Research Brief

Middle Grades: Quality Teaching Equals Higher Student Achievement

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SREB | Making Middle Grades Work

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EXECUTIVE SUMMARY

The middles grades are critical to public school systems and our nation's economy. It's the make-or-break point in students' futures. Studies repeatedly show when students are not engaged and lose interest in the middle grades, they are likely to fall behind in ninth grade and later drop out of school. When this happens, the workforce suffers, and the U.S. falls further and further behind in an increasingly competitive world.

A key element of achieving success for middle grades schools is implementing the Southern Regional Education Board's (SREB) Making Middle Grades Work (MMGW) 10 Best Practices. They include: Enroll students in an accelerated curriculum; engage students in meaningful assignments and classroom learning experiences; improve students' abilities to read grade-level material and writing; and ensure students receive high-quality guidance and advisement. (See Appendix A.) The report, *Improved Middle Grades Schools for Improved High School Readiness: Ten Best Practices in the Middle Grades*, presents data demonstrating how these Best Practices result in better outcomes for middle grades students.[1]

The MMGW Student Survey is designed to measure the frequency and perceptions of these practices through the eyes of students. Students are asked to report how often they experience proven classroom practices, are expected to complete challenging assignments and are supported to succeed.

Previous reports were able to align the MMGW Student Survey responses to student achievement on the MMGW Assessment. However, the MMGW Assessment was discontinued in 2012. As a result, SREB set out to link the MMGW Student Survey responses to achievement measured by state-specific achievement exams to determine the influence of classroom practices on student engagement and success. As stated in a report of SREB's Middle Grades Commission:

"Recent evidence makes clear that each middle-grader's personal, individual engagement in school is essential to his or her success. Studies repeatedly show that students who lose interest in school in the middle grades are likely to flounder in ninth grade — and later drop out. Yet developmental and brain research confirm that by the middle grades, students are capable of making connections between their academic work, their personal interests and career aptitudes. Middle grades professionals can use these connections to help students prepare for success in high school and postsecondary studies. It is time for middle grades schools to capitalize on this."[2]

This report aligns results from the 2012 MMGW Student Survey to each student's state assessment score in reading, math and — where applicable — science from 2012. Forty schools in 11 states provided the requested achievement data. Across these 40 schools, 4,792 student survey responses were matched (by student ID number) to students' assessment scores to measure correlations between students' experiences and perceptions and their subsequent achievement. This group of 4,792 students was diverse: 70 percent were white, and 30 percent were nonwhite; 51 percent were female, and 49 percent were male. The recommendations listed in this report are based on the findings from these survey and achievement analyses.

Recommendations

1. **Focus on consistent implementation of an accelerated curriculum.**

All students can benefit from an accelerated curriculum, especially those in greatest need of support. Engaging instruction with challenging assignments and opportunities for collaborative work should be standard practice in every classroom and not reserved for the highest-performing students. Students at all performance levels need opportunities to work independently and to work with peers to solve challenging problems, explain their thinking and utilize a variety of literacy strategies to deepen their content understanding.

Teachers must be supported in their efforts to introduce new ways of teaching and engaging students. They need protected time for planning and sharing strategies to ensure that all can successfully implement the critical instructional components of an accelerated curriculum. Teachers with struggling students may need additional training to ensure they are equipped to provide the instructional scaffolding these students will need to meet grade-level standards.

1 Bottoms, G., and Timberlake, A. (2012). Improved Middle Grades Schools for Improved High School Readiness: Ten Best Practices in the Middle Grades: Southern Regional Education Board.

2 Bottoms, G., and Cooney, S. (2011). A New Mission For The Middle Grades: Preparing Students For A Changing World: Southern Regional Education Board.

2. Make it a goal to include literacy experiences in non-language arts courses.

Ensuring a variety of literacy experiences in all content areas is critical for improving students' reading and writing skills and achievement in each core academic area. In English/language arts, social studies, math and the sciences, these experiences need to occur by design as well-planned assignments that engage students in reading texts and other documents related to the discipline area. Non-fiction texts and real-world topics must be selected for review and discussion that will advance achievement in the subject area. Regular writing task assignments can deepen students' understanding of content by requiring them to research, analyze and reflect. Teachers can collaboratively establish specific goals to make literacy become a routine part of their instructional strategies.

