SOL Remediation Guidelines document, “tutors working in SOL Remediation programs must have received training in remediation techniques” and “principals or their designees must certify that all tutors participating in the program have completed training in remediation techniques.” However, based on the spring survey of principals, assistant principals, and SISs, 25 percent of the respondents at the middle school level indicated that the tutors did not receive training and 14 percent did not know. At the high school level, 21 percent of the respondents indicated that the tutors did not receive training and 38 percent did not know. In addition, one of the themes of comments from respondents to the administrator/SIS spring survey was the need for knowledgeable and qualified tutors and the need for training.

Recommendation #4: Identify individual schools that are experiencing success with SOL remediation and conduct a qualitative study of how their programs operate to identify best practices. (Responsible Departments: Department of Planning, Innovation, and Accountability and Department of Teaching and Learning)

Rationale: On the spring survey, 97 to 100 percent of administrators/SISs and 79 to 82 percent of teachers at middle and high schools agreed that the remediation activities at their school were effective in preparing students to pass the SOL tests. In addition, one of the most prevalent themes of the comments from respondents on the spring survey was that their SOL remediation activities were effective. However, at the middle school level, pass rates ranged from 40 to 100 percent for the SOL tests taken by those who had participated in SOL remediation, and pass rates at the high school level ranged from 50 to 92 percent on EOC tests. Given this variation and the variation in activities and methods at each school, a review of the outcome data at each school is recommended for the purpose of selecting individual schools that are experiencing success. After a sample of schools is selected, interviews with the administrators and/or the SISs could help identify any commonalities in practices for the purpose of sharing those best practices with schools across the division.

Appendices

Appendix A: Description of SOL Remediation Program Activities Based on Feedback from Principals

Remediation Activity*	Description of SOL Remediation Activity
Academic Support Class	Students with significant deficiencies (failing an SOL or grades of D or lower) in reading and mathematics are required to enroll in the appropriate course for remediation activities. The course prescribes prevention/intervention techniques as well as acceleration and remediation practices, documents remediation efforts and time commitments, and fosters parental community involvement.
Algebra Readiness	Tutors work with students who are struggling in Algebra in small-group settings. Algebra tutoring is provided at various times (before school, after school, and weekends) depending on the school.
Algebra/Geometry Lab Class	The course is designed for students needing additional assistance to be successful in algebra and/or geometry. Students in the class have been identified as being at risk of failing the SOL and the course. Students receive remediation in topics essential to the understanding of algebra along with hands-on opportunities to explore algebraic concepts using a variety of representations. Topics include variables and expressions, solving equations and inequalities, linear functions, and graphing and writing linear equations.
Core Plus	Middle school students receive 40 minutes of remediation time each day to work on SOL/course objectives that are designated as weaknesses based on data from grade level common assessments and/or classroom formative/summative assessments. Students involved in this SOL remediation activity receive additional instruction in all core subject areas.
Effective Reading Skills for High School	Students who do not pass the 8th grade reading SOL are placed in the Effective Reading class. Additionally, students are also identified for the activity by their SRI scores and their score on the Holt Reading Diagnostic. The students are tracked using the SRI scoring system. Effective Reading classes are taught by a reading specialist.
Homework Center	Students may work on homework after school in a computer lab and access the internet if needed.
Independent Reading for Middle School	This activity provides focused instruction on reading and literacy strategies using the Read 180 program. Students are identified for this activity if they have failed an SOL or at risk of failing an SOL.
Math Center	During the first 45 minutes of every block, students who are at risk of not passing the SOL (as determined by their math teacher) and any senior and/or transfer student who needs a math SOL to graduate are sent to the math center for remediation. During the second 45 minutes of the block, the math center is open to any student desiring help with math.
Read 180 Class	Students are recommended for placement in this course based on multiple criteria that include results from prior SOL and other standardized testing. Students receive instruction in the use of word recognition and context to build vocabulary; conventions of print and nonprint to increase understanding and comprehension of text; strategic reading to increase comprehension and enhance learning and retention; and writing in response to text. This course is available to general education students and special education students.
Saturday School	Saturday school allows for remediation as well as enrichment. Students work in groups on their areas of difficulty within subject areas of their choosing. In addition to instructors being available, there are peer tutors to facilitate this process as well. This option provides SOL-focused remediation for those students who have previously taken and failed the SOL.