3. Develop course-specific standards and expectations for student work.

School and classroom practices must reflect high expectations and an understanding that students learn in different ways and need varied levels of time and support to master concepts. As teachers engage in collaborative planning for instruction, they must develop consensus around their expectations for student work. Teachers in high-performing classrooms communicate to students what they need to know and be able to do to meet or exceed standards. Teachers who provide exemplars can model for students the level and quality of work expected to meet standards. Creating these standards by course will ensure the standards remain consistent across all classrooms, regardless of students' ability levels.

4. Incorporate career exploration and guidance activities as part of an ongoing advisement program.

Beyond connecting students with adults, meaningful advisement programs can serve to introduce students to careers and awaken students to interests they may not have otherwise considered. By inviting guest speakers, hosting special events, and partnering with local civic organizations and universities, schools can expose students to career paths, courses of study, and postsecondary opportunities that spark interest and inspire them to achieve at effective levels. Classroom advisement sessions allow ample opportunity for discussions and activities that educate students about study skills, setting goals, action planning, personal organization and budgeting, and other topics that will support increased readiness for high school.

5. Create opportunities for classroom teachers to provide targeted support for struggling students.

Whether before school, during the school day, after school or on the weekends, supplemental instruction designed to bridge students' learning gaps must be offered, and student attendance must be actively encouraged, if not required. Simply advising struggling students of support opportunities available is not enough. There has to be a coordinated effort to develop the appropriate support and then ensure students take advantage of it. Homework hotlines, lunch study periods, extended learning time and Saturday school, when developed using best practices for supplemental instruction, can help close the gaps in student achievement, but only if those students in greatest need are actively participating.

Sincerely,
Gene Bottoms

SREB, Senior Vice President

INTRODUCTION

This report aligns responses to the 2012 Making Middle Grades Work (MMGW) Student Survey to each student's score on 2012 state assessment exams in reading, math and science. The survey, given in spring of 2012, explores classroom experiences of eighth-grade students and provides benchmark measures to determine to what extent schools have implemented the research-based MMGW Best Practices. There were 35,306 students around the country who completed this survey.

In September 2012, a request was sent to all sites that administered the survey asking for corresponding student achievement data for eighth-grade students who took the survey. Forty schools in 11 states provided the requested data. Across these 40 schools, 4,792 student survey responses were matched (by student ID number) to the students' exam scores for 2012 for the purpose of measuring correlations between students' experiences and perceptions and their subsequent achievement. Of these 4,792 students, 70 percent were white, and 30 percent were nonwhite; 51 percent were female, and 49 percent were male. Not all states administered science assessments to eighth-graders, therefore only 2,956 student exam scores are included in the science data compared to 4,792 students included with reading or math scores.

This report highlights indicators that revealed a significant relationship between students' responses on the MMGW Student Survey and their subsequent achievement in one or more content areas. The report uses those findings to offer recommendations for practitioners. In most cases, the data indicate students who experience high-quality instructional practices and engage in challenging assignments tend to score higher on state achievement exams in reading, math and science.

SREB has developed several indices related to instructional effectiveness and student achievement. Collectively, these indices provide an overview of how well the school is doing in implementing a framework based on the MMGW Key Practices associated with high student achievement. By linking survey responses to student achievement in participating schools, SREB research identified five primary trends or key findings.

Summary of Key Findings

Key Finding 1: Students demonstrate significantly higher achievement in math when they have access to an accelerated curriculum with engaging instruction.

- Students who reported experiences consistent with the Mathematics Design Collaborative (MDC) strategies (explained later in greater detail) had pass rates as much as 14 points higher on standardized math exams than those who did not.
- Teachers help students understand the connection between what they are studying and why it will be important beyond the middle grades.
- Teachers give students challenging math problems and sometimes allow students to work on them independently.
- Students are able to demonstrate their understanding of content through assignments before taking an exam.
- Students are exposed to accelerated math and science experiences that include working on challenging assignments and explaining to the class how they solved a problem.
- Students take ownership of learning.

Key Finding 2: Students who experience an emphasis on literacy in multiple content areas score significantly higher on assessments of reading ability.

- Teachers require writing assignments that make students defend their thinking with evidence from their reading.
- Students experiencing the type of reading and writing assignments advocated by the Literacy Design Collaborative (LDC) (described in more detail later in this report) had pass rates more than 10 percentage points higher than students who did not on state standardized exams.
- Students use what they read to discuss, write and complete projects in classes other than language arts.

Key Finding 3: When teachers convey high expectations, it often translates into higher achievement.

- Students who reported their teachers "often" encouraged them to do well in school performed significantly better on achievement exams.
- Achievement was also higher among students who said their teachers explicitly stated what was necessary to earn an A or B in the course.
- Teachers should set high standards and be willing to help students meet those standards.

Key Finding 4: Student activities should include career exploration and planning.

- Data indicate a majority of students are not exposed to a variety of career exploration activities in eighth grade.
- Students who report adults talk with them about what they will need to know and be able to do in ninth grade exhibited higher achievement than students who reported no one spoke with them about this.

Key Finding 5: Struggling students often need more targeted academic support.

- While struggling students seem to feel comfortable asking for help from their teachers, barely more than half of them report receiving the extra help they need.
- For the subgroup of students who scored below standards on both the reading and math exams, a substantial number reported not receiving the extra help they needed from their core subject teachers. These are the students most in need of extra help, and many are not receiving it.

Key Findings — A Deeper Look

Key Finding 1: Students demonstrate significantly higher achievement in math when they have access to an accelerated curriculum with engaging instruction.

One of the 10 Best Practices for the middle grades cited in SREB's *Improved Middle Grades School for Improved High School Readiness: Ten Best Practices in the Middle Grades*, suggests schools should "enroll more students in an **accelerated curriculum** that is benchmarked with ninth-grade college-preparatory standards and emphasizes teachers working together to plan and share classroom learning, student assignments and classroom assessments that reflect high school readiness standards in English/reading, math and science." Getting more students ready for high school requires the alignment of middle grades curricula to high school college- and career-readiness standards (Bottoms, Timberlake, 2012). Middle grades and high school leaders and teachers will need to work together to achieve this alignment. Significant changes in student learning and achievement can occur when teachers focus on teaching an accelerated curriculum, work with other teachers to share best practices and plan interdisciplinary activities, and utilize assignments and assessments benchmarked to high school readiness standards.

The MMGW Student Survey reveals how the frequency of engaging assignments and supportive instruction impact student achievement levels. The following indicators comprise the Engaging Numeracy and Science Across the Curriculum Index, created to measure students' engagement in accelerated learning experiences in math and science classes.

Indicators of Engaging Numeracy and Science Across the Curriculum

a. Worked with other students in my class on a challenging mathematics assignment during class time

b. Explained to the class how I solved a mathematics problem

c. Explained different ways for solving mathematics problems to the class

d. Worked with other students in my class on a challenging science assignment during class time

Students who said they had these experiences frequently (three to five times per week) were more likely to pass the state math assessment than those who had these experiences less frequently. (See Table 1.) Of the 72 percent of students who reported experiencing these activities an average of three to five times per week, 76 percent achieved a passing score for math on the state standardized exam, compared to only 68 percent of students who reported less frequent experiences, a difference of eight percentage points.

Table 1: Indicators of Engaging Numeracy and Science Across the Curriculum — Results

Average Student Rating (on a scale of 1 (Never) to 5 (Weekly))	Percentage of Responses in Each Category	Percentage Passing Math	Percentage Scoring at The Highest Performance Level for Their State
Less frequent experiences (*average of 0-2.9*)	28%	68%	15%
More frequent experiences (*average of 3-5*)	72	76**	23**

** *Indicates highly significant difference (p<.001)*

Source: Analysis of 2012 MMGW Student Survey Report, SREB

SREB is intently focused on state and local policies and practices that will improve reading, writing and math skills so students graduate from high school ready to succeed in college and careers. SREB is employing a new approach to professional development that brings powerful teaching and learning strategies into classrooms. The strategies, Literacy Design Collaborative (LDC) and Mathematics Design Collaborative (MDC), help students reach the deep learning necessary to master national and state standards for college and career readiness.