Remediation Activity*	Description of SOL Remediation Activity
SOL Boot Camp	Students are identified based on teacher recommendations and performance on SOL tests. During this remediation, students receive a pretest in order to target individual areas of weakness. Instruction is then differentiated to target the students' areas of weakness in order to improve their performance and understanding of material. Teachers in the various SOL subjects set up a boot camp prior to their SOL. This program provides students with an overview of the main topics of the subject. Most boot camps target students who have previously failed the SOL or in jeopardy of failing it.
SOL Lab	Students who failed a math or reading SOL the previous year with a score range of 375-399 were enrolled in this "course" for the duration of quarter one. Students in SOL Lab "classes" are remediated in areas of weakness as evidenced on their SPBQ (Student Performance By Question). English and social studies teachers are teamed to work with students in reading SOL Labs, while math and science teachers team together to remediate students in math SOL Labs.
Special Education Resource Class	This class provides remediation of skills for special needs students to improve academic and SOL success.
Study Block	Students are assigned to a focused study block in which they receive remediation. The students report to the focused study block, where tutors review anchor papers and pretests in order to gauge student understanding. The instruction is then tailored to meet the needs of students. The SIS identifies and encourages participation from students who have failed and need to retake an SOL. Teachers, counselors, and administrators encourage participation from students who are struggling with SOL courses in which they are currently enrolled.
Tutoring by Paid Tutors	Tutors are hired by the school to work with small groups of identified students during the SOL Lab, Core Plus, and core instructional bells or at other specified times.
Tutoring by Peers/Students	Advanced students tutor their peers who need help while currently enrolled in SOL courses.
Tutoring by Teachers	Before/after school tutoring is provided for students who have failed a previous year's SOL test with a score under 375, those who are at risk of failing with scores between 400-410, and/or those who are new to Virginia are recommended for before/after school tutoring. Students are given instruction based on their SPBQ reports, if applicable, in addition to learning test taking strategies and organizational skills.
Writing/Literacy Center	Students who have not passed the English reading and/or writing SOL are assigned to the Literacy Center for intensive remediation by English teachers. Students who are at risk of not passing the SOL as determined by their teacher may also participate.

*Note: The descriptions of the remediation activities are summarized based on information provided by principals from questionnaires and surveys as well as division documentation when available. The descriptions provided might not be applicable to every school, but serve as an example of what the activity entails based on principal feedback.

¹ Source: Program Overview Worksheet (2014-2015) compiled by the Department of Teaching and Learning for the Program Evaluation Committee, July 15, 2014.

² Source: SOL Remediation Guidelines for Administrators and Site Coordinators 2014-2015, Department of Teaching and Learning. Revised September 3, 2014.

³ Source: Guidance Document Governing Certain Provisions of the Regulations Establishing Standards for Accrediting Public Schools in Virginia 8 VAC 20-131. Amended by the Board of Education January 13, 2011.

⁴ Source: Remediation Recovery Programs and Synergy Tracking memorandums to principals from the Department of Teaching and Learning and the Department of Planning, Innovation, and Accountability, January 8, 2015.

⁵ Source: School Improvement Specialist job description from the Department of Human Resources.

⁶ Students who received SOL remediation but whose records from the schools or the division's data warehouse did not indicate the subject area in which the remediation was received were not included in the analysis of data because the remediation could not be specifically tied to an SOL test.

⁷ Sources: SOL Remediation Guidelines for Administrators and Site Coordinators 2014-2015, Department of Teaching and Learning. Revised September 3, 2014 and Remediation Recovery Programs and Synergy Tracking memorandums to principals from the Department of Teaching and Learning and the Department of Planning, Innovation, and Accountability, January 8, 2015.