MDC is a framework to balance instruction so that students develop an understanding of basic math concepts, fluency with math procedures, and the reasoning to know how and when to apply math knowledge and skills to solve problems. MDC helps teachers understand and implement — by design and not by chance — formative assessment lessons aligned to state standards. Formative assessment lessons, a hybrid of assessment and instruction, are key MDC tools that, when coupled with instructional strategies to deepen student understanding, have been shown to result in significant improvements in teaching and learning.

In 2012, additional indicators were added to the MMGW Student Survey to measure students' experiences with MDC strategies in their classrooms. (See Table 2.) For example, one MDC strategy involves having students engage in productive struggle and solve challenging math problems. The corresponding survey item asked students whether "teachers give me challenging problems to solve and sometimes allow me to work on them independently." In essence these strategies are shifting teaching so students take ownership of learning and achieve at higher levels.

The data show all of these instructional strategies positively influenced achievement in math. In fact, in some cases, students who reported being exposed to the strategies had pass rates more than 10 percentage points higher than students who did not. In essence, these strategies are shifting teaching so students take ownership of learning how to think in ways of solving problems involving more than one math concept.

Table 2: Teaching for Deeper Understanding and Application

(includes the following six survey items)

Mathematics Design Collaborative (MDC) Strategies	Students who answered YES: Percentage Passing Math	Students who answered NO: Percentage Passing Math	Difference
I am encouraged to understand math concepts instead of just memorizing rules and procedures.	78%	66%	12**
My teachers provide feedback frequently to help me understand my mistakes and improve my performance in mathematics.	76	69	7**
My teachers review my work and provide feedback to help me solve math problems.	75	72	3**
Teachers give me challenging problems to solve and sometimes allow me to work on them independently.	79	67	12**
My mathematics teachers guide my understanding of mathematics through questioning as well as through explaining.	77	68	9**
I am able to demonstrate my understanding of content through assignments before taking an exam.	80	66	14**

* *Indicates statistically significant difference (p<.05)*

** *Indicates highly significant difference (p<.001)*

Source: Analysis of 2012 MMGW Student Survey Report, SREB

Key Finding 2: Students who experience an emphasis on literacy in multiple content areas score significantly higher on assessments of reading ability.

Another middle grades Best Practice indicates schools should "focus on improving students' reading and writing skills by giving reading and writing assignments that engage students in reading grade-level materials specific to each content area — English, math, science and social studies." Developing students' reading comprehension skills should be a priority for both the middle grades and high school because the ability to read text is associated with higher achievement. Reading with comprehension defines learning in every subject — including mathematics, science and social studies. To address this priority, all teachers — not just language arts teachers — must be responsible for engaging students in reading and writing assignments that deepen their reading comprehension as well as their understanding of subject-matter content.

In the MMGW Student Survey, students were asked to respond to a variety of indicators that reflect engaging literacy across the curriculum. These indicators show the strongest relationship to student achievement.

Indicators of Engaging Literacy Across the Curriculum

- How often have you read an assigned book outside class and demonstrated that you understood the main idea in your English/language arts classes?
- How often did you use word-processing or presentation software to complete assignments in your English/language arts classes?
- How often have you participated in discussions with other students about what you have read in English/language arts classes?
- In classes other than language arts, we use what we read to discuss, write and complete projects.
- How often have you completed short writing assignments of one to three pages for a grade in your science class?
- How often have you completed short writing assignments of one to three pages for a grade in social studies?
- How often have you completed short writing assignments of one to three pages for a grade in your English/language arts class?

Table 3: Indicators of Engaging Literacy Across the Curriculum — Results

Average Student Rating	Percentage of Responses in Each Category	Percentage Passing Math	Percentage Passing Reading
Less frequent (*average of 0-2.99*)	56%	72%	74%
More frequent experiences (*average of 3-5*)	44	76*	79**

* *Indicates statistically significant difference (p<.05)*

** *Indicates highly significant difference (p<.001)*

Source: Analysis of 2012 MMGW Student Survey Report, SREB

Essentially, students who reported experiencing these classroom conditions more frequently had higher achievement on reading assessments. (See Table 3.)

An approach for incorporating rigorous literacy standards into middle grades and high school content areas, the Literacy Design Collaborative (LDC) provides a system for developing reading, writing and thinking skills within a variety of academic disciplines, not just in English/language arts courses. The purpose of LDC modules is to help students develop the literacy skills required to successfully meet the more rigorous college- and career-readiness standards.

Using LDC tools and strategies, teachers engage students in a series of tasks that result in a student-written product that integrates literacy and content standards. An analysis of 2012 MMGW Survey results provided a link between LDC strategies and student achievement. When asked to report whether certain LDC strategies were used in their classrooms, significantly higher percentages of students who answered "yes" passed state reading exams than those who answered "no." (See Table 4.)

Table 4: Teaching for Deeper Understanding and Application

(includes the following four survey items)

Literacy Design Collaborative Strategies (LDC) Strategies	Students who answered YES: Percentage Passing Reading	Students who answered NO: Percentage Passing Reading	Difference
My teachers require me to compare information in one text to information from other sources.	78%	75%	3**
I am often asked to read difficult materials and to write about them to show my understanding.	79	74	5**
My teachers require writing assignments that make me defend my thinking with evidence from my reading.	80	70	10**
The comments I get on my work from my teachers help me understand how to improve.	79	73	6**

* *Indicates statistically significant difference (p<.05)*

** *Indicates highly significant difference (p<.001)*

Source: Analysis of 2012 MMGW Student Survey Report, SREB

Because of the differences in achievement observed, (See Tables 2 and 4.) it was important to examine the link between the depth of implementation of LDC and MDC strategies and the overall impact on student achievement. SREB compared the differences in performance among students who experienced higher implementation of LDC and MDC strategies and those who were exposed to lower implementation. Students who reported their teachers used at least half of these strategies (five out of 10) performed significantly better on academic achievement exams. They were more likely to pass reading and math assessments than students who reported their teachers using fewer of these strategies. (See Table 5.) **Further, these differences in achievement were even more pronounced for the subset of nonwhite students included in our study.** (See Table 6.)

Groups of teachers and education experts developed the LDC and MDC frameworks, with initial funding from the Bill & Melinda Gates Foundation. The educator groups are now expanding into wider networks of teachers, schools and districts working together to develop and share assignments and modules. For a first-hand account of what teachers and principals are saying after using these strategies, read *Literacy Design Collaborative* and *Mathematics Design Collaborative: Changing How Students Learn* and *Teachers Teach*. Together, LDC and MDC provide teachers with frameworks upon which to build lessons in all disciplines that require students to engage and interact with challenging problems and texts.

Table 5: Overall Differences in Achievement Among Students Exposed to Deeper Learning Experiences Through LDC and MDC (N=4734)

Depth of LDC / MDC Strategy Use	N	Percentage Passing Reading	Percentage Passing Math
Lower implementation (0-4)	2927	73%	71%
Higher implementation (5-10)	1807	82	79
Difference in achievement between students exposed to higher vs. lower implementation	----	9	8

Source: Analysis of 2012 MMGW Student Survey Report, SREB

Table 6: Overall Differences in Achievement Among Students Exposed to Deeper Learning Experiences Through LDC and MDC for Nonwhite Students (N=1392)

Depth of LDC / MDC Strategy Use	N	Percentage Passing Reading	Percentage Passing Math
Lower implementation (0-4)	873	63%	60%
Higher implementation (5-10)	519	75	71
Difference in achievement between nonwhite students exposed to higher vs. lower implementation	----	12	11

Source: Analysis of 2012 MMGW Student Survey Report, SREB

Key Finding 3: When teachers convey high expectations, it often translates into significantly higher achievement.

Many experienced teachers think they know what middle-graders can do — and often, their expectations of students are set too low, particularly in the most-challenged schools. These teachers need to hold students to grade-level standards aligned to college- and career- readiness standards for high school. Middle grades students learn in different ways and at different rates, and some will need more time and help to meet more grade-level standards.

In the survey, students were asked to respond to a variety of indicators reflecting high expectations. The survey found when expectations are clear and standards are high, students achieve at a higher rate. (See Table 7.)

Table 7: Indicators of High Expectations

Most of my teachers encourage me to do well in school.	Percentage in Each Category	Percentage Passing Math	Percentage Passing Reading	Percentage Passing Science
Never/Rarely	11%	64%	67%	62%
Sometimes/Often	89	75**	77**	73**

My teachers set high standards for me and are willing to help me meet them.	Percentage in Each Category	Percentage Passing Math	Percentage Passing Reading	Percentage Passing Science
Never/Rarely	14%	64%	69%	62%
Sometimes/Often	86	75**	77**	73**

My teachers clearly indicate the quality of work that is necessary to earn a grade of A or B at the beginning of a project or unit.	Percentage in Each Category	Percentage Passing Math	Percentage Passing Reading	Percentage Passing Science
Never/Rarely	11%	62%	67%	59%
Sometimes/Often	89	75**	77**	73**

* Indicates statistically significant difference ($p<.05$)

** Indicates highly significant difference ($p<.001$)

Source: Analysis of 2012 MMGW Student Survey Report, SREB

Table 7: Indicators of High Expectations (continued)

My teachers care about me enough that they will not let me get by without doing the work.	Percentage in Each Category	Percentage Passing Math	Percentage Passing Reading	Percentage Passing Science
Never/Rarely	21%	68%	70%	64%
Sometimes/Often	79	75**	78**	74**

My teachers encourage students to help each other and learn from each other.	Percentage in Each Category	Percentage Passing Math	Percentage Passing Reading	Percentage Passing Science
Never/Rarely	26%	71%	74%	68%
Sometimes/Often	74	74*	77*	73*

* Indicates statistically significant difference (p<.05)

** Indicates highly significant difference (p<.001)

Source: Analysis of 2012 MMGW Student Survey Report, SREB

Key Finding 4: Student activities should include career exploration and planning.

The 2011 report of the SREB Middle Grades Commission states, "Middle grades schools can help raise student achievement by creating an intensely engaging school experience that helps middle grades students focus on the future (including potential careers) and chart possible paths to reach their goals." (Bottoms, Cooney, 2011). By connecting student learning to real-world challenges and helping students visualize how academic content will be relevant in their future careers, students are more motivated to learn and more likely to be successful in school. Student survey responses reveal significant differences in achievement between students who selected at least three of the four indicators related to academic motivation.

Interestingly, only about a third of students reported high levels of academic motivation, pointing to a clear need to ensure more engaging, real-world learning experiences for students. (See Table 8.)

Academic Motivation Indicators (Students were asked to select all statements with which they agreed.)

1) I am confident that I can succeed in any class.
2) I like learning even if the material will not be on an exam.
3) I like to wrestle with new concepts.
4) I like to discover new concepts through reading or a project before the teacher provides instruction on them.

Table 8: Academic Motivation Intensity

Total # out of 4	Percentage of Responses in Each Category	Percentage Passing Math	Percentage Passing Read-ing	Percentage Passing Science
Low Intensity (0-2)	68%	72%	74%	69%
High Intensity (3-4)	32	78**	81**	78**

** Indicates highly significant difference (p<.001)

Source: Analysis of 2012 MMGW Student Survey Report, SREB

Guidance and Career Exploration

Another middle grades best practice identified by the SREB study was to "ensure students receive high-quality guidance and advisement by providing students with a personal connection with an adult in the building, involving parents in discussions about their child's performance and readiness for high school, and helping students develop a six-year plan for high school and post-high school studies." The MMGW Student Survey inquired about these student-adult relationships and found approximately 83 percent of students have had conversations with teachers or other adults at school about what they will need to know and be able to do in ninth grade.

While it appears students are involved in at least initial conversations with adults about what to expect in ninth grade, the survey responses do not suggest that schools have comprehensive programs in place to support career guidance and planning. A strong guidance and advisement program includes career-related experiences. The MMGW Student Survey measured the prevalence of these experiences reported by eighth-grade students' response to a variety of indicators. (See Table 9.)

Theoretically, students exposed to a larger number of career exploration activities will be motivated to achieve at higher levels than students exposed to less information about future careers and educational opportunities. The data available for this report reveal that low numbers of students are participating in fewer exploration activities. The middle grades is a good time to provide students with experiences that will allow them to think about their interests in terms of possible career goals and to understand the educational paths that can help them meet their goals.

Key Finding 5: Struggling students often need more targeted academic support.

Schools that are successful in raising student achievement understand that raising standards is not enough. Many students will need extra help and support to succeed in more rigorous course work. Extra help should not only be made available to students, but students not meeting grade-level standards should be required to access it. For example, one of the best practices identified for the middle grades was "identify at-risk students as early as grade six and provide them with additional instruction and support to help more of them meet grade-level standards and get on track to enter high school prepared for the ninth grade." The MMGW Student Survey asked students to report how frequently they receive this support. Ideally, students should easily be able to get extra help that is effective and enables them to feel more confident, get better grades and ultimately better understand course content.

To address this concern, SREB focused its analysis only on students who did not meet grade-level standards on the state assessments. These are the students most in need of academic support services. It was important to examine the extent to which these students reported having support available to them. Naturally, higher achieving students would report not receiving extra help or academic support because (typically) they do not need it.

Among the 40 schools nationwide that submitted data for this study, there were 1,660 students (out of 4,792) who scored below standards in either reading or math in 2012. Tables 10 and 11 were based on these students' responses. Only 40 percent of these students indicated they often received the support needed.

Table 9: Indicators Reflecting Guidance

Career Exploration Activities	Percentage Passing Reading	Percentage Passing Science
I took a career exploratory class.	21%	79%
I heard guest speakers from various careers.	58	42
I heard guest speakers from various colleges.	32	68
I have shadowed my parents at their workplace.	32	69
I attended a career fair.	26	75

Source: 2012: Analysis of 2012 MMGW Student Survey Report, SREB

Table 10: Indicators of Extra Help N=1660

I am able to get extra help from my teachers when I need it without much difficulty.	Percentage of Responses in Each Category
Never	5%
Rarely	15
Sometimes	40
Often	40

How often has the extra help you received at school helped you to understand your school work better?	Percentage of Responses in Each Category
Did not receive extra help	13%
Never	3
Rarely	10
Sometimes	39
Often	35

How often has the extra help you received at school helped you to try harder on your schoolwork after receiving extra help?	Percentage of Responses in Each Category
Did not receive extra help	13%
Never	3
Rarely	10
Sometimes	33
Often	41

How often has the extra help you received at school helped you to receive better grades after receiving extra help?	Percentage of Responses in Each Category
Did not receive extra help	12%
Never	3
Rarely	9
Sometimes	33
Often	43

Source: Analysis of 2012 MMGW Student Survey Report, SREB

The data reveal many of the subgroup of students who scored below standard on one or both of the reading and math exams were not receiving adequate support, and approximately one-fifth of these students said they would not have felt comfortable asking for help. Further, less than half of the students reported the extra help they received "often" helped them improve their performance. This is most certainly due to the way in which extra help activities are offered and structured at schools and perhaps an indication that the students most in need of access to an accelerated curriculum with engaging instruction are those least likely to receive it.

More troubling perhaps are the responses from the subgroup of students who scored below standard on both the reading and math exams. These would presumably be the lowest achieving eighth-graders, and more than one-third of them reported not receiving the extra help they needed in their core subjects. These are the students most in need of extra help, and many are not receiving it.

Through years of experience working with middle grades schools, SREB has identified which interventions do not work effectively: substituting regular classes with remedial

Table 11: Questions Related to Indicators of Extra Help

Indicator	Below Standards in Reading or Math (N=1660)		Below Standards in Both Reading and Math (N=762)	
	YES	NO	YES	NO
If you needed extra help, would you feel comfortable asking your teachers for it?	79%	21%	78%	22%
Have you received the extra help you needed from your teachers in English/language arts or reading?	51	49	56	45
Have you received the extra help you needed from your teachers in mathematics?	60	40	62	38
Have you received the extra help you needed from your teachers in science?	51	49	55	46

Source: Analysis of 2012 MMGW Student Survey Report, SREB

instruction, technology-based programs disconnected from classroom instruction and poorly taught extended-time programs that "dumb down" the material (Bottoms, Cooney, 2011).

SREB provides guidance to middle grade schools on how best to provide the necessary supports. For example, schools should "help teachers assess what students do not understand and support students to meet higher standards. Teachers can give students an "incomplete" on below-standard work and then provide extra time and reteaching to ensure students can bring their work up to grade-level standards." **However, it is important that such "extended time be well planned and taught, preferably by the students' regular teachers, using instructional strategies that differ from those offered in regular classes."** Another suggestion is for schools to develop "a good 'early warning' diagnostic assessment and intervention system that can help schools counteract chronically poor student performance."

Conclusion

When 2012 MMGW Student Survey responses were matched to achievement data, clear relationships between MMGW's 10 Best Practices and student achievement were identified. Student perceptions of teachers' behaviors and the extent to which the Best Practices were incorporated are, for many indicators, positively linked to student achievement. Across 40 schools in eleven states, 4,792 students rated the frequency of, and level to which, teachers provided: an accelerated curriculum with engaging instruction; opportunities to experience literacy across the curriculum and participate in career exploration and planning; support for struggling students; and conveyed high expectations. Students who met grade-level standards in state-specific reading, math, and science achievement exams were more likely to report experiencing teacher behaviors and classroom conditions linked to the 10 Best Practices than those who did not meet expectations in reading, math, and/or science exams.

SREB's Middle Grades Commission report offers the following call to action:

New economic realities, such as the need for 21st-century skills to secure employment, and new research on student engagement clearly show that the middle grades are make-or-break years in students' journey toward high school graduation, college and career readiness. States can no longer afford to let students "muddle through the middle." They need to implement a road map for change now.

The data collected from linking student survey responses to student achievement reveal specific actions middle grades schools should incorporate into road maps for change:

1. Implement an accelerated curriculum.
2. Emphasize literacy across the curriculum.
3. Maintain consistent standards and expectations for student work.
4. Provide career exploration and guidance through an advisement program.
5. Ensure support for struggling students is accessible and meaningful.

APPENDIX A

The 10 Best Practices in the Middle Grades

1. Have a **clear mission**, with strong faculty support, to ensure that more students leave the eighth grade with the knowledge and skills needed to succeed in a college-preparatory curriculum in high school, to graduate high school prepared for postsecondary education and to become productive adults.

2. Have strong, collaborative **district support** for the school's mission, for implementation of proven and promising practices, for professional development, and for adjustments to master schedules to provide teachers with common planning time.

3. Enroll more students in an **accelerated curriculum** that is benchmarked with ninth-grade college-preparatory standards and emphasizes teachers working together to plan and share classroom learning, student assignments and classroom assessments that reflect high school readiness standards in English/reading, mathematics and science.

4. **Engage students in learning** — intellectually, emotionally, socially and behaviorally — by making greater use of authentic problems, project-based learning, cooperative learning and technology.

5. Focus on improving students' **reading and writing** skills by giving reading and writing assignments that engage students in reading grade-level materials specific to each content area — English, math, science and social studies.

6. Strive to achieve **success for every student** by maintaining high expectations for all students and supporting them through reteaching, tutoring, extra help and extra time to relearn and redo work until it meets standards.

7. **Identify at-risk students** as early as grade six and provide them with additional instruction and support to help more of them meet grade-level standards and get on track to enter high school prepared for the ninth grade.

8. Ensure students receive high-quality **guidance and advisement** by providing students with a personal connection with an adult in the building, involving parents in discussions about their child's performance and readiness for high school, and helping students develop a six-year plan for high school and post-high school studies.

9. Provide extensive **professional development** to staff, aligned with the school's mission and improvement plan, with emphasis on implementation of new strategies learned.

10. Have a strong **principal and school leadership team** that work collaboratively with the school community to keep them focused on the school's mission, to ensure students are engaged in a rigorous curriculum, and to review and use data to engage in ongoing school improvement efforts.

